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The
Philadelphia Medical Journal

A WEEKLY JOURNAL CONDUCTED EXCLUSIVELY IN THE INTERESTS OF THE MEDICAL PROFESSION.

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The Philadelphia Medical Journal

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See Advertising Page 8

VOL. XI. NO. 1 JANUARY 3, 1903 $5.00 PER ANNUM

The Lister Jubilee.—Any one interested in the history of surgery will read the *British Medical Journal* of December 13 with great profit. It is called the "Lister Jubilee Number," and contains a most interesting list of original articles, illustrating the influence exerted by Lister's work upon the practice of surgery, and also a number of biographical sketches of this great master. No other one man has wrought in surgery the revolution which resulted from the work of Lord Lister. It is true that others worked independently along the same lines as Lister, but it is undoubtedly due to him that surgery owes nearly altogether the advancement made during the past generation. It is true that antiseptic surgery has been replaced to a large extent by aseptic surgery, but the latter may be looked upon as an offspring of the former.

This change, too, was probably anticipated by Lister, as is shown by the following sentences quoted by Sir Hector C. Cameron:

> "Of all those who use antiseptics in surgery, I suspect that I apply them least to the surface of the wound. After the first dressing, the object which I always aim at is to have the material in contact with the exposed tissues approximate as closely as possible to the perfectly bland and neutral characters of the healthy living textures. If you consider the circumstances of a simple fracture, which you cannot too often call to mind if you wish to keep your ideas clear and right upon this subject, if you remember how the severe contused internal wound, with the interstices of the mangled tissues loaded with extravasated blood, recovers quickly and surely under the protection of the unbroken integument, it is plain that all that is required in an external wound is to guard it against the disturbing influence of external agency. The injured tissues do not need to be 'stimulated' or treated with any mysterious 'specific'; all that they need is to be let alone. . . Now, of all external agencies the most injurious by far is putrefaction, and this, above all, we endeavor to exclude. But a substance employed with this object, if sufficiently potent to destroy the life of the putrefactive organisms, cannot fail to be abnormally stimulating to the exposed tissues; and these must be protected from its action if the wound is to progress exactly like a subcutaneous one."

It is just 50 years since Lister became a member of the British Medical Association, and it is a proper and commendable spirit which prompted the *British Medical Journal* to devote this entire issue to a commemoration of this date. The British Government has recognized Lister's great work and made him a Peer of the Realm, and the profession of the world acknowledges its great indebtedness to him. The medical profession generally knows too little about its own history and history-makers, and we commend to every member of it the careful perusal of this Lister number. Not only does it deal with the actual scientific work done by Lister, but it contains a number of articles which give us an insight into his character and life. A number of photographs appear, and a very excellent reproduction of the late portrait by Hugh Riviere. Among the contributors are such distinguished foreigners as von Bergmann, Lucas-Championnière, Bloch and others. Among the British contributors are Annandale, Cameron, Chiene and Cheyne.

The Sites for the Almshouse and the Asylum for the Insane.—Announcements, apparently authorized, in the newspapers state that a site for homes for the indigent and insane has been been agreed upon by the Philadelphia authorities after consultation with prominent medical men. As the ground is already owned by the city, the tedious and expensive process of condemnation will be avoided, and there seems to be now nothing to interfere with the immediate beginning of the plans for the buildings. From inspection of the map we learn that the entire area owned by the city extends for a mile, at least, along the Delaware shore and back for over half a mile to the line of the New York Division of the Pennsylvania Railroad. It includes both sides of Pennypack Creek for about a mile, owing to the winding course of that stream, and also both sides of a nearly straight and level highway, the State Road. The most distant boundary is ten miles in a direct line from City Hall and adjoins the land recently taken for the largest of the city's filter-plants. The House of Correction is located at the south end of the tract, and the County Prison on a tract at the southwest.

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The establishment of homes for the indigent and insane at this point will, therefore, bring four of the city's institutions for the delinquent and defective classes within one boundary, an advantage in administration and classification; the latter by no means an unimportant point. There will be ample space for laying out attractive grounds and the erection of small isolation wards, so that the cases of contagious disease that arise within the institutions can be treated without removal to the Municipal Hospital.

The locality is very accessible. In all but the deep winter season, the river channel will be available, for, although not navigable throughout by deep-draft vessels, it is easily so, at all stages of the tide, by river steamboats. The land approach is also easy, and the proximity of a main line railroad and trolleys will add to the advantages. The ground is not subject to flood. Some distance back from the river the elevation is twenty feet above the river level. Sewer connections can be made and the river will afford an inexhaustible supply of water for general purposes, while the proximity to the filter-plant will secure good drinking-water.

The difficult problem of locating the various city hospitals seems now to be solved in a satisfactory manner, and it is to be hoped that the new buildings will embody all the many advances in hospital construction which have been made of late years.

Some Aspects of Artificial Immunity.—The subject of immunity with its diverse theories, hypotheses and controversies is of general scientific interest, but the matter of immunization is of especial interest to the practising physician who applies the results of scientific research to the cure of disease. Whatever the explanation of the interesting phenomenon of immunity may be, the fact of its production either artificially or naturally has been established beyond any reasonable doubt and has become the basis of serum therapy. However, the application of the principles of immunity to the cure of disease has not been followed by the results which one would expect were he to judge from theory and laboratory experiments only.

The enthusiasm and extravagant expectations, engendered by the successful experiments on animals, suffered a considerable reduction in fervor when the scene of activity was shifted from the laboratories to the bedside, and were it not for the substantial success following the universal use of diphtheria antitoxin, serum therapy would perhaps be looked upon by the practical therapeutist as a science which does not stand the crucial test of practical application. Many of the disappointments following the application of serum therapy, however, are due to the prevalent misconception that antitoxin treatment is the only means of producing artificial immunity in man, and, unless one has familiarized himself with the subject, one is not aware of the fact that the production of artificial immunity by the use of antitoxin is practically limited to two diseases, namely, diphtheria and tetanus. In the majority of the other infectious diseases, the causative agents of which are known, antitoxin treatment, or passive immunization, has not been followed by any encouraging results. To this group of diseases belong typhoid fever, pneumonia, streptococcic infection, cholera, plague, tuberculosis, anthrax and a few others.

Why Attempts at Immunity Fail.—The reason for the failure lies in the fact that true antitoxic serum can only be obtained by the injection of soluble toxins, the latter being produced to an appreciable extent, so far as we know, by the diphtheria and tetanus bacilli alone. In the case of the other pathogenic micro-organisms, the toxins are incorporated, as it were, in the bacterial protoplasm and cannot be obtained for purposes of immunization in a free and soluble state. On this account, immunization of animals in these cases is accomplished by means of the bodies of the bacteria, whether dead or alive. The serum resulting from such a mode of immunization is bacteriolytic and differs essentially from the antitoxic serum. This serum, moreover, possesses but slight protective and curative value, and whatever potency in that direction it may possess is of comparatively brief duration. No wonder, then, that the various antipneumococcic, antistreptococcic and similar serums proved so uncertain in their action. The only rational method of therapeutic immunization in this group of diseases seems to be by means of vaccination, and whenever such method could be practised it proved eminently successful. This form of immunization is direct, and more nearly approximates the immunity produced by direct infection.

The only serious objection to active immunization is in the local disturbances, such as inflammation and suppuration, which follow the injections. This objection has been recently overcome by Bezredka (*Comptes rendus des Seances de l'Académie des Sciences*, June 2, 1902) who made the interesting observation that, if bacteria are mixed with antibacterial serum, the specific antibodies are fixed on the bacteria which become attenuated and devoid of any irritating or toxic properties, while preserving to the highest degree the ability of immunizing an animal against specific infection. Thus, if typhoid bacilli be mixed with antityphoid serum obtained from an immunized animal, the bacilli removed by centrifugalization and heated for 30 minutes at 58° C., they lose the irritating properties, and yet, when injected into an animal, produce lasting immunity. The author found that antiplague "vaccine" prepared in this manner produced no symptoms in animals and but a slight indisposition in his own person, while the animals vaccinated showed immunity at the end of 24 hours, and this immunity lasted for more than two months. If this observation can be varified by others and this interesting fact established by experiments on man, the benefits which will accrue to therapy by immunity can hardly be estimated.

Quinine in the Treatment of Typhoid Fever.—When the coaltar products were introduced as substitutes for quinine they were received with an enthusiasm which only embittered the more the disappointment following the discovery that none of them is free from danger and even the safest are only limited in their applicability in the treatment of fevers. This realization of the shortcomings of these new antipyretics wrought a reaction which resulted in a sort of therapeutic nihilism, in so far as the drug treatment of the fever proper is concerned. Quinine is generally no longer thought of as an all-around antipyretic, and is used mainly as a tonic or as the specific against malaria. So grounded has become the general belief that large doses of quinine can be useful only in malaria that this drug is used for diagnostic purposes, and any remittent fever which yields to the administration of large doses of quinine is pronounced at once by some clinicians to be malaria, without any examination of the blood, or, even, in spite of the absence of plasmodia. This view, however, is undergoing some modification and the time-honored quinine is again brought to the front as an antipyretic by some German clinicians.

Two years ago Erb contributed to the *Therapie der Gegenwart* (1901, H. 1) a paper on the treatment of typhoid fever with quinine. His observations embraced 200 cases of typhoid fever, many of them quite severe, and in all these cases quinine administered in doses of 15 to 30 grains at night was claimed to have a most beneficial effect. Erb claimed that not only was the fever reduced, but the course of the disease was considerably shortened. In some cases, and this is suspicious, the temperature became normal soon after the administration of the drug. Such a claim is not reconcilable with what we know about genuine typhoid fever. Similar observations were recorded by Binz and Lissauer and Goldscheider. Kernig (*Russky Archiv Patologii, Klinitcheskoi Meditziny i Bakteriologii*, Vol. XIII, No. 3) claims that he corroborates these observations, basing his conclusions on a life-long experience at the Women's Obouchoff Hospital, where thousands of patients with typhoid fever were treated with quinine and cold baths. The mortality, despite the extreme overcrowding and other adverse conditions, has been 7.6% for the last 10 years.

While Kernig does not go so far as to claim that quinine shortens the course of the disease, he attests most emphatically to its virtues as an antipyretic and tonic. He lays stress on the fact that this is the only antipyretic that strengthens the pulse and improves the circulation, an effect which goes far toward aiding in the recovery of the patient. He has also observed the temperature becoming normal after a few doses of quinine. Such direct and favorable testimony, coming from such sources, may help to rehabilitate quinine in the opinion and practice of some physicians, but we are confident that many practitioners in America will justly criticise the practice and dissent from the conclusions on which it is based. Heroic doses of quinine in typhoid fever were long ago voted by a large majority in the United States to be bad practice. We give these German testimonials for what they are worth.

The Deep Reflexes in Transverse Lesions of the Spinal Cord.—With Dr. Bastian originated the now well-known view, that a complete transverse lesion of the spinal cord is accompanied with flaccid paralysis of the limbs and loss of the tendon reflexes. This was contrary to the view that had generally been accepted up to that time, but since Bastian's paper in 1890 his opinion has been confirmed in so many cases that it has been very generally held by neurologists. There seems room, however, for further investigation and criticism in this important matter, and in a recent paper Dr. W. B. Warrington (*The Medical Chronicle*, November, 1902) has given a résumé of the whole subject. Warrington has reviewed many, but not all, of the recently recorded cases.

The difficulty seems to be that in some cases of apparently transverse lesion not all of the symptoms described by Bastian are recorded, and, *per contra*, all of these symptoms have been claimed to have been present in some cases of apparently nontransverse lesion.

Warrington concludes from his study that, while Bastian's law holds good in general, yet, when the lesion is slowly progressive, the reflexes may be retained; and, on the other hand, symptoms approximating those described by Bastian may be present in rare cases in which the lesion is incomplete. This latter is true in compressing lesions.

We think that Warrington has not sufficiently emphasized the rôle of *shock* in these cases. In cases of profound shock, even in which the lesion is not totally transverse, the abolition of the reflexes may be complete, but afterward in some cases there may be a tendency to a restoration of reflexes, even though the case prove fatal. This fact was observed in a case of traumatic hematomyelia of the cervical region, observed recently at the Philadelphia Hospital.

On the whole, however, Bastian's law is sufficiently well established to be of immense importance to neurologists both in the diagnosis and prognosis of these cases.

The Death of Krafft-Ebing.—The distinguished Austrian alienist, whose death has just recently been announced, deserves to be commemorated as one of the most eminent of that German school of psychiatry which has left such an indelible mark on the science of the nineteenth century. Krafft-Ebing was a great psychiater, a great teacher and a great writer. His name is probably most familiar to American students for his contribution to the classification of insanity—a classification which brought into such marked prominence the whole subject of the degenerative types of mental disease. Perhaps in this scheme of nosology Krafft-Ebing drew the line of demarcation somewhat too arbitrarily between the psycho-neuroses and the degenerative insanities, and subsequent criticism has already marked its defects, but it is not too much to say that its influence on American alienists has been profound.

In recent years Krafft-Ebing has seemed to descend a little too far into the popular arena, and his writings on psychopathia sexualis unfortunately gave rather too much of a stimulus to a certain kind of pornographic literature which was for a time very much in vogue. It would be unjust, however, to associate his name too intimately with this rather bizarre species of medical literature. Both as a teacher and writer Krafft-Ebing was exceptionally brilliant, and his influence was far-reaching and will be in a large measure permanent.

The Support of the "Index Medicus" by the Carnegie Institution.—The *Popular Science Monthly* says in an editorial that, although no official announcement has been made, a grant of money for the revival of the *Index Medicus* has been approved by the executive committee of the Carnegie Institution. Some of the medical journals report that $10,000 a year will be appropriated for this purpose. We trust that this statement is authentic, for surely the new Institution, with its large endowment, could afford to appropriate this money, and it could hardly appropriate money to a more legitimate scientific object.

It has been amply demonstrated that the *Index Medicus* cannot live on professional patronage alone. It does not appeal to the profession at large, for it is a literary instrument for the use of the working minority. But this working minority does the work of scientific medicine, and its appeal for aid is not selfish, but is inspired by the highest of altruistic motives. Some of Mr. Carnegie's numerous libraries could better be spared than this important publication.

Stabbing a Man Through a Speculum.—An obstetrical friend has written to us, evidently in hot haste, to decry a tendency which he sometimes observes in his particular specialty, namely, for the obstetrician or gynecologist to criticise some other practitioner for not sewing up a perineum or repairing a cervix. Our friend seems to think it is taking an unfair advantage of a man, after he has faithfully attended a woman in confinement, for the next man on the scene to affect a holy horror at the condition in which he finds the cervix uteri. He thinks it has come to such a pass that it is almost dangerous for a family doctor to let one of his maternity patients pass out of his hands, because the next man who sees her may be a hypercritical operator, who assures her that she is in a very bad way, and that the fault is her family doctor's.

Our obstetrical friend mournfully descants about it as follows:

"In these days of specialism and commercial ascendency it is an easy matter to fall from grace and overstep the limitations of the Hippocratic oath; ostensibly to adhere to the letter of the law, but in reality to desecrate its very essence and spirit. Not only is this true of the grosser breaches of professional ethics, but there is the more sinister aspect, because insidious and evasive, of professional homicide, which should meet with the sternest condemnation of honorable and upright men. The slaying of a man's professional character and ability is as heinous a crime as the taking of his physical life, and especially because too often it is impossible to fix the guilt and bring the culprit to his well-merited punishment. The surgeon may shake his head with the remark that he should have seen the case earlier; the gynecologist may deplore, in the presence of his consulting patient, the imperfect technique of her family physician—a man who may be vastly his superior in general information and character; and so through the list of specialists.

"In every case," writes our friend, "the blow is in the back and, therefore, the more to be deprecated. If the truth were known, in almost every maternity case the best has been done that the circumstances would permit. The perineum has been carefully repaired, but the sutures have not held because of sloughing or devitalization of the parts. The delay in the visit to the surgeon may have been in spite of the physician's protest and not by his advice. The vital point of the matter is that the honor and good name of the family physician have not been protected by the consultant, who is in honor bound to cover and support him. This is no imaginary evil. Day after day the blow is struck, and the seed of discontent and dissatisfaction sown in the breast of the querulous patient. How far-reaching the evil is, or what the effects may be, the unscrupulous or, at least, the unthinking consultant does not know and frequently does not care. But the ethical question remains. The breach is made, and the injury is done to both physician and consultant, the one professional and the other moral; but the one redeeming feature is that the result is reactive, and he who does the injury is himself in the long run more seriously the sufferer——"

At this point our obstetrical friend broke off abruptly, as though he were out of breath.

Mark Twain on Christian Science.—Mr. Samuel L. Clemens has had a prophetic vision. In the *North American Review*, for December, he tells us all about this vision, and we, having read it, cannot in the least wonder that the thing has turned the old man's head. Mark Twain sees in Mrs. Eddy the founder of a new religion—not a new sect, but a real, genuine religion, which will rival Christianity and Mohammedanism, and will have its own hierarchy and the whole paraphernalia. All this will happen in about one hundred years.

Mark Twain is by no means original in this idea. Other persons, even of less perfervid imagination and with decidedly less penchant for Eddyism, have seen in this craze the possible seed of a very widespread religious movement. It is from such beginnings, they say, that all religious movements take their origin, and it requires no great stretch of the imagination for them to see in the present disciples of Mrs. Eddy the close congeners of the early Christians. The only difficulty is for the contemporary observer to foretell which one of these various movements now on the stage has vitality enough to live. Is it Eddyism, or Dowieism, or Mormonism, or the Salvation Army? For our part, we think old John Alexander Dowie would make a better Mohammed than would Mrs. Eddy.

But Mark Twain shows his weakness, both as a prophet and a critic, in what he says about the claims of Mrs. Eddy's religion to be the real thing. "Its great offer," he says, "is to *rid the race of pain and disease*." This preposterously impossible program seems to Mark Twain to be quite a practical business, and one in the achievement of which Mrs. Eddy's religion will have no doubt and no difficulty whatever. In other words, Mr. Clemens himself comes so near to being a follower of Mrs. Eddy that he has not critical insight enough left to see that her claim to be able to abolish disease is the gist of the whole humbug. He already says that Christian Science can abolish *four-fifths* of the disease that afflicts mankind! Clearly, Mark Twain is already four-fifths Eddyite, and of all the blatherskite he has ever written his latest is a little the most senile.

Current Comment.

MARK TWAIN AND TYPHOID FEVER.

One of the incidents of a pathetic story told by Mark Twain in the Christmas number of *Harper's Magazine* is the taking of typhoid fever by a young girl as the result of being confronted with her mother, who lay ill of that disease. For the comfort of many good people who are in undue dread of infectious diseases, it may be well for physicians to impress upon them that typhoid fever is not apt to be communicated in such an interview as is described in the story.

—*The New York Medical Journal.*

THAT DREADFUL MATERIALISM.

Medical materialism finishes up Saint Paul by calling his vision, on the road to Damascus, a discharging lesion of the occipital cortex, he being an epileptic. It snuffs out Saint Teresa as an hysteric; Saint Francis of Assisi as an hereditary degenerate. George Fox's discontent with the shams of his age, and his pining for spiritual veracity, it treats as a symptom of a disordered colon. Carlyle's organ-tones of misery it accounts for by a gastroduodenal catarrh. * * * * And medical materialism then thinks that the spiritual authority of all such personages is successfully undermined.

—*Professor William James.*

PSEUDO-SCIENCE.

It is amazing that reputable journals should fill their columns with such announcements of pseudo-science and such a rehash of old novels as that which reports the discovery by Dr. Elmer Gates, of Washington, of a solution which, put in a bottle and breathed through, will change its color so as to register the feelings of the person, such as happiness or melancholia, and they anticipate that it will be perfected so as to make it useful in judicial trials! More wonderful things have been announced from that Washington laboratory than from that of Tesla.

—*The Independent.*

Correspondence.

ANOTHER WORD ABOUT NOMENCLATURE.

By ALONZO ENGLEBERT TAYLOR, M. D.,

of San Francisco.

To the Editor of the **Philadelphia Medical Journal**:

In your issue of December 6, upon page 854, is an editorial entitled "A Word About Nomenclature." Convinced that the editorial presents an erroneous point of view, permit me to comment upon it.

In the first place the use of a twenty-syllable nomenclature is not confined to the German chemist, but is universal among chemists. Its use is explained and justified by the fact that compounds in modern chemistry are classified upon the basis of the geometric or spatial configuration of the molecule, combined in some instances with designations to illustrate the stereo-isomeric relations of the substance. It has been the aim of all the chemical societies to bring into the vast number of organic compounds, now numbering over 80,000, a system of terminology which would correspond to the chemical state of affairs. As in inorganic chemistry the unit of nomenclature is the name of the individual element, so in organic chemistry the unit of nomenclature is, in addition, the name of constantly recurring groups of elements, as amido, methyl, etc. Of these syllables that stand as the names of definite groups of elements which act as units there are possibly some few hundred. By a practical common consensus of opinion the use of these units in the current nomenclature has been organized and arranged upon the basis of the geometric or spatial configuration of the molecule. It is thus possible from the name to know the substance, to write its spatial formula and to express exactly what, in theory, this substance is. Obviously the word is intelligible only to the trained chemist. It was, however, coined by him for the use of the chemist. If the lay world choses to coin 80,000 terms derived from Greek and Latin roots and embellished, as medical terms certainly have been, with the results of ignorance of Greek and Latin, it has that privilege. But such a terminology would bear no relation to chemical knowledge, which the terminology of which you speak, though apparently abstruse and unintelligible, certainly does. The nomenclature of which you complain is a systematic classification of specific scientific terms. Would it be preferable to replace it with 80,000 words like appendicitis, tuberculin and gumma? Virchow once said that, if it should be discovered that there were a specific poison in scabies, it would probably be called scabein and the particular virus in the bite of a rat would be called ratein! The fault with our chemical nomenclature is not the quality of which you complain, but rather the fact that, before the technical terminology became established, a few thousand hybrid terms became fixed by usage and cannot now be made to yield promptly to their legitimate successors.

TEMPORARY CONSTRICTION OF THE CAROTIDS.

By GEORGE W. CRILE, M. D.,

of Cleveland.

To the Editor of the **Philadelphia Medical Journal**:

In your issue of November 8 Max R. Dinkelspiel refers to the question of priority regarding the constriction of the carotids as practised as a preliminary measure to the operations upon the head and neck. The controversy in regard to this originated in an article by Drs. Mills, Phahler and Deaver, in which the latter accords me the credit of first practically applying this measure. W. J. Johnson, in a subsequent number of your journal of October 27, 1902, desired to correct this statement in claiming propriety in regard to the clinical application of the temporary occlusion of the carotid arteries. Dinkelspiel, in the above mentioned issue, then in turn corrects Johnson, saying that the principle, if not the practice, of temporary ligation is a measure not of very recent date, and that practically also it had been applied at an earlier time. In my publication entiled Problems Relating to Surgical Operations, which appeared in 1899, a review of the most important experimental data is given, and it is there shown that the principle of both the temporay and permanent occlusion of the carotid arteries is by no means an idea of recent origin. As to the clinical application of temporary occlusion this was practised by Treves in 1880, (*Lancet*, 1888, I) who in place of ligating the common carotid artery in an instance of hemorrhage from one of its branches placed a loop of catgut around this vessel upon which he then exerted traction. Subsequently he practised the same measure for the purpose of controlling hemorrhage in operation on the head and neck. In 1895 Senger, and in 1896 Riese, as Dinkelspiel rightly states, resorted to the temporay occlusion of the carotid artery, the former employing an elastic ligature, while Riese practised compression of the vessel by means of a specially devised instrument. Johnson, in 1898, in a communication on this subject, reports a devise which had also been especially constructed for this purpose. The principle of his device is essentially that reported by Treves, a loop (silk in this instance) encircling the carotid artery upon which traction is then exerted not by the hand, but by means of a soft wooden bobbin. The attachment of a loop at each end of the wooden bobbin enables both carotids to be simultaneously occluded. These various methods, which have been so far proposed for the temporay arrest of the carotid circulation, may be summarily classified into the method of traction, (method of Treves and Johnson), and the method of direct compression, (methods of Senger, Riese and my own). The methods of traction as well as the method of Senger in constricting the vessel by means of an elastic band embody the principle of the ligature and are to be viewed as a modification of the same. The method of direct compression as practised by both Riese and myself is distinct from these in that the occlusion of the vessel is effected by bringing a broad zone of the arterial walls into apposition with each other by means of the blades of a specially devised intrument whereby the amount of compression can be more accurately gauged. This method was first clinically applied by Riese in 1896. As to my own device the idea of the same was primarily obtained in 1895 and experimentally practised and thoroughly tried on dogs during the following 2 years with the view of practically applying the same on man. After this experimental research of 2 years it was then for the first time clinically practised by me in 1897, or a year after Riese. The latter's efforts along the same line were unknown to me at the time of the publication of my reports, so that the method of instrumental compression of the carotid arteries for the control of hemorrhage from the neck and face originated in both of us entirely independent of each other. The claim of priority has heretofore not been advanced by any of the authors, and a closer analysis of the discussion which has arisen resolves itself into a study of dates. All the methods so far proposed for the temporary closure of the carotid arteries have, it appears, been evolved independent of each other and are the natural sequencein the evolutionof hemostasis. It may be truly stated that with the progress of the times this idea of temporary compression had assumed general proportions and had in theory no specific individual factor. The contemporary publications of the various methods mentioned would at least point in this direction. The literature on the subject was obtained at the time (1895-96) the experimental research was in progress and no reference to the work of Senger and Riese was then to be found in the library of the Surgeon-General.

Reviews.

Diseases of the Skin. A Manual for Students and Practitioners. By Joseph Grindon, Ph. B., M. D., Professor of Clinical Dermatology and Syphilis, Washington University, St. Louis, etc. Illustrated with thirty-nine engravings. Philadelphia and New York, Lea Brothers & Co.

Dr. Grindon has given in this manual of 377 pages, a good, though, necessarily, somewhat brief, presentation of our present knowledge of dermatology. The order of consideration of the diseases is practically that adopted by most other authors, except that he makes a separate class of granulomata, including therein the various tuberculoses, lupus erythematosus, equinia, actinomycosis, mycetoma, rhinoscleroma, leprosy, syphilis, granuloma fungoides, and frambesia. The general points as to symptomatology, etiology and diagnosis, are first touched upon, the hints bearing upon the last, though short, containing a good deal of practical information. The individual diseases are then taken up, concisely and clearly presented, with a terse summary of the most commonly accepted plans of treatment. Considering the space at his disposal, Dr. Grindon goes sufficiently into the modern views of etiology and pathology; and in ringworm, for instance, states briefly the present position of the question. Scattered through the text are 39 illustrations, some of them excellent, others not so clearly reproduced, and with a few, the reproduction is quite faulty. The book, as a whole, compares favorably with other hand-books of its size, and students and physicians will find it of distinct value in study and practice.

[H. W. S.]

The Medical Epitome Series. Diseases of the Skin. A Manual for Students and Practitioners. By Alfred Schalek, M. D., Instructor of Dermatology, Genito-urinary and Venereal Diseases, Rush Medical College, Chicago, Ill. Illustrated with thirty-four engravings. Lea Brothers & Co., Philadelphia and New York. Duodecimo. Pp. 225.

The introduction of examinations in the subject of skin diseases into the curriculum of our larger medical schools has brought into use a number of brief sketches of the subject which may be employed by the student as an *aide mémoire*.

The present work differs little in any respect from others of its class. The arrangement is alphabetical, but the usual classification is also given. The subject of anatomy, general symptomatology, diagnosis, etc., are discussed in a few pages. The individual diseases, or all, at least, of which the student is expected to know something, are briefly described; and, with a good memory and some quickness of apprehension, there is no reason why the candidate may not find here all that he needs to pass his examination in dermatology. [A. V. H.]

The Practical Medicine Series of Yearbooks. Under the general editorial charge of Gustavus P. Head, M. D. Vol VII.—**Pediatrics and Orthopedic Surgery**, edited by W. S. Christopher, M. D., John Ridlon, A. M., M. D., Samuel J. Walker, A. B., M. D. July, 1902. Chicago: Year Book Publishers.

The combination of pediatrics and orthopedics in a single volume is a good one. The pediatric portion of this book is deserving of special commendation for the clear and systematic arrangement of the abstracts. The first portion relates to heredity, the second to nutrition, the third to infections, the fourth to pathological resultants, anatomical; the fifth to pathological resultants, functional. A table of contents is a great help to reference, and the numbering of each abstract renders cross reference easy. The abstracts of both portions of the present volume have been chosen with judgment and represent very well the recent literature of pediatrics and orthopedics. It is to be regretted that in the general index at the end of the volume the names of the authors of the various abstracts do not appear. The binding is the same as that of the other volumes and has been criticized in former reviews.

[J. H. G.]

American News and Notes.

PHILADELPHIA AND PENNSYLVANIA.

Almshouse and Insane Hospital, Philadelphia.—It is reported that the site for the new Almshouse and Insane Department of the Philadelphia Hospital has been found at last. Both institutions will be erected on the House of Correction property at Holmesburg, which consists of over 150 acres of high land, already owned by the city and easily accessible. Plans will soon be drawn for the buildings, to which all the funds at hand, about $300,000, will be devoted. The site recently chosen for the Municipal Hospital is about 5 miles southwest of this property. A number of Philadelphia physicians visited this property, December 28, and found it exceptionally suitable for the proposed institutions. Among these physicians were prominent members of all of the medical schools and hospitals of the city. Together with the Mayor, the Directors of Public Works and Public Safety, visits were paid to the House of Correction and the Torresdale Filtration Plant. A resolution, stating that the Almshouse and Insane Department of the Philadelphia Hospital be separated from the Philadelphia Hospital as soon as possible, to afford better quarters for the indigent poor and the insane, to relieve the dangerous overcrowding of the insane wards, and also to afford proper room and necessary facilities for the treatment of patients in the Philadelphia Hospital, was passed. The plot of ground belonging to the city, on the House of Correction property between State road and the Pennsylvania railroad, is in every way adapted for this purpose. On December 30 Dr. Shoemaker, president of the Board of Charities and Correction, notified the Mayor and members of city councils that, according to the views of the physicians present at this meeting, the above-named site should be selected for the erection of the new Insane Hospital and Almshouse. It is proposed to erect 2 buildings, one for the Almshouse and the other for the Insane Asylum, on either side of State road. Dr. Shoemaker announced that, after the removal of the Insane Department and the Almshouse from the Philadelphia Hospital, the present buildings at Thirty-fifth and Pine streets should be razed and new and model buildings erected, even though this take 4 or 5 years. The new Insane Hospital will accommodate 5000 patients and the Almshouse an equal number. It is proposed to spend $200,000 in erecting the Insane Asylum, and $100.000 for the Almshouse. The Almshouse will be called the Home for the Indigent.

Methodist Episcopal Hospital, Philadelphia.—A vacancy is announced in the staff of the assistant visiting physicians. Candidates for the position must have the degree of A. B. as well as that of M. D. The assistant visiting physician at the Methodist Hospital is also chief of the medical clinic, on duty 3 months each year.

Free Hospital for Poor Consumptives.—The Pennsylvania State Legislature will soon be asked to pass a bill appropriating $300,000 for the enlargement and improvement of the White Haven Consumption Sanatorium. If this appropriation is passed, Pennsylvania will have given more than any of the United States for the care of the consumptive poor. It is proposed to establish other sanatoria like that at White Haven throughout the State. The method of treatment is out-door life with forced feeding.

Smallpox in Philadelphia.—During the week ending December 27, 25 cases of smallpox, with 3 deaths, were reported Of these cases 6 occurred in the Thirty-eighth and one in the Twenty-second ward, making 7 in Germantown; 3 in the Twenty-fourth and 2 in the Twenty-seventh, making 5 in West Philadelphia; leaving 3 in the Nineteenth, 2 in the Seventeenth, Twentieth and Thirty-second wards, and one in the Ninth, Fifteenth, Twenty-eighth and Twenty-ninth wards each. Because the disease occurred in a man working at the Oak Lane reserve basin for filtered water, the 450 men at work there were vaccinated. During November, 1901, 333 cases were reported as compared with 11 cases during November, 1902; during December, 1901, there were 352 cases, while during December, 1902, there were only 50 cases reported. The Marine-Hospital Reports state that there have occurred in Pennsylvania, during the past 6 months, 1652 cases with 170 deaths, against 1614 cases and 76 deaths during the same period last year. Philadelphia, however, has had many cases less than the rest of the State. Eight more cases have been reported in 2 days this week.

Pennsylvania State Medical Society.—At the meeting to be held next September, at York, Pa., the following appointments have been made for the annual addresses: In medicine, Dr. H. M. Neale, Lehigh; in surgery, Dr. W. L. Estes, South Bethlehem; in obstetrics, Dr. J. G. Clark, Philadelphia; in hygiene, Dr. Seneca Egbert, Philadelphia; in neurology, Dr. C. B. Mayberry, Retreat; and in ophthalmology, Dr. E. B. Heckel, Pittsburg.

Society Meetings Next Week.—The following societies will meet next week at the College of Physicians, Philadelphia, at 8.15 P. M.: Monday evening, January 5, Obstetrical Society; Wednesday evening, January 7, College of Physicians; and Thursday evening, January 8, Pathological Society.

Philadelphia Hospital.—At the meeting of the Board of Charities and Correction, held December 30, the entire medical staff was reappointed for 1903. The only new appointments made were: Bacteriologist, Dr. R. C. Rosenberger, to share the position of Dr. L. N. Boston; and neurologist registrar, Dr. T. H. Weissenberg.

NEW YORK AND NEW JERSEY.

Dr. Lorenz Honored.—In the City Hall, in the presence of the Mayor of New York City, the heads of all the city's departments and 100 invited guests, the freedom of the City of New York was presented to Dr. Adolf Lorenz, of Vienna, December 30, through Mayor Low, by a vote of the Board of Aldermen. Dr. Lorenz left America, December 31, sailing from New York on the steamer *Celtic*, for Liverpool.

New York Skin and Cancer Hospital.—Dr. L. D. Bulkley will give a series of clinical lectures on diseases of the skin, on Wednesday afternoons at 4.15 o'clock, in the out-patient hall of the New York Skin and Cancer Hospital, Second avenue, corner of Nineteenth street. This course, the fifth in the history of the hospital, free to the medical profession, will begin January 7, 1903.

Columbia University, New York City.—A new department of health and science is soon to be established, from the $250,000 recently given to Columbia College. Applicants wishing to take this course must have completed a secondary course and must have had college or technical training during a subsequent period of at least 2 years. This department will be a branch of the Teachers' College. In this new department of physical education courses will be given in psychology, physiology, child study, hygiene, anatomy, gymnastics, bacteriology, history and principles of education, theory and practice of teaching physical education, school hygiene, the history of physical education and anthropometry. A new building will be erected on 120th. street, between Amsterdam avenue and Broadway, to contain a gymnasium, laboratory and class rooms for students in physical education.

Bubonic Plague in New York City.—Dr. W. H. Park, bacteriologist of the Health Department, has completed the examination of the 3 sailors detained 2 weeks ago at Swinburne Island on the suspicion that they were suffering from bubonic plague. He reported, December 23, that all 3 had well-developed cases of the plague. They are being kept isolated.

Smallpox in New Jersey.—Camden has at present but 4 cases of smallpox. There are some in Bridgeton, several in Vineland, Forest Grove, Minatola and other villages. Schools have been closed in Vineland on this account. A number of witnesses, who were to have gone to Atlantic City to testify, were not permitted to leave Minatola on account of the smallpox. Trenton had a case of smallpox this week.

NEW ENGLAND.

Foot and Mouth Disease in New England.—The quarantine against New England States is still in force in New Hampshire, Vermont, Massachusetts and Maine. Connecticut is absolutely free from the disease. At present 1300 head of cattle have been slaughtered in Massachusetts, and under favorable conditions all of the known infected herds should be killed and disposed of within 10 days more.

City Hospital, Worcester, Mass.—City Councils have unanimously passed the 10 years' loan of $300,000, for the erection of new buildings at the City Hospital, December 22, last.

Boston Birth Statistics.—Health department statistics state that more boys are born than girls. In 1900 the number of boys born in Boston was 8376, as compared with 7975 girls. During the past 12 years, with the single exception of 1891, more boys were born in Boston every year than girls.

Smallpox in Massachusetts.—There are a number of cases still reported in Boston, several at Saxonville, Attleboro and some still at Webster. Many other isolated cases have been reported from different parts of the State. Late cases are reported in Portsmouth, N. H., and Newport, R. I.

WESTERN STATES.

Consumptive People Excluded.—The California State Senate Committee, appointed to investigate the conditions connected with the coming of consumptives to California from the East, and the proposed establishment of a State institution for the care of such patients, met recently. It was decided to recommend to the Legislature some legislation restricting the coming of consumptive persons to the coast. It was also decided not to support the plan for establishing a home for consumptives, the committee believing that such a move would result in encouraging tuberculous patients to come to California.

Medical and Surgical Society of the State of California.—This new society was incorporated in the city of San Francisco, December 20, last, by some of the best-known physicians of California.

Santa Fé Road Hospital, Albuquerque, N. M.—This big hospital burned down December 23, 25 patients, some of them extremely ill, being saved with great difficulty. There were many narrow escapes, and the effect of the alarm and the fire upon the patients has made many of them worse.

West Coast Medical College, California.—The new institution was incorporated December 20, with a capital stock of $100,000. The directors are Drs. C. W. W., F. and E. J. von Tiedemann, J. B. Gerino and F. B. Josephs.

Oriental Dispensary and Hospital, San Francisco.—The only Chinese hospital with Chinese doctors, Chinese medicine, Chinese nurses and Chinese patients, is situated on the border of Chinatown, San Francisco. It is a large new, two-story building and has but recently been erected. Up to this time a Chinese, unless afflicted with leprosy, in which case he was sent to the pest-house, was not admitted to the public hospitals. Rich Chinese merchants subscribed $30,000, the income of which supports the present Chinese hospital. There is a daily clinic held in the hospital, with a resident white physician and surgeon; there is also a Chinese department with a Chinese doctor. Patients entering are told to choose; about one half choose European treatment. As many as 400 cases are treated in a month, with only about 15 deaths. The hospital contains 40 beds.

SOUTHERN STATES.

Diphtheria on a U. S. Cruiser.—Diphtheria is epidemic on the U. S. Cruiser *Buffalo*, which reached Pensacola, Fla., December 30. Two deaths have occurred, and several men are seriously ill.

New Drug Laboratory, Chemical Bureau, Washington.—This new department, with the object of investigating adulterations and of establishing a uniformity in, and test of, drugs for future State and national legislation, has recently been established. This will probably result in the establishment of uniformity in the standard of drugs, and the American Pharmaceutical Association has already passed resolutions endorsing the new bureau. L. F. Kebler, of Philadelphia, has been appointed in charge.

Measles in Baltimore.—For the week ending December 27, 205 new cases of measles were reported, showing that the epidemic has by no means subsided. While but 2 deaths were down as due to measles, there were 43 deaths from pneumonia. There were also a number of cases of scarlet fever reported in the Eleventh district. There is one case of smallpox in Baltimore, and several cases have appeared in Belair, Md.

Baltimore Medical and Surgical Association.—At the last meeting, held December 22, several cases were presented by Dr. T. S. Cullen. No nominations of officers for the ensuing year were made.

Municipal Hospital, Baltimore.—Soon after the first of the year the Municipal Hospital Commission will meet, to consider the purchase of the Hardesty tract of 142 acres, adjoining Bayview Asylum, for the Municipal Hospital. For this purchase $50,000 have been appropriated. It has not yet been decided, however, whether this land will be used for buildings to relieve the congested condition of Bayview Asylum or whether part of it will be used for the Baltimore hospital for contagious diseases. It has been proposed to erect several glass buildings, like those recently planned in Philadelphia, for pavilions for tuberculous patients. In addition to this, it is expected that a home for boys may also be erected. The plans for the infectious disease hospital are to erect a number of cottages with an administration building, each of the cottages to be devoted to the different infectious diseases.

In Memory of Dr. Walter Reed.—The Medical Society of the District of Columbia held a memorial meeting in honor of the late Dr. Walter Reed, Major Surgeon, U.S.A., December 31. Addresses were delivered by Dr. S. S. Adams, president of the society, Medical Director Marmion, U. S. N., Surgeon J. R. Kean, U. S. A., Professor A. F. A. King, Dr. C. W. Stiles, General Leonard Wood, U. S. A., and Dr. W. H. Welch, of Johns Hopkins University.

American Association for the Advancement of Science.—Among the physicians present at the meeting, held this week in Washington, were Dr. Charles S. Minot, of Boston, professor at Harvard and formerly president of the association, Dr. Ira Remsen, president of Johns Hopkins University, Dr. William H. Welch and Dr. William Osler, of Johns Hopkins University. Many other prominent men, not physicians, were also present.

MISCELLANY.

Smallpox in the United States.—Between June 28 and December 26, 1902, there have been reported 15,656 cases of smallpox, with 806 deaths, as compared with 17,496 cases, with 595 deaths, for the corresponding period in 1901.

Cuban Quarantine Regulations.—Early in December the following maritime quarantine regulations were issued at Havana: Vessels considered not infected are those which, during their stay in the ports of countries in which yellow fever exists, have anchored more than half a mile from the wharf or coast, and that no other vessel which may be considered infected has been alongside of a noninfected vessel; or in cases of a vessel which has not fulfilled these conditions, but has been fumigated at a distance of more than half a mile from the wharf or coast, by means of pyretheum powder, one pound for each 1000 feet of space, under the inspection of a Cuban medical officer, properly detailed for that purpose. Vessels considered infected are all those from ports as mentioned above which have not complied with the above stated requisites; these are prohibited from tying up at wharves in Cuban ports. They will continue to be considered infected until disinfected. For passengers who are not immune, arriving on vessels considered not infected, the period of quarantine will be counted from the time of the sailing of the vessel from the port where such passengers embarked, if the vessel has always complied with regulations in all ports of call, and if no passenger in transit has gone ashore at such ports. Passengers arriving on vessels considered infected are to be subjected to 5 days' quarantine, which period will begin from the moment they disembark. Workmen who load and discharge cargo of infected vessels will have to be certified immunes, properly authorized by the maritime quarantine service.

Yellow Fever.—Between July 1, and December 8, 1902, 104 cases of yellow fever, with 16 deaths, have occurred at Panama, Colombia. Between July 4 and December 6, 27 cases, with 14 deaths, have occurred at Port Limon, Costa Rica. The disease is still epidemic throughout Mexico, Vera Cruz alone having had 438 cases, with 174 deaths, between June 7 and December 13.

Bubonic Plague in Mexico.—A disease appeared shortly before Christmas in Mazatlan, on the west coast of Mexico, near the Gulf of California, greatly resembling bubonic plague. In 3 days there were 25 deaths from the disease. Physicians in the city disagree as to whether the disease is bubonic plague or not. As no authentic reports have been received, the U. S. P. H. and M.-H. Service has sent an expert to Mazatlan to make a thorough inquiry into this disease, which, from all reports, is affecting almost exclusively Chinese laborers. Guatemala has established a quarantine against Mazatlan, although it is believed that the reports of the plague there are unfounded.

International Medical Congress, Egypt.—At this meeting, held at Cairo, which terminated December 24, the preparation of typhoid antitoxin and its use in the treatment of typhoid fever, as recently described by Dr. Chantemesse, of Paris, received the unanimous approval of the congress. In a paper read by Dr. Chantemesse, he stated that, from 1886 to 1898, typhoid fever caused the deaths of 56,623 people in France alone. By this method, by which 10 cg. to 12 cg. of serum are inoculated at the patient's elbow, the death-rate from typhoid fever has fallen from 19.3% to 3.7%. French people believe that this congress, recently ended, will be renowned for having pronounced the efficacy of the serum treatment of typhoid fever, just as the congress at Budapest, in 1894, was memorable for having established the efficacy of Roux's serum treatment of diphtheria.

Smallpox at Halifax, N. S.—The steamer *Assyria*, which reached Halifax from Hamburg, December 24, on her way to New York, was ordered to quarantine for 5 days, because a case of smallpox was discovered on board. Her passengers and crew, numbering over 600, were placed in quarantine for 18 days. The steamer was disinfected and allowed to proceed this week.

Cholera in the Philippines.—Latest reports state that cholera has again broken out about Manila, as many as 30 cases being reported daily. The provinces of Cavite, Batangas and Tayabas have been placed under military control. In Iloilo the death-rate is very heavy. The Philippine Commission has already spent $346,000 in the effort to stamp out the cholera. In Machi there are 50 deaths a day.

Sleeping Sickness in Uganda.—The School of Tropical Medicine has issued a report on the sleeping sickness which is now devastating Uganda. Though it was discovered only a few years ago, it is computed that the disease has already killed from 20,000 to 30,000 people, and is spreading to new areas with increasing virulence. Its extension to the north will be of the greatest menace to Egypt. Scientific reports describe the sleeping sickness as meningitis. It begins insidiously with the changes in the mental attitude of the patient. From that time the disease progresses and the patient becomes stupid and restless, and, after other symptoms have passed, becomes comatose and dies. The duration of the complaint varies from a month in acute cases to 6 months or more in others. The disease is almost invariably fatal, and although taking longer to cause death than hydrophobia, may be classed with the latter as one of the most fatal illnesses known to mankind. It is contagious and its spread is assured by overcrowding of many individuals in the same huts. The depopulation of many large and thickly populated areas is making itself felt, and the outlook is very gloomy. The only scheme yet devised for the prevention of the disease is the isolation of new cases.

Obituary.—Dr. John B. Combie at Pittsburg, Pa., December 23, aged 45 years.—Dr. George B. Beeler, at Baltimore, Md., December 23, aged 49 ears.—Dr. George W. Kennedy, at Pottsville, Pa., December 25.—Dr. Frederick L. Brady, at New York City, Decmber 24, aged 30 years.—Dr. Dennis J. Loughlin, at Philadelphia, Pa., December 27, aged 55 years.—Dr. William E. Brownell, at New Bedford, Mass., December 27, aged 43 years.

GREAT BRITAIN.

Lemon Juice in Typhoid Fever.—Dr. Asa Ferguson, of London, is credited with the statement that lemon juice, dropped into a test-tube containing cultures of typhoid bacilli, causes destruction of the bacilli. He is reported to have announced, therefore, that lemon juice was a typhoid germicide. One teaspoonful of lemon juice to a half glass of water kills all the typhoid bacilli present.

Children's Hospital, London.—Mr. W. W. Astor has given the sum of $250,000 to the Hospital for Sick Children in

Great Ormand street, for the erection of a new out-patient department, in memory of his daughter, Gwendoline, who died recently. It is reported that Mr. Astor has given a number of institutions large sums of money in recent years, among which may be mentioned $50,000 to the Maidenhead Cottage Hospital, $10,000 to the Prince of Wales' Hospital Fund, $50,000 to the Society for Prevention of Cruelty to Children, $50,000 to Cambridge University, and $100,000 to University College, London.

In Honor of Lord Lister.—Lord Lister, the discoverer of antisepsis in surgery, celebrated the fiftieth anniversary of his having become fellow of the Royal College of Surgeons of England, December 9 last. He was the recipient of a large number of congratulations and gifts. Several banquets were given in his honor, and some of the medical journals published Lister numbers to celebrate his anniversary.

Insurance Against Appendicitis.—The prevalence of appendicitis in London has induced Lloyds to issue insurance against it. For a premium of 5 shillings a man is assured that if he has to undergo an operation he will have expenses up to $1000 paid, and for death under or after an operation, $1000 more. This premium is the same as was charged for insurance during the smallpox epidemic of 1901.

No Hydrophobia in England or Australia.—In both of these countries the presence of hydrophobia has been completely stamped out by drastic measures and legislation regulating the importation of dogs. Every dog arriving in England is quarantined for several days, during which time it is examined by experts to ascertain whether the dog has rabies or not. Thus the lack of hydrophobia in England or Australia is due to the simple fact that no animal with rabies is admitted into the countries, and no other animal can contract the disease, since there is no chance of coming in contact with an animal having the disease.

A Bequest.—By the will of the late Mr. Henry Pearce, of Birkdale, $50,000 was left to the Birmingham General Hospital, Birmingham.

CONTINENTAL EUROPE.

Sulphuric Acid as a Preservative.—The Saxon Government permits the sale of dried fruits which do not contain over 0.125% of sulphuric acid, because the State Medicinal Board of Saxony finds that sulphuric acid is not in all cases detrimental to health, although it should not be used in conserves or food stuffs. Dealers selling fruit containing a higher percentage of sulphuric acid will not be punished, if circumstances warrant the belief that they have acted in good faith. For it is unsafe to fix the maximum amount of sulphuric acid which would not act deleteriously.

Open Air Hospital, Berlin.—At Schönholz, a suburb of Berlin, an open air hospital was started last May, for the children of the poor. Girls are admitted up to the age of 16 years, boys to the age of 10 years. No incurable invalids or children with serious chronic diseases are received. Twelve hours of each day are spent in the open air among the pine trees, at lessons, gymnastics, meals and naps. This method of treatment is especially applicable to children with tuberculosis. Similar hospitals for adults have been established in the neighborhood.

A New Device.—A very curious medical invention has been patented in Paris. It is likely to be of great use. It is a small apparatus which, placed under the arm of a patient suffering from fever, rings a small bell directly the temperature reaches a dangerous height, thus summoning the doctor or nurse.

Gynecological Society of East and West Prussia.—This society has recently been organized in Dantzic and Königsberg, with Professor Winter as director in Königsberg and Dr. Köslin as director in Dantzic.

Obituary.—Dr. Rudolf Massini-Meyenrock, professor of therapeutics and materia medica in the University of Basel, died suddenly, December 12.—Dr. V. Sobieranski, professor of pharmacology in the Medical School at Lemberg, also died recently.—Dr. Wenzel Bernazik, professor emeritus of medicine in the University of Vienna, died in Vienna, aged 82 years.

The Latest Literature.

BRITISH MEDICAL JOURNAL.

December 13, 1902.

1. Remarks on Plugging With Iodoform Gauze in Operations Performed in Cavities of the Body. ERNST VON BERGMANN.
2. An Essay on Scientific Surgery, the Antiseptic Method of Lister in the Present and in the Future. LUCAS-CHAMPIONNIERE.
3. Observations on Certain Cerebral Localizations. FRANCESCO DURANTE.
4. A Clinical Lecture on the Antiseptic Treatment of Wounds. The Antiseptic Treatment in Denmark. OSCAR BLOCH.
5. Contribution to the Treatment of Fractured Patella. PROF. VON MIKULICZ-RADECKI.
6. The Bradshaw Lecture on Infective Arthritis. HOWARD MARSH.
7. Remarks on the Influence of Lister Upon Military Surgery. ALEX. OGSTON.
8. An Address on Pasteur and Lister. BERRY HART.
9. Early Days in Edinburgh. THOMAS ANNADALE.
10. Lord Lister and the Evolution of Modern Surgery, etc. HECTOR C. CAMERON.
11. Edinburgh Royal Infirmary. 1869-1877. JOHN CHIENE.
12. Listerism and the Development of Operative Surgery. W. WATSON CHEYNE.

1.—Von Bergmann writes on the value of **iodoform gauze packing** in operations in which the pharyngo-oral cavity has been opened. After removing the upper jaw through the Velpeau or Dieffenbach incision, spurting branches of the internal maxillary artery are ligated, and the whole cavity packed tightly with iodoform gauze. The external incision is sutured and a few sutures are passed through the mucous membrane of the cheek and through the mucous membrane of that portion of the upper jaw which remains so as to form a net on which the tampon rests, thus securing it from falling into the mouth. The end of the gauze hangs out of the nostril. Of 70 total and partial resections of the upper jaw, infection was avoided in every case but one. Similarly the wound which remains in the floor of the oral cavity and in the lateral wall of the pharynx after extirpation of the tongue is tightly plugged with iodoform gauze. Because of the danger of aspiration pneumonia after these operations, the lingual artery is always ligated and a fistula between the mouth and the skin is established close to the laryngeal orifice. Of 159 operations for resection or extirpation of the tongue, not one patient died of cellulitis of the throat or floor of the mouth. In total extirpation of the larynx the cavity on either side of the pharynx, between it and the lateral muscles of the neck, is tightly packed with iodoform gauze and the trachea is completely shut off from the oral cavity by suturing it to the skin. The value of plugging the wound with iodoform gauze after excision of the rectum is also pointed out. [F. T. S.]

2.—Championniere writes on the **method of Lister in the present and in the future.** He says that aseptic surgery is nothing more than laboratory work, and that the surgeon must depend for success upon those who should be his servants: the architect, the engineer, the plumber, the assistants, the nurses and the onlookers; that, if the surgeon does not surround himself with impracticable precautions, such as masks, gloves, etc., the safety of the patient is imperiled. The ligature which is simply sterilized by physical means is subjected to a number of sources of infection before, during and after an operation. The doctrine of the master should be faithfully followed. [F. T. S.]

3.—As a result of the study of **cerebral localization**, Durante concludes: (1) That lesions, especially those determined by neoplasms, of the frontal lobes are nearly always accompanied by very grave phenomena of altered intelligence, which proves that the frontal lobes, and particularly the prefrontal, must be considered as the seat of the most elevated functions of the mind. (2) That the cortical center for hearing is situated in the temporal lobes, that each center is in relation with both the auditory nerves, and that the direct auditory bundle must be very much less active and smaller than the crossed auditory bundle. (3) That the site of the center for general sensibility and for muscular sense is in the parietal lobes, and that disturbances of general sensibility and of muscular sense may occur in the limbs independently of any disturbance of motility whatsoever. (4) That for the solution of various problems concerning the functions of the several regions of the human brain, operative surgery and pathological anatomy are more useful than experimental physiology, which has animals only at its disposal; the functional arrangement of the brains of such animals has some analogy with that of man, but certainly cannot be compared with it in every respect. [J. M. S.]

4.—Bloch details from personal experiences some of the **changes which Lister has wrought in the practice of surgery.** Thirty-five years ago it was a usual thing for young men to faint at the sight of suppurating wounds or to be made ill by the dreadful smell. These horrors, together with the agonizing pain of operation wounds, have been banished by Listerism. It is more difficult to be a good antiseptic surgeon than it is to be a good operator. Lister's only fault is that he has created many operators who are not surgeons. Bloch operates in a hospital 150 years old and minus many of the essentials of aseptic surgery, besides there are no rounded corners and smooth walls, but there is no danger in the picture hanging on the wall. It is Lister's portrait! Why such good results? Because Lister introduced antiseptic treatment. [F. T. S.]

5.—Mikulicz-Radecki pays a tribute to Lord Lister and discusses the **treatment of fractured patella.** The operative and the nonoperative methods give equally good results with a right interpretation of indications and a correct technique. Cases of fracture of the patella due to indirect violence in which the accessory ligaments are torn and in which the fragments are widely separated, are suitable for operation. Fractures due to direct violence in which the ligaments remain attached to both sides of the patella, thus preventing wide separation, are treated by medicomechanical means. Those cases in which the fracture is produced by indirect violence and in which the patients are unable to straighten the knee, the effort causing a perceptible increase in the separation. In the same way an increase in the gap occurs if the knee-joint is passively flexed. The decision as to operation must be made, at the latest, by the end of the first week, for the later one operates the more difficult does the operation become and the more uncertain the result. The medicomechanical treatment is as follows: Immobilization of the joint for a short time with elastic compression to hasten reabsorbtion of the effused blood, massage of the knee joint, especially the quadriceps, starting from the second to the fourth day; the patient gets up at the end of the first week with a removable plaster-of-paris splint, which he lays aside at the end of the third week. At this period careful active and passive movements begin, and later exercises with medicomechanical apparatus are employed. Mikulicz operates without exsanguinating the limb, makes a transverse incision, uses 3 or 4 brass wire sutures for uniting the fragments, always sutures the ligaments, practises asepsis only, does not drain, and conducts the after treatment the same as if the patella were not sutured excepting for immobilization of the limb during the healing of the cutaneous wound. Of 45 cases, 16 were treated without operation. In 9 instances in which operation was not employed, the result was good in 8 and only moderate in one, in 2 of these cases the line of fracture could no longer be recognized with the X-rays. Suture of the bones was done 30 times for 29 patients. Of 17 cases of primary suture of the patella, of which the final result was known, only one showed a bad result. In 8 cases of late suture only one gave an unsatisfactory result. [F. T. S.]

6.—Marsh discusses **infective arthritis** due to the pneumococcus, to typhoid fever, influenza, scarlet fever, dysentery, erysipelas and glanders. [F. T. S.]

7.—Ogston calls attention to the **conservatism in military surgery which has been developed by Listerism.** [F. T. S.]

LANCET.

December 13, 1902.

1. The Bradshaw Lecture on Infective Arthritis. HOWARD MARSH.
2. An Address on the Surgery of Acute Appendicits. C. B. LOCKWOOD.
3. The Clinical History and Symptoms of 120 Cases of Exophthalmic Goiter. GEORGE R. MURRAY.
4. The Incidence of Alkaptonuria; a Study in Chemical Individuality. ARCHIBALD E. GARROD.
5. Ablation of the Crystalline Lens to Rectify High Myopia. WILLIAM J. COLLINS.
6. A Case of Chronic Gastric Ulcer Successfully Treated by Excision. ERNEST W. HEY GROVES.
7. Notes on Sleeping Sickness. C. A. WIGGINS.

1.—See current number of *British Medical Journal.*

2.—Lockwood concludes that most of the difficulties in the **diagnosis and treatment of appendicitis** are due to insufficient knowledge of its morbid anatomy and pathology. In most of the cases the clinical symptoms will tell us the extent and intensity of the inflammation, and whether it is progressing or receding. The larger number of cases of acute appendicitis run a favorable course. Each case must be judged upon its individual merits in regard to the question of operation. The degree of pain and rigidity indicates the degre of inflammation. Sharp pain at the end of micturition occurs when the pelvic peritoneum is inflamed. A recurrence of vomiting after the gastric contents have been voided is an ominous sign. Rectal examination is of great value when the appendix is located in the pelvis. The value of the pulse, temperature and the respirations is in the order given. The presence of pus cannot be inferred with certainty from the leukocyte count. Paralytic intestinal obstruction is seldom absent after the peritonitis has been established for some hours. When the question of operation is in doubt, it is better to operate. Lockwood is strongly adverse to the use of morphine and purgatives. Enemata skilfully used afford relief and are unattended with any danger. It is better to make a determined attempt to remove the appendix than deliberately leave it behind. [F. T. S.]

3.—Murray presents **the clinical history and symptoms of 120 cases of exophthalmic goiter.** The greatest liability to the disease exists between the ages of 15 and 35 years. He found no instance of heredity; the parents in none of these cases having had exophthalmic goiter. In some, certain circumstances (sudden prolonged grief and anxiety), which are considered as exciting causes, seemed to have a definite relationship to the onset of the disease. In most of the cases the thyroid gland was found enlarged at the time the patient was examined, in 5 cases there was a history of previous enlargement and in 3 cases entire absence of enlargement. In 27 of his cases it was slight, in 36 it was moderate, and considerable in 20. It was generally uniform, often the right was larger than the left, in only 2 instances was the left lobe larger than the right, in 2 the right lobe alone was enlarged and in one the right lobe and isthmus. In 14 cases a thrill was felt over the enlarged gland. In 33 a bruit was heard, which was systolic in time in 23 instances, in 7 it was continuous, and in 3 of these it was much louder with each systole of the heart. The frequency of the pulse varied from 90 to 200. The pulse was usually regular; irregularity of rhythm was observed only in 8 instances. Systolic murmurs were heard over the heart in many of the cases; in 17 in the pulmonary area, in 16 over the mitral area and in 8 both mitral and pulmonary areas. In one case a presystolic murmur was heard at the apex, and in 24 no murmur was heard at all. The apex-beat was felt over a larger area than normal, in many cases it was displaced to the left. He noted the condition of the eyes in 114, of which 79 showed exophthalmos. In 3 there had been prominence of the eyeballs at an early stage, and in **32 cases there was no exophthalmos at all.** A delay in the natural fall of the upper eyelids (von Graefe's sign) was found in 36 out of 91 cases, in which the presence or absence of this sign was noted. Retraction of the upper eyelids was noted in 47 cases and absent in 29. **A fine regular tremor of the hands was observed in 111 cases, which he thinks is one of the most constant symptoms of this disease.** In 4 cases no tremor was found. He found that nervousness and irritability of temper were very constant symptoms. One patient had melancholia with suicidal tendencies. The skin was generally warm and flushed at times, and perspiration was increased very frequently. Increased frequency of respiration was seen in some cases. In 11 cases variations in the appetite were noticed. In 4 cases thirst was complained of. In 35 instances, more than one quarter of the total number, there was liability to diarrhea; constipation occurred in 8. In 19 cases the urine was studied; a trace of albumin was found in 4 cases and sugar in one. One hundred and ten cases occurred in women, 23 of which showed irregularity in menstruation. Loss of weight was a common symptom. The course of exophthalmic goiter is generally so slow and protracted and it varies so in different cases that the author thinks it difficult to follow; the prognosis is often uncertain. In 2 instances the disease ran a short course, one terminating favorably and the other the reverse. He gives a short account of the treatment which proved most successful in his cases. No hard-and-fast lines can be laid down for the treatment of this disease. It is interesting to note that he has found thyroid extract harmful, it often exaggerated the symptoms and should not be given in exophthalmic goiter. [F. J. K.]

4.—Garrod discusses **the incidence of alkaptonuria.** He inclines to the view that alkaptonuria is not the manifestation of a disease, but is rather of the nature of an alternative course of metabolism, harmless and usually congenital and lifelong. [F. J. K.]

5.—Collins contributes an article on **the ablation of the crystalline lens to rectify high myopia,** with the reports of 9 cases. In all those patients in whom the lenses have been removed for high myopia, some improvement of vision followed, in some very great improvement, and in no case was the operation followed by untoward symptoms. The improvement in vision was so marked in some that glasses were not required. He contends that the operation in suitable cases, a limited class, is so reasonably safe and attended often with such brilliant results that it should be regarded as a recognized procedure in the treatment of high or advancing myopia in young persons. [F. J. K.]

6.—Groves reports a case of **chronic gastric ulcer successfully treated by excision.** The patient was a man, aged 48 years, who suffered for 2 years and 4 months from epigastric pain, vomiting and loss of flesh. A tumor could be felt in the abdomen. Through an abdominal incision a portion of the anterior wall of the stomach, measuring 2 by 1¼ inches, containing the area of ulceration, was excised. The patient recovered. [F. T. S.]

7.—Wiggins presents **notes on sleeping sickness.** The notes were gathered while studying at Wa-Semi, among a people belonging to the Wa-Kavirondo, residing on the north shore of Kavirondo bay in Lake Victoria Nyanza, about one and one-half days' journey from Kisumu, the inland terminus of the Uganda railway. At this place he found this disease very common, and it appeared to be spreading very rapidly. Nearly one-half of the population was affected with it. He gathered notes of 150 cases and also blood films. He was unable to find filariæ perstans in any one of the films, though he has found it in nearly every Msoga resident whether he was healthy or otherwise. Dr. A. D. P. Hodges has found filariæ perstans in all his patients among the Wa-Soga and in the Wa-Kavirondo. The most direct sign of the disease is the expression of the patient. The disease runs a well-defined course of from 4 to 5 months. At the end of the first month the patient presents a vacant expression with a characteristic drooping of the lower lip. At the end of the second month the patient becomes listless, the face gets puffy, the upper eyelids begin to droop. At the end of 3 months the symptoms intensify, saliva drips over the hanging lip, and the whole body is dirty. Tremors are present in the limbs, especially in the arms. At the end of the fourth month the sufferer cannot get around, he lies on the ground in his hut without changing his position. During the fifth month sores develop over his body. The eyes are closed, the patient is unable to speak. This state lasts from a fortnight to a month, when death ensues. The appetite is increased during the first 2 months. Emaciation sets in rather rapidly. The pulse quickens and the temperature is normal or subnormal. The superficial glands were found enlarged in a number of cases. He remained in the district a week only, and for that reason any attempt at treatment was useless. [F. J. K.]

MEDICAL RECORD.

December 27, 1902.

1. On Some of My Principles in Orthopedic Surgery. ADOLPH LORENZ.
2. What Can Be Done to Prevent the Spread of Syphilis. E. HARRISON GRIFFIN.
3. X-Light in Therapeutics. CLARENCE EDWARD SKINNER.
4. Typhoid Gangrene. CHARLES E. NAMMACK.
5. The Etiology of Relapse in Enteric Fever. H. N. RAFFERTY.
6. Pasteurized and Sterilized Milk as a Cause of Rickets and Scurvy. E. M. SILL.

1.—Lorenz states that he prefers bloodless operations to bloody ones as long as the bones are elastic enough. He prefers **osteoclasis to osteotomy;** this latter operation is exclusively reserved for adolescents and adults; in **hip deformities** he prefers **bloodless corrections to osteotomy** as long as even the slightest motility of the joint is present; only in cases of complete bony ankylosis does he operate with the chisel. All cases of **knee contractures he corrects** by the **intra-articular modelling redressement,** as long as even the slightest motility can be found. Only cases of complete bony ankylosis of the joint, which are rarer than is usually believed, are reserved for the bloody operation. In all **deformities of the foot,** both paralytic and congenital, he relies exclusively upon his method of modelling redressement of the foot. He does not sympathize with the **total extirpation of the sternocleidomastoid in wry-neck** and states that **subcutaneous myotomy,** in connection with the **modelling redressement of the cervical skoliosis,** is sufficient to cure the condition and without leaving a scar. Another principle which he has always followed is the so-called central correction of deformity, which means that every deformity should be corrected in the vertex of its angle. His standpoint on the question of treatment of **tuberculous diseases of the joints** in children, he declares, is rather one of expectancy, but he has never made a resection of a tuberculous joint in a child. [T. L. C.]

3.—Skinner is of the opinion that, in the **treatment of malignant disease, X-light and operative interference** will ultimately join hands in dealing with the majority of cases. In certain cases of mammary cancer (which he classifies) X-ray therapy may be resorted to as a preferable means of treatment. In this contribution Skinner reviews the various conditions in which radiotherapy is indicated and the results which this treatment promises. [T. L. C.]

4.—Nammack reports a case of **typhoid gangrene** in which the process extended in both legs to the upper third of the thigh and was due to **arterial thrombosis.** The patient has refused operation. The rarity of this condition is attested by the fact that **no case of arterial thrombosis** was found in 2000 autopsies on typhoid fever patients in Munich, although the same series showed 59 cases of thrombosis of the femoral vein. [T. L. C.]

5.—Rafferty states that there is strong probability that

a large percentage of relapses in typhoid fever is due to the gall-bladder and liver colonization and subsequent reinfection of the duodenum and lower bowel with the bacilli-laden bile. [T. L. C.]

6.—Sill holds that cows' milk is the best substitute for mother's milk, when properly prepared; but cows' milk is not bettered by sterilization or pasteurization; on the contrary, he believes that this treatment undoubtedly makes it the direct cause of rickets and scurvy and kindred diseases in children. The object of pasteurization can be safely accomplished, in his opinion, by receiving the fresh milk in sterilized quart bottles, which are then tightly sealed, labeled with the dairyman's name and the date, and cooled immediately in a temperature of 40° F. [T. L. C.]

MEDICAL NEWS.

December 27, 1902. (Vol. 81, No. 26.)

1. Recent Advances in Electrotherapeutics. WILLIAM J. MORTON.
2. Imitation, Suggestion and Social Excitements. JOHN BESSNER HUBER.
3. Cutaneous Angiomata and Their Significance in the Diagnosis of Malignant Disease: A Statistical Study Based upon the Observation of Nearly Four Hundred Cases. DOUGLAS SYMMERS.
4. The Rapid Microscopical Diagnosis of Fresh Tissue: With Special Reference to Staining. F. T. BILLINGS.
5. Indications for the Performance of the Mastoid Operation. WILLIAM C. BRAISLIN.

1.—Morton says that the high potential, high frequency currents produce an increased output of heat, of water, of carbonic acid, of phosphates and of urea; in short the oxidations or combustions are increased and tissue metamorphosis accelerated. Electrification is applied to general and constitutional conditions, and is found to be especially useful in diseases of perverted and defective nutrition, like rheumatism, gout, obesity, anemia and general diseases of malnutrition. [T. M. T.]

3.—Symmers makes the following statement: That skin angiomata bear no relationship to malignant disease, and that their existence, even in large numbers, is not to be viewed with any degree of alarm, so far as cancer is concerned: that they form a frequent, practically an invariable, concomitant of the decay of advanced years, and in both young and old are probably significant of some form of well-marked arterial degeneration. [T. M. T.]

4.—Billings sums up the different steps of hardening and staining sections of fresh tissue for microscopical examination as follows: (1) Fresh specimen set upon freezing stage, frozen and cut; (2) section wiped off knife and placed in water; (3) alcohol, 50%, 2 minutes; (4) alcohol, 95%, 3 minutes; (5) hemalaum, 3 minutes; (6) wash in water; (7) alcoholic solution of eosin, 30 seconds; (8) alcohol, 80%, 3 minutes; (9) alcohol, 95%, 3 minutes; (10) carbolxylol, 2 or 3 minutes; (11) mount in Canada balsam. The whole process should not take more than 25 minutes, and the result, as a rule, is very satisfactory. [T. M. T.]

5.—Braislin gives the following symptoms for immediate operation: (1) Pain continuous and severe, making sleep impossible, and radiating upward along the side of the head to the vertex, backward to the occiput, or more rarely forward to the frontal region; (2) the temperature, even in children, does not often keep at a high point after the first days of acute illness, but it is often markedly irregular; (3) a falling of the posterior superior wall of the external auditory canal. This is caused by edema of the periosteum and tissues over the mastoid cells or may be due to the actual burrowing of pus; (4) tenderness over the mastoid is the rule in cases calling for operation, but there are exceptions. Other severe symptoms may be present pointing to perforation of the tegmen tympani. [T. M. T.]

NEW YORK MEDICAL JOURNAL.

December 27, 1902.

1. The Operative Treatment of Deformed Fractures as Indicated by the Röntgen Rays. CARL BECK.
2. Rerocecal Abscess Developing Three Years After Removal of the Appendix. THOMAS S. CULLEN.
3. Personal Experience with McGraw's Method of Gastro-enterostomy. SAMUEL LLOYD.

1.—Malunion is often followed by such changes in the direction, shape and length of a limb that this function becomes impaired or annulled. Impairment of shape is generally not so grave as that of length, especially when the lower extremities are concerned. Up to the present time the **correction of these deformities** has not been frequently undertaken, although the Röntgen rays now enable us to make the diagnosis. Beck says that, if 2 or 3 weeks only have elapsed after the injury, refracture will often suffice to correct the deformity. Transverse fracture may even be tried months afterward. If such procedures fail, osteotomy is the only remedy. In fracture of a single bone a longitudinal incision should be made, while in fracture of 2 bones a semilunar incision is more advantageous, since it exposes both bones simultaneously. He speaks of the dangers from the interposition of nerves between the fragments, causing paralysis, and muscle producing pseudarthroses. In fractures of the lower half of the humerus or the upper end of the fibula, the possibility of nerve interposition should never be lost sight of. He exhibits several interesting skiagraphs and gives 5 complete case-histories with results obtained from treatment. [P. B. B.]

2.—Cullen reports an interesting case of **retrocecal abscess** following 3 years after the removal of the appendix. He believes that in this case there was a pocket of pus undiscovered at the operation 3 years before, and that increased inflammatory activity was due to the reception of an injury sustained in this area. [P. B. B.]

3.—Lloyd describes **McGraw's method of gastro-enterostomy as performed with the elastic ligature.** He reports 7 interesting case-histories, and from this series of cases he has reached the following conclusions: This method enables us to save considerable time. It has some advantages over the Murphy button. By its use we are able to make as large an opening as we desire. It would not be applicable in cases of entero-enterostomy necessitated by a complete intestinal obstruction. It may be applicable, however, to cases of incomplete obstruction. [P. B. B.]

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

December 27, 1902.

1. Obstetrics and the General Practitioner. M. H. FUSSELL.
2. Three Cases of Involuntary Movements in Locomotor Ataxia. J. H. W. RHEIN.
3. Sanitary Measures for the Prevention of Tuberculosis in New York City, and their Results. HERMANN M. BIGGS.
4. A Peculiar Case of Recurrent Bullous Eruption. WILLIAM S. GOTTHEIL.

1.—See **Philadelphia Medical Journal**, June 21, 1902, page 1099.

2.—See **Philadelphia Medical Journal**, June 21, 1902, page 1119.

3.—Biggs contributes an article on the sanitary measures for the prevention of tuberculosis in New York City, and their results. He points out that the Department of Health of New York City has requested notification of all cases of tuberculosis, but has not prosecuted physicans who have failed to report cases. The records of living patients and of deaths are preserved in two card indices—one, a name-index arranged alphabetically, the other a street-index, arranged by streets and by the house-numbers in each street. The dead are entered on blue, the living on pink cards. Other information is also added—age, sex, occupation, etc. The department has found that nearly

80% of those dying from tuberculosis in the Borough of Manhattan have previously been reported to the department while living as suffering from this disease. More and more cases are constantly reported, and the data are constantly increasing. The important results of this work show that there has been a reduction of the death-rate, and that individuals are becoming educated as to the infectious nature of tuberculosis and to the measures necessary for its prevention. The author points out that among the most pressing needs of the future are larger and better equipped hospitals for the treatment of advanced cases and municipal sanatoria outside of New York for the care of incipient cases, the inspection of factories, shops and all other places in which phthisical patients may be found, and a more strict enforcement of the sanitary ordinance prohibiting spitting in public places, workshops, etc. The death-rate from tuberculous disease in the Borough of Manhattan and the Bronx (old New York) has been constantly decreasing; in 1886 it was 4.42, while in 1901 it was 2.89. The author views the progress made as a sure one, and believes that we may confidently anticipate, as the result of our continued efforts, the almost complete eradiction of tuberculosis, the most fatal disease with which sanitary authorities have to deal. [F. J. K.]

4.—Gottheil reports **a peculiar case of recurrent bullous eruption**, occurring in a girl, 5½ years of age. This eruption appeared in the fall of 4 successive years; it ran a definite course and was unaccompanied with other symptoms. He hesitates to term it a benign pemphigus, on account of its periodicity and the absence of an inflammatory areola around the bullæ, yet this term is the one that would fit it best. [F. J. K.]

AMERICAN MEDICINE.

December 27, 1902.

1. The Diagnosis of Cancer of the Stomach. WILLIAM FITCH CHENEY.
2. Lumbar Puncture as a Curative Agent in Meningitis, With Report of a Case. S. ORMOND GOLDAN.
3. An Autopsy Four Hours Post Partum on a Subject on Whom Ventral Hysteropexy Had Been Done Four Years Previously. BYRON ROBINSON.
4. Hydrops Tubæ Profluens, With Report of Cases. F. HURST MAIER.
5. A Case of Corrosive Sublimate Poisoning from a Vaginal Douche. HORATIO C. WOOD, JR.
6. A Case of Herpes Zoster Ophthalmicus Complicated by Oculomotor Palsy. WILLIAM ZENTMAYER.

2.—Goldan reports a case diagnosed as **tuberculous meningitis** cured by **lumbar puncture.** He offers as an explanation of the beneficial result following the puncture that it was probably due to a reduction of the fluid tension by means of which absorption again took place and equilibrium was established analogous to what occurs in many instances in pleurisy and ascites. [T. L. C.]

3.—Robinson presents the report of an autopsy 4 hours post partum on a subject on whom **ventral hysteropexy** had been done 4 years previously. His conclusions, drawn from a study of this case, are as follows: (1) Death was caused by invagination of the post partum uterus, due to a ventral hysteropexy performed 4 years previously. (2) The direct cause of the invagination was the atrophy of the fundus, due to the dragging of the peritoneal band on the fundus. (3) The direct cause of death was heart shock. The trauma was carried to the heart over the hypogastric and ovarian plexuses by way of the abdominal brain and splanchnics to the cervical ganglia. Here the nervous shock was reorganized and carried directly to the heart over the 3 cervical cardiac nerves. The force passed also over the second, third and fourth sacral nerves by way of the spinal cord to the brain, where it was recognized and emitted directly to the heart over the pneumogastric. (4) This patient experienced suffering during gestation from dragging of the peritoneal band fixed to the uterine fundus. The author has known of a number of cases of severe pain during gestation which had followed a ventral hysteropexy. Reports are constantly increasing in which Cesarean or other section is required at parturition subsequent to the performance of ventral hysteropexy. (5) It is rational to conclude, therefore, that ventral hysteropexy should not be performed on a reproductive person. (6) The large majority of women with retrodeviations are not suffering from the uterine displacement, but from the accompanying myometritis, which is the chief pathological factor, and which is not cured by producing another fixation and dislocation of the uterus. [T. L. C.]

4.—Maier reports 2 cases of **hydrops tubæ profluens,** a condition which, he believes, has been found, although it is an extremely rare one. Its pathology is nearly the same as that of ordinary hydrosalpinx, the difference lying mainly in the **form of occlusion** that exists. [T. L. C.]

5.—Wood reports a case of **corrosive sublimate poisoning from a vaginal douche.** The patient recovered. This case shows the possibility of absorption through the vaginal mucous membrane, as well as the great danger of the use of bichloride as an internal antiseptic. [T. L. C.]

DEUTSCHE MEDICINISCHE WOCHENSCHRIFT.

October 30, 1902.

1. Concerning a New Variety of Diphtheria Serum. A. WASSERMANN.
2. The Origin of a Malarial Epidemic in the Harlinger and Jeverland Region During the Year 1901. E. MARTINI.
3. Acute Syphilitic Nephritis. WALDVOGEL.
4. The Question of the Origin of the Basophile Granules in the Red Bloodcorpuscles. P. SCHMIDT.
5. The Significance of the Typhoid Bacillus in Diseases of the Respiratory Apparatus in Typhoid Fever, and the Appearance of the Bacillus in the Sputum. Conclusion. F. GLASER.
6. On the Frequency of Maternal Nursing. H. NEUMAN.

1.—Wassermann has taken dead diphtheria bacilli, dried them, ground them up, extracted them after the method of Aronson, and injected this extract into animals. It produced death, as a rule, commonly with great rapidity; but when diphtheria antitoxin was injected first the solution of the bacilli could be injected in considerable quantities. The serum of the animals so treated **caused a precipitate in the extract of the diphtheria bacilli.** Diphtheria antitoxin had no effect upon the solution of the extract of the bacilli, nor had normal serum; hence, there was a precipitin to the extract of diphtheria bacilli, and, apparently, the effect was specific to diphtheria bacilli. The author thinks that **this serum may be of use in practice, particularly in cases in which the bacilli persist in the throat,** in spite of the fact that the toxic symptoms of the disease have disappeared. [D. L. E.]

2.—Martini gives extensive details of his study of an epidemic of malaria that occurred in a region previously free from that disease, along the North Sea. He traced the epidemic to a body of Dutch laborers that were excavating and building dykes. Some of these were infected, and came from an infected region, and the **epidemic appeared in the region in which these workmen were at that time located;** it developed after the appearance of warm weather and the arrival of mosquitoes. The disease followed the infected persons from the original point to other regions round about, and the anopheles were found in considerable numbers in all the places in which malaria appeared. [D. L. E.]

3.—Waldvogel first refers to the **difficulties in demonstrating absolutely that nephritis is due to syphilis.** In order to do this, it must be demonstrated that there has been no previous disease that is frequently complicated with nephritis; that florid syphilis has either immediately preceded or accompanied the outbreak of nephritis; and, finally, that treatment with mercury has, without otherwise changing the general life of the patient, caused the rapid disappearance of the symptoms of nephritis. The author describes a case that he believes fulfils these tests better than any other that has, as yet, been reported; although he admits that there are certain facts about this case, as well as about all others that have been reported as syphilitic nephritis, which indicate the possibility that the nephritis may have been due to some other cause. So far as is known, the patient had had no previous disease that would have been likely to give rise to nephritis. He acquired syphilis, and, shortly afterward, exhibited the signs of a marked nephritis, the latter disappearing rapidly under the influence of inunctions of mercury. Waldvogel insists that, in these cases, mercury is much better than iodides. [D. L. E.]

4.—Schmidt considers that the basophile granules in the red corpuscles are an evidence of regeneration. He reports the case of a man who had lived in the tropics and who, on his journey home, was seized with attacks of tropical malaria. After the use of quinine this patient developed hemoglobinuria. He was extremely anemic. The blood contained megaloblasts and normoblasts, and showed other alterations; but there were no basophile granulations. A week later, at a time when the man had greatly improved, but when the blood had not changed in other ways, there was a sudden appearance of very numerous basophile granulations; and it was afterwards noted that at a time of blood-regeneration, basophile granules appeared in large numbers. Polychromatophilia ran an almost coincident course with that of the basophile granules. The author also notes the occurrence in this patient of black-water fever after the use of methylene blue. In conclusion, he insists that basophile granules in malarial patients were chiefly observed, in his experience, during the period of convalescence. He also notes the appearance in the circulating blood of some parasites that were apparently transitional forms between the ring and the half-moon shapes. This form has, apparently, never been observed in the circulating blood. It is not at all improbable that they may be found in the bone-marrow. [D. L. E.]

5.—Glaser refers to the last case mentioned in the last number, and states that for about two weeks the sputum showed enormous numbers of typhoid bacilli, which were definitely determined to be such. A few patients in which typhoid bacilli appeared in the sputum in considerable numbers have been previously described. These are of importance from the hygienic standpoint. In only one instance of so-called typhoidal pneumonia has there been serious doubt as to whether the pneumococcus caused the pneumonia or not. The author is strongly of the opinion that, even in this case, typhoid bacilli did not cause it. He refers to the importance of hemorrhagic sputum as indicating pneumonia in typhoid fever. The sputum in the pneumonia of typhoid fever is much more markedly hemorrhagic than in pneumonia under other circumstances. Glaser insists, however, that hemorrhagic sputum does not definitely indicate the presence of a pneumonia, because pulmonary infarct is not very uncommon in typhoid fever. He then describes a patient in whom it was extremely difficult to determine whether there was an infarct or a pneumonia. The patient developed a pleurisy that became suppurative, but got well after aspiration. Typhoid empyema is usually of very favorable prognosis. In this case the typhoid bacilli contained in the effusion were found to be virulent. The author then refers to another patient, who showed clinical signs strongly suggesting pneumonia, but in whom post mortem examination showed that the pulmonary condition was infarct. He closes with the admission that it is possible that typhoid bacilli may produce pneumonia; but he thinks that it is highly probable that they do not cause lobar pneumonia, and that it is not unlikely that they do not produce lobular pneumonia. [D. L. E.]

6.—In a study of the frequency of maternal nursing in Berlin, Neumann directs attention to the fact that the percentage of children nursed by their mothers has fallen from over 55 to below 32. The frequency with which wet-nurses are used has also fallen from 2.7 per cent. to 0.7 per cent., while the frequency with which milk of animals is used has risen from 33.9 to 54.8 per cent. In spite of all this, the figures for mortality from intestinal diseases have fallen. This shows how important has been the regulation of the milk supply and of the city hygiene. [D. L. E.]

November 6, 1902.

1. On the Present Status of the Communicability of Tuberculosis of Cattle to Human Beings. KOEHLER.
2. On Further Uses of Precipitins. A. SCHUETZE.
3. Two Cases of Carcinoma of the Esophagus that Ran the Course of Aortic Aneurysm. R. KUCKEIN.
4. The Recognition of Fetal Syphilis. R. HECKER.
5. The Relation of Enlargement of the Thymus to Sudden Death. M. PENKERT.

1.—The article is a general review that leads up to the conclusion that it is not yet determined whether tuberculosis of cattle and that of man are due to different organisms. It is, therefore, not known whether they are intercommunicable. It is, however, certain that tuberculosis of cattle is of less importance to human beings than tuberculosis in other human beings. It is very important to see that milk is sterile, less on account of tuberculosis than on account of typhoid fever, scarlet fever and other diseases. In connection with tuberculosis, however, it is chiefly important to see, so far as this is possible, that no opportunity is given for one tubercular person to infect another. Measures taken with this object in view are the most important of all in relation to the spread of tuberculosis and the limitation of this disease. Consequently, hygienic regulations of human beings and, as far as possible, their isolation in sanatoria are the chief matters of importance in connection with the control of tuberculosis. [D. L. E.]

2.—Schütze has injected rabbits with the blood of other rabbits and has found that, as a result, in only 2 cases out of 32 experiments was there any evidence of the production of a precipitin; but this was a specific precipitin for rabbits' serum. He has, however, injected goats' milk into a goat, with the result that the bloodserum subsequently caused a marked precipitation in goats' milk, but did not cause any precipitation in heterologous milks. Hence, he did produce an isoprecipitin, and he has given new evidence of the true specificity of lactoserums. He states that he has also produced petone serums that will distinguish human peptones from animal peptones. He has likewise produced very active immune serum and found that it has a specification upon semen, a fact that he considers of some importance in medicolegal work. He believes that in such work, it is only necessary to inject with bloodserum in order to obtain a specific reaction. He has, also, studied various yeasts, thinking that it might be possible to distinguish them by biological methods; but he has come to the conclusion that the albuminous substances in these yeasts are practically the same, so that they are not distinguishable by biological methods. [D. L. E.]

3.—The case described is one that occurred in a man, 47 years old. The whole symptom-complex had closely resembled that of aortic aneurysm, and the X-rays had even shown a mass with expansile pulsation in the position that would be occupied by an aneurysm of the arch of the aorta. Post mortem examination, however, showed a large carcinoma, that had originated in the upper and middle parts of the esophagus. The tumor had grown chiefly centrifugally, and had rapidly broken down inside, so that the

lumen of the esophagus had remained open; there had been no dysphagia. It had also grown almost entirely on the anterior wall. As a result, it had not produced the cardinal symptom of esophgeal carcinoma, viz., obstruction, but had produced the signs of a mediastinal mass. The expansile pulsation was dependent upon the fact that **the aorta lay directly against the tumor, and it was the pulsation of the aorta itself that had been observed.** (*To be concluded.*) [D. L. E.]

4.—Hecker's own material in 62 dead children showed, by microscopical examination, that 26 per cent. were positively nonspecific, 53 per cent. were syphilitic, and 9.7 per cent. were doubtful; and that in all 11 per cent. no result could be obtained from the examination. The importance of determining whether a still-birth is due to syphilis or not is evident. The author considers that this **can be done satisfactorily only by microscopical examination.** Of those cases of his that were definitely syphilitic, gross examination would have left about ½ doubtful or unrecognized. A macroscopical diagnosis was made only when at least 2 organs showed characteristic signs; for instance, when there was present osteochondritis and tumor of the spleen. The spleen, the bones and the liver are the most commonly affected; but the author has found that the liver and spleen are usually extremely difficult to examine microscopically, because they so readily become macerated. The kidneys are, by all means, the most satisfactory organs to examine microscopically. As a result of such examinations, Hecker states that he has **found the kidneys involved in 90 per cent. of cases, the spleen in 61 per cent., the thymus in 50 per cent.,** the pancreas in 46 per cent., the bones in 43 per cent., the liver in 23 per cent., the lungs in 17 per cent. and the umbilicus in 16 per cent.; hence, the kidneys most constantly show pathological changes, while these are comparatively uncommon in the lungs and liver, largely because the latter organs become macerated so easily that the changes are not recognizable. The author also insists upon the frequency of syphilitic changes in the spleen and thymus. Osteochondritis he found in only half of the cases; when present it is pathognomonic. [D. L. E.]

5.—The question of the relation of enlarged thymus to sudden death is discussed. Penkert, taking the stand of his chief, Grawitz, that it is directly related to sudden death through pressure. He reports 2 cases, one of which is of importance because he believes that the **absence of all other causes of death was definitely demonstrated,** and thinks that **the enlarged thymus must have caused death by suffocation.** Thymic asthma is a term that should be used with great care, because, as a rule, acutal asthmatic attacks are not present. It is not a good term for those patients who die suddenly without asthma. Penkert believes that, if the thymus is enlarged, the assumption of an unusual position may be sufficient to cause it to exercise enough pressure upon the trachea to cause obstruction. This, he thinks, is the case in sudden death while swimming, as bending the head backward causes the thymus to exercise pressure. This position also causes the thymus to swell from obstruction of the venous circulation. The author, likewise, refers to a case of Siegel's, in which severe dyspnea was not controlled by tracheotomy, but was finally controlled by pulling the enlarged thymus away from the trachea. [D. L. E.]

MUENCHENER MEDICINISCHE WOCHENSCHRIFT.

October 28, 1902. (No. 43.)

1. The Value of the Elastic Stain for Histological Diagnosis. B. FISCHER.
2. The Sahli Method for Testing the Function of the Stomach. BOENNIGER.
3. Further Contribution to the Treatment of Noma by Excision of the Diseased Tissue. H. v. RANKE.
4. Ovariotomy During Pregnancy. GRAEFE.
5. Suture of the Bladder for Sectio Alta. C. HOFMANN.
6. Recent Attacks Against Paracentesis of the Tympanic Membrane in the Treatment of Acute Otitides. GRUNERT.
7. A Case of Congenital Cystic Kidney of Pararenal in a Syphilitic. H. FELS.
8. Retrospect of 720 Laparotomies for Gall-Stones, with Especial Consideration of 90 Cases of Drainage of the Hepatic Duct. H. KEHR.

1.—Fischer is much pleased with **Weigert's method of staining the elastic fibers.** He considers it of especial value in staining tumors, because, on account of the sharpness of details, it enables a rapid and accurate study of the topography of the part and enables us to tell with certainty when the tumor has penetrated the wall of a bloodvessel. He mentions a tumor in the neck in which a diagnosis of benign lymphoma was corrected by the discovery of rupture of the tumor into the bloodvessels. Moreover, as the elastic fibers maintain their integrity in various destructive processes better than the other parts, staining them often enables us to learn something about the nature of tissue that has apparently lost all its structure. He illustrates this by describing a tumor obtained from the bladder which was completely necrotic and, until the elastica was stained, consisted apparently chiefly of blood-clot and desquamated epithelium. The distinct structure of the bloodvessels enabled him to recognize that it was really a form of growth leading to extensive necrosis of tissue. [J. S.]

2.—Bönniger attempts to answer the question whether or not **the method of Sahli for testing the functional activity of the stomach** is dependable, and whether it gives better results than the old methods. He tested the method of Volhardt for the determination of the fat, and having convinced himself that it was trustworthy, he then attempted to find out whether the addition of the stomach contents produced any tendency to separation of the fats in the test-meal. Tests in various conditions showed that this actually occurred; that often the stomach contents obtained at first contained less than the average, although sometimes the reverse was true. He, therefore, is inclined to believe that the old method, that is, the determination of the total acidity and of the free HCl., will probably prove to be the most satisfactory in ordinary practice. He is also very skeptical whether the estimation of the quantity of the secretion will be of much use in clinical diagnosis. [J. S.]

3.—Von Ranke reports the case of a girl, 3 years of age, who, after an attack of measles, developed **noma of the genitals and the rectum.** He performed excision of all the gangrenous parts without employing the thermocautery. The patient rapidly recovered, and the deformity was comparatively slight. This is his fourth successful case treated in this manner. [J. S.]

4.—Graefe reports a number of interesting cases, in which it was necessary to perform **ovariotomy during pregnancy.** The first, a woman of 25 years, had had one healthy child. Subsequently a large ovarian tumor was discovered and the uterus did not contract well. Later she again became pregnant, and, about the sixth month, the pains due to the tumor became so severe that she agreed to submit to operation. Ascites was found and a large cystoma of the ovary. The result of the operation was entirely satisfactory, and the child was born at term without difficulty. The second patient also had had one child and was pregnant for the second time. A tumor was found just back of the uterus which appeared to be a cyst. An operation was performed, the cyst removed, and pregnancy was not disturbed. The third patient, a woman of 35 years, had had 3 children. In the fourth pregnancy a tumor was found in Douglas's pouch that could readily be pushed upward. This also proved to be an ovarian cyst, which was removed without difficulty by laparotomy, and the patient was delivered of a normal child at term. He tabulates 27 cases, making the total number recorded 175, and in a foot-note he adds several that have since occurred. In the last 100 cases of Orgler's collection there were 2 deaths, one not due to the operation, and in the other the cysts contained pus and caused gangrene of the intestine by compression. It also appears that in the more recent cases pregnancy is rarely interrupted, whereas in the earlier cases it seems to be constantly interrupted. It must not be forgotten that often pregnancy is interrupted by the presence of the tumor. Occasionally these tumors give trouble after pregnancy. He mentions 2 instances in which torsion of the pedicle occurred shortly after child-birth, both of them requiring operation. Whether the operation should be done by the vagina or through the abdominal wall, it is sometimes difficult to decide. In the late stages of pregnancy the vaginal operation will be more difficult, but possibly the recent wound of the abdominal wall operation might interfere with the power of the muscles and thus disturb delivery. [J. S.]

5.—Hofmann discusses **suture of the bladder** in patients in whom it has been opened after laparotomy. He mentions the case of a man into whose bladder a wax taper was introduced. This caused signs of cystitis and, subsequently, of orchitis. The patient was treated first for the cystitis and later an operation was performed which was entirely successful. He believes that the treatment previous to the operation is very important. [J. S.]

6.—Grunert discusses the indications for **paracentesis of the membrana tympani** in acute otitis media. He calls particular attention to the indications as given by Schwartz and those of Piffl, who prefer to delay operation. Grunert believes that it is too late if the operation is delayed until complications appear. He, therefore, defends vigorously paracentesis in certain early cases. [J. S.]

7.—Fels continues his article upon **congenital cystic kidney.** He mentions some cases collected from the literature in which hematoma occurred, and states that he does not believe that the infection of the throat had anything to do with the infection of the kidney, in his cases. [J. S.]

8.—Kehr, in collating his statistics, shows that in 720 operations the mortality was 15.5%. From these operations, however, 185 can be deducted, either on account of operations at the same time on the stomach or intestines, the pancreas, the liver, etc., or because there was inoperable carcinoma of the gall-bladder, gall-duct or liver, or diffuse purulent nephritis, peritonitis or cystitis. This leaves 535 operations solely for gall-stones, with a mortality of 3.5%. It must be remembered in these statistics that all patients who died within 100 days of the operation are included. Death in many of these cases cannot be ascribed in any way to the surgeon's intervention. In the case of sepsis and carcinoma with a mortality of 97% the operation is justified because such patients are certain to die, and if 3% are saved it is a considerable gain. Moreover, error in diagnosis sometimes occurs, and it is found at the operation that the condition is not so severe as was suspected. Regarding the special indications for operation, Kehr believes that patients over 60 years of age should only be subjected to it when the indications are pronounced. In regard to drainage of the ductus hepaticus, it is his custom, after removing all stones possible, to place a small tube in the duct through which all the bile is carried outward for the first 2 weeks. Later the stones that may have been overlooked can usually be readily removed by lavage. He believes that drainage of the ductus hepaticus, combined with hepatectomy, is the normal method for the surgical treatment of chronic relapsing cholelithiasis; the mortality is less and the danger of overlooking stones is less. In patients in whom the stones are incarcerated in the ductus hepaticus he has sometimes found it useful to introduce the laminaria tent, which can be removed at the expiration of 12 days. The objection is that it causes the patient intense pain. Usually, however, in the course of 12 days the duct is so dilated that the stones can be removed readily. He has never seen relapse occur due to the reforming of stones in a thoroughly emptied gall-bladder. Therefore, he believes that the operation actually produces cure, although relapses due to stones that have been overlooked, or to various other complications, are not uncommon. He mentions some cases of his own in which relapses were due to various conditions, and often illustrated the extreme latency of gall-stones. In conclusion, he expresses the opinion that the surgical treatment of cholelithiasis will be greatly improved in the future. [J. S.]

November 4, 1902. (No. 44.)

1. Cell Poisons and Protective Processes in the Human Organism. WOLFGANG.
2. The Knowledge of the Hemolytic Action of Saponin. W. SCHANSENBACH.
3. Pleural Transudates in Heart Disease. J. ESSER.
4. Parenchymatous Gastric Hemorrhage. E. MOSER.
5. Contribution to the Pathology and Therapy of Syphilitic Stenosis of the Trachea. A. STRUBELL.
6. Contribution to the Diagnosis of Cavities of the Lung. H. CYBULSKI.
7. A Case of Morphine Poisoning in Early Childhood KATZENSTEIN
8. Bloodless Stretching of Phimosis. GRAESER.
9. Rhino-Pharyngological Methods of Instruction. R. KAFEMANN.

1.—Wolfgang discusses the present attitude of medicine regarding the **cytotoxins and the substances which produce the antibodies.** He believes that antitoxin production arises only from the union of a poison with the body cells, not as a result of the simple deposit of a poison in the organism. Now, as the narcotics and antipyretics do not cause the formation of specific antibodies, they cannot be capable of assimilation. It is possible that only highly complicated products of the animal and vegetable cell are capable of uniting with protoplasmic cells and stimulating the production of the antibodies. He discusses particularly the various forms of lysins that are produced as a result of disease, and shows that, under certain circumstances, an autolysin may not occur, although the isocytolysin is present. It does not always follow that, when an animal exhibits symptoms of poisoning, the receptors are lacking. It may be that there is not sufficient antitoxin. It is possible, too, that the antitoxin formation is not completed. When subjects are not receptive it may be that the receptors are attached to cells in the body not susceptible to poison. When they are readily poisoned the receptors are probably found in the cells of vital organs. In any event, there can be no doubt that the introduction of a sufficient amount of specific antitoxin protects against the uniform, that is, the uncomplex, toxins, whether derived from animal or vegetable organism. [J. S.]

2.—**Saponin** is a plant alkaloid, originally found by Schrader in the roots of certain plants. It can be separated by boiling into quinic acid and a carbohydrate. Physiologically it is a protoplasmic poison, and, injected into the blood, causes solution of the red bloodcells, hemorrhagic enteritis, general edema and death from collapse. Schanzenbach has undertaken the study of the action of this drug, he has immunized animals to its action, and then found that, when immunized, the action of the saponin was greatly delayed, and sometimes immunization with other substances, as human blood or typhoid bacilli, also had a delaying action. The blood of animals of the same species as that being tested, also delays the action of saponin, and diluted solutions of sodium chloride have the same effect, the normal serum being apparently, in the majority of cases, most efficient. Saponin added to the bloodserum diminishes its bactericidal action. When added to the blood the effect is even more pronounced, apparently indicating that substances liberated from the red bloodcells favor the growth of the micro-organisms. Animals inoculated with saponin had diminished resistance to bacteria, and some rabbits inoculated with swine plague died 48 hours sooner, if they had been treated with saponin than the control animals. Other controls inoculated only with saponin, recovered. [J. S.]

3.—In view of the uncertainty regarding the **pleural effusions** that take place in cardiac disease, particularly whether they are inflammatory in origin or merely transudates, Esser reports 3 cases in which it was possible to obtain an autopsy. The first, a man of 39 years, was admitted with gallop-rhythm and the signs of an effusion into the right pleural cavity. There was some ascites. The patient improved for a time, but later the effusion in the right chest increased and remained considerable, in spite of repeated tapping. The patient finally died, and at the autopsy enlargement of the lymphglands at the hilum of the right lung was determined, in addition to the signs of passive congestion of all the organs. The second patient, a man of 52 years, suddenly developed dyspnea. When examined, it was found that he had a slight exudate in the right pleural cavity. This accumulation increased and, when aspirated, it was found to have a specific gravity of 1010. It rapidly reassembled, left-sided hydrothorax also occurred, and the patient died. At the autopsy the lymphglands of the hilum of the right lung were enlarged, hard and black, showing some calcification. On the hilum of the left lung the glands were slightly enlarged and soft. Finally, the third case occurring in a man, of 51 years, who had suffered for some time with heart disease, showed general edema, ascites and bilateral hydrothorax, more pronounced on the right side. The liquid had a specific gravity of 1012. At tne autopsy the glands at the hilum of the right lung were enormously enlarged, hard and extended far into the interior of the lung. The right mediastinal glands were also enlarged, those on the left side were only moderately involved. Esser believes that, ordinarily, this obstruction of the lymphatic flow is of little significance, on account of the free anastomosis. When, however, there is passive congestion in the veins, added to the lymphatic congestion, transudation is likely to occur. [J. S.]

4.—Moser reports the following extraordinary case: A man, 41 years of age, developed pain in the region of the stomach, associated with nausea and vomiting, one or two hours after eating. The vomitus apparently never contained blood, but was sour, and the patient could not take acids. Occasionally the stools showed slight blackness. There was nothing found in the physical examination excepting slight prominence of the abdomen. There was slight hyperacidity and, apparently, secretion of gastric contents during fasting. The patient was treated by careful diet and he rapidly improved. He returned to the hospital, giving a history of black movements, loss of weight, and pain 3 fingers' breadth to the right of the navel. In the hospital he repeatedly vomited blood and, finally, it was necessary to resort to laparotomy. Nothing was found in the stomach, and the patient finally died. At the autopsy the wall of the stomach was found to be hypertrophied, but no ulcers were found in the stomach or esophagus. The condition of the spleen is not mentioned. Moser discusses these **parenchymatous hemorrhages** and reaches the conclusion that, up to the present, we are unable to state exactly what their nature is, although they have been observed by others, especially Lambottes, in cases of stenosis of the pylorus. [J. S.]

5.—Strubell mentions a case of **stenosis of the trachea**, evidently due to a syphilitic lesion. There were extensive tertiary lesions of syphilis, and vigorous syphilitic treatment did not tend to relieve the tracheal stenosis. As tracheotomy was declined by the surgical consultant, Strubell tried gradual dilatation with considerable success. On 2 occasions the patient coughed up small round tumors about the size of a cherry, and after each was considerably relieved. The tumors represented fragments of the tracheal cartilages. An interesting feature of the treatment was the success attained with the metal uterine catheter, after Schrotter's tracheal dilators had proven unsatisfactory. The reason why tracheotomy was refused was that the patient was cachectic, and that, in cases of tertiary syphilis, the hemorrhage is sometimes severe. There is a careful review of the literature of the subject. [J. S.]

6.—Cybulski calls attention to the fact that, in cases with pulmonary cavity, if the patient opens his mouth widely and breathes deeply while the physician has his ear close to the open mouth, distinct rales and metalic tinkling may be heard, just as it is when the ear is placed close to the chest. [J. S.]

7.—Katzenstein reports the case of a **child, 24 days old**, previously healthy, who suddenly developed cramps and cyanosis. The pupils were small, the corneal reflexes were lost, and the respirations were slow. **Morphine poisoning** was suspected, and he finally discovered that the nurse-girl had given some sleeping preparation. There was some twitching of the face and extreme coldness of the surface of the body. The tetanic cramps were repeated from time to time. The asphyxia was controlled by dipping the child in hot baths at 44° C., and the patient was also given hypodermoclysis. Finally recovery ensued, after 24 hours' active treatment. The urine examined after the poisoning contained albumin, and this persisted for about 6 weeks. Subsequent investigation showed that the dose of morphine was a little more than 1/10 of a grain. The weight of the child was slightly over 7 pounds. The most interesting symptom was the tonic spasm, and the most important element in the treatment the prolonged artificial respiration. [J. S.]

8.—Graeser states that he is entirely satisfied with the **bloodless stretching of phimosis**, as described by Orlipski. [J. S.]

9.—Kafemann recommends that, in instruction in rhinopharyngological methods, students should always be trained to **practise on the cadaver** before practising upon living beings. The improvement in manual dexterity is often considerable. [J. S.]

November 11, 1902. (No. 45.)

1. Von Nenckis' Investigations Upon the Blood-Coloring Matter, and Its Relation to Coloring. N. SIEBER-SCHUMOFF.
2. The Carbohydrates of the Albuminous Bodies of the Bloodserum. L. LANGSTEIN.
3. Contribution to the Knowledge of Rhinogenic Purulent Meningitis and Cerebrospinal Meningitis. T. STRUPPLER.
4. Aristochin, a Tasteless Derivative of Quinine. H. STURSBERG.
5. The Value of Cryoscopy in the Diagnosis of Death by Drowning. REVENSTORF.
6. The Prevention of the Formation of Hematomas in Küstner's Suprasymphyseal Cesarean Section. K. HEIL.
7. A Case of Croupous Pneumonia and Sepsis Caused by the Pneumobacillus of Friedländer. E. PHILIPPI.
8. A Case of Luetic Bilateral Paralysis of the Posticus, with Termination in Cure. F. STEINHAUS.
9. A Case of Lobar Pneumonia with Consecutive Acute Pemphigus in a Child 2½ Years Old. O. MOOS.
10. Stabwound of the Kidney. TUBENTHAL.
11. A Case of Congenital Diabetes Insipidus Associated with Epilepsy, Caused by Insolation. LICHTWITZ.
12. Further Contribution to the Question: "In What Relation do Movements of the Body, the Warmth of the Body and Albumosuria Stand to Each Other and to the Fever in Cases of Phthisis?" G. SCHROEDER and T. BRUEHL.
13. The Detection of Simulation in Hysterical and Traumatic Cases. NIEDNER.
14. The Intestinal Action of Atropine. GEBELES.

1.—Sieber-Schumoff discusses the value of the **work performed by Nencki upon the blood-coloring matter.** This included the determination of the formula for hemin, for hematin, that is, hemin dissolved in alkali; the recognition that hemin crystals with HCl. contain amyl alcohol in their molecule, the method for the production of hematoporphyrin without iron and its precipitation in crystal form. About this time it was discovered that phylloporphyrin bore a close relation, spectroscopically, to hematoporphyrin, and that the chemical formulæ were not very dissimilar. Nencki showed that chemically there was considerable relation between hemin and phylloctaonin, a derivative of cholorophyl, and, finally, he was able to obtain a body standing midway between these 2 substances, to which he gave the name of "mesoporphyrin," and which could be crystallized by the addition of HCl. From this it was possible to obtained hemopyrrol, a substance with which various salts could be obtained, and which, when introduced into the animal body, gave rise to urobilin. Finally he found it possible to produce hemopyrrol from phylloporphyrin, proving the essential identity of chlorophyl and hemoglobin. Nencki called attention to the curious forms of animal life that employed chlorophyl for purposes of metabolism, and Sieber-Schumoff believes that by his investigations a new line of thought in biology is rendered possible. [J.. S.]

2.—Langstein discusses the **carbohydrates of the blood-serum.** There is in serum a body which turns light to the right, whose benzoyl product is entirely identical with benzo-glucose. There seems, therefore, reason to believe that glucose has an important part in the formation of blood globules. There is reason to believe that glucose exists in the globulin molecules, or, rather, that globulin has the power of absorbing glucose. In fact, Langstein believes that the mother substance must be supposed to be globulin glucose. This, however, he admits is at present a hypothesis. [J. S.]

3.—Struppier reports a case of **meningitis apparently secondary to infection of the nose.** When admitted the patient had been somewhat dull for 8 days, had had pain in the back, difficulty in respiration and swallowing, headache and some cough. There was sugar in the urine, stiffness in the muscles of the back and neck, hyperesthesia of the legs and considerable fever. Two weeks later there was distinct trismus, disturbance of the bladder and rectum, increasing coma, clonus of the fingers, and subnormal temperature. A lumbar puncture was performed twice, once 65 cm., and, 8 days later, 70 cm., of fluid being obtained. An autopsy was performed, and a diagnosis was made of subacute fibropurulent leptomeningitis of the base and convexity, and also of the spine, secondary to suppuration in the antrum of Highmore. There was also some extra-dural hemorrhage. He also reports a second patient, a man of 43 years. The disease commenced with nausea, sleepiness, loss of appetite, prostration and vomiting. He became unconscious; there was stiffness of the muscles of the neck, and clonic twitching in both upper extremities. Both patellar reflexes were increased, lumbar puncture was negative, and there was paresis of the left side of the face. The patient died on the day after admission. At the autopsy there was found purulent leptomeningitis secondary to suppuration in the antrum of Highmore, and acute parenchymatous nephritis. The third, a woman, 45 years of age, was admitted to the hospital in a semi-unconscious condition. She had suffered with headache for about 9 months. There was stiffness in the back of the neck, increase in the patellar reflexes, paresis of the extremities, loss of pupillary reflexes and some paresis of the muscles of the eyes and face. There was evidence of acute nephritis; lumbar puncture was negative. There was a polyp in the left external auditory meatus, and it was supposed that possibly meningitis was secondary to this. The antrum and middle fossa of the skull were explored, but without success. The patient developed spasms of the left arm, edema of the legs and then died. At the autopsy there was found an acute purulent meningitis of the base, convexity and posterior portions of the brain, following empyema of the antrum of Highmore, and an accumulation of pus in the neighboring ethmoid cells. There was general septicemia, and acute inflammation of the liver and kidneys. As a result of a study of these cases, Struppler believes that there is no reason for supposing that the most common cause of meningitis and secondary inflammation of the antrum of Highmore is by means of thrombosis of the lateral sinuses. [J. S.]

4.—Stursberg discusses **aristochin,** a tasteless derivative of quinine, which is supposed to contain about 96% of quinine. It is a white powder, readily soluble in dilute HCl.; is not precipitated when the acidity is neutralized, and after administration quinine is eliminated in the urine. Eighteen patients suffering with whooping-cough were treated with this, and the results were: Six patients could not be observed for a sufficient length of time, in half no particular result was noted and in the remainder the result appears to have been fairly favorable. [J. S.]

5.—Revenstorf has determined the freezing-point of the blood in the right and left half of the heart, in order to find out whether a distinct dilution of the blood occurs after drowning. The blood was obtained from the right auricle, about 15 to 20 cc. being employed, and the determination made with Becqmann's thermometer. Carara contended that, after drowning, the freezing-point in the right heart is very much lower than that in the left, and that this does not occur in any other condition. Revenstorf has confirmed the difference in the freezing-point after drowning, and that in various other conditions in which the blood was obtained at autopsy, made from 24 to 72 hours after death. No essential difference in the 2 sides existed. However, it seemed to be shown that the freezing-point gradually diminished on both sides after death, and that silght differences were not uncommon. He had an opportunity of examining the blood from 12 patients who died by drowning and found that the results, in general, were negative. In 7 patients the difference was insignificant, and in 5 patients, although pronounced in some, was a hardly sufficiently marked to justify an absolute diagnosis. He mentions 2 instances in which the subjects had suffered injuries immediately prior to falling into the water, in one of which death was evidently due to the injury, and in the other to drowning. The advantages of this method are that it is easily carried out and that the symptom of inequality of the freezing point is independent of any other change. [J. S.]

6.—Heil warmly recommends Küsser's **supra-symphyseal operation for the removal of the tubes and ovaries.** The cosmetic effect is excellent, and the danger of hernia greatly diminished. Hematoma can usually be avoided by the use of sand-bags after the operation. He gives the histories of 20 patients, on whom he performed the operation by this method. [J. S.]

7.—Philippi reports a case of **pneumonia** occurring in an elderly man, giving the ordinary symptoms and signs of acute croupous pneumonia. Blood-cultures were made and only the **pneumobacillus of Friedländer grew.** The patient died, and the same micro-organism was found in the tissues and in the lungs. [J. S.]

8.—Steinhaus reports the case of a man, 39 years of age, who had had syphilis. He suddenly developed inspiratory dyspnea and other symptoms of paralysis of the posterior laryngeal nerves. He was given hypodermics of succinidate of mercury and improved very rapidly. The most common cause of paralysis of these nerves is some infectious condition. In the present case, the treatment was indicated by the history. [J. S.]

9.—Moos reports the case of a girl, 2½ years of age, who had typical croupous pneumonia. On the ninth day of the disease she suddenly developed, all over the body, blisters containing a clear liquid, which rapidly increased in size, accompanied by profound prostration. Desquamation followed, the pneumonia terminated by lysis, and the patient finally entered upon a satisfactory convalescence. [J. S.]

10.—An under officer was struck with a small side-sword, thrown by a comrade, which penetrated the back, 5 cm. to the left side of the spinal column. There was profuse hemorrhage, and the following day the patient passed some bloody urine. The next day a reddish fluid was found staining the bandages, and there was some inflammatory condition in the region of the kidney. The **kidney** was, therefore, exposed by operation, the **wound** found and tamponed with iodoform gauze. The patient made a satisfactory recovery. [J. S.]

11.—Lichtwitz reports the case of a man, 23 years of age, who was born with an abnormal thirst so that he endeavored to drink the water in which he was bathing. He always had polyuria, had been weak, but never had developed any symptoms of epilepsy. His intelligence was slight. On one occasion he had a sunstroke, followed by typical epilepsy. There was evidence in the skull of congenital anomaly of the brain. It is probable that this predisposed him to the development of epilepsy. [J. S.]

12.—Schröder and Brühl, in reply to Ott, contend that the results of their observations on tuberculosis were correct, and that in cases in which albumoses were present in the urine there was disproportion in the rectal and mouth temperature. [J. S.]

13.—Niedner states that, in his article regarding the value of the paradoxical contractions of the muscles as a sign of simulation, he mentioned the fact that it might occur voluntarily when there was injury to the joints. The case of Van Hösslin, he believes, is a valuable contribution to the subject. [J. S.]

14.—Gebeles insists that atropine excites peristalsis, that it possesses a narcotic action and that many forms of intestinal obstruction may be favorably influenced by its administration. [J. S.]

WIENER KLINISCHE WOCHENSCHRIFT.

November 20, 1902. (XV. Jahrgang, No. 47.)

1. The Solution of the Variola-Varicella Question. NORBERT SWOBODA.
2. The Behavior of the Leukocytes in Suppuration. M. BLASSBERG.
3. The Occurrence of Punctate Erythrocytes. KARL REITTER.
4. Simultaneous Pregnancy in Both Tubes. KARL KRISTINUS.

1.—Will be abstracted when concluded.

2.—Blassberg counted **the leukocytes in the blood** of 40 cases **of suppuration** of different kinds, which are described. He concludes that **leukocytosis usually accompanies suppuration.** This is less marked with peripheral than with abdominal suppuration. Evacuation of the pus is followed by a slight increase in the leukocytes, with a gradual decrease afterward. Leukocytosis persists as long as the suppurating process tends to spread. Leukocytosis is an early sign of suppuration, and is of value in diagnosis. Yet leukocytosis is not constant with all cases of suppuration. It is probably the specific reaction of the organism to infection. When leukocytosis is wanting, either the organism develops too much power, so that leukocytosis is unnecessary, or the infection is so severe that death occurs before leukocytosis appears. [M. O.]

3.—Reitter examined **the blood** of 20 cases **of advanced phthisis with anemia**, and found **punctate erythrocytes in every specimen** examined. He believes that the presence of these basophilic granules is due to the anemia. The granules were most frequent in blood in which the size of the erythrocytes varied. As the condition was observed in the blood of some normal individuals. Reitter believes that **it may occur physiologically as well as pathologically.** [M. O.]

4.—Kristinus reports in detail the case-history of a woman, 30 years old, in whom he found, by laparotomy, proof of certain **bilateral, simultaneous tubal pregnancy;** abortion in the right tube and fresh rupture in the left, after complete tubal abortion with hematocele formation some weeks before. With the rupture there was hemorrhage into the abdominal cavity. Examination of both ovaries showed the absence of any fresh corpus luteum. At the operation both ovaries and tubes were removed. Yet menstruation has occurred normally since. Nor are there any exceptional genital symptoms since the operation. The literature is cited. [M. O.]

BOLNITCHNAIA GAZETA BOTKINA.

June 26, 1902. (Vol. XIII, No. 26.)

1. On the Influence of Pilocarpine on the Secretion of the Gastric Glands. I. TZITOVITCH.
2. Pregnancy, Labor and Postpuerperal Period in the Course of Mitral Insufficiency and Stenosis of the Left Venous Opening. U. E. VERTZINSKY.
3. On Penetrating Incised-Punctured Wounds of the Chest. B. K. FINKELSTEIN.

1.—Will be abstracted when concluded.
2.—Will be abstracted when concluded.
3.—Will be abstracted when concluded.

July 3, 1902. (Vol. XIII, No. 27.)

1. On the Influence of Artificial Nutrition, According to Lokk's Method, on the Irritability of Nerve Elements. P. IU. KAUFMAN.
2. Pregnancy, Labor and Postpuerperal Period in the Course of Mitral Insufficiency and Stenosis of the Left Venous Opening. U. E. VERTZINSKY.
3. On Penetrating Incised-Punctured Wounds of the Chest. B. K. FINKELSTEIN.
4. On the Influence of Pilocarpine on the Secretion of the Gastric Glands. I. TZISTOVITCH.

1.—Kaufman concludes, from his experiments, that: (1) The nerve elements—the peripheral cells and nerve endings—may retain their irritability for many hours if supplied with carbohydrates, and (2) the central and peripheral nerve cells show different behavior toward Lokk's fluid, this serving as another proof of their biochemical difference. [A. R.]

2.—Will be abstracted when concluded.
3.—Will be abstracted when concluded.

4.—Tzistovitch presents the following conclusions from his experiments on dogs: (1) Pilocarpine stimulates gastric secretion; (2) the time of the appearance of the gastric juice is proportionate to the size of the dose and varies in different individuals; (3) the secretion of saliva and mucus appears much more rapidly and after much smaller doses than the gastric secretion; (4) the corresponding curves of the secretion of saliva and gastric juice after large doses of pilocarpine are analogous; (5) the acidity and digestive power of the gastric juice are in direct relation to the quantity secreted; (6) the acidity and digestive power of the gastric juice obtained after the administration of pilocarpine are not lowered. [A. R.]

July 10, 1902. (Vol. XIII, No. 28.)

1. The Role of Intestinal Worms in the Etiology of Appendicitis. M. IV. ROSTOVTZEFF.
2. Pregnancy, Labor and Postpuerperal Period in the Course of Mitral Insufficiency and Stenosis of the Left Venous Opening. U. E. VERTZINSKY.
3. On Penetrating Incised-Punctured Wounds of the Chest. B. K. FINKELSTEIN.
4. The Conditions Under Which the Medical Students of the Urjeff University Live. A. VINOGRADOFF.

1.—Rostovtzeff found **intestinal worms in the appendix in a number of autopsies without there being any indications of appendicitis.** In one case a scolex was discovered in the appendix of a young man, who died of erysipelas. In 2 others, small round worms were discovered at the opening of the appendix. No special examination of the feces for eggs was made, but the author surmises that, since he has found feces in the appendix in 108 out of 278 cases, the eggs must have been present there if they were at all in the intestinal tract. He also adduces the fact that, of 163 cases of appendicitis treated in the Obouchoff Hospital for the past 10 years, nematodes were found only in 3. He, therefore, concludes that intestinal worms bear no direct etiological relation to appendicitis, and any influence they may possess is remote, the effect being due to the intestinal disturbance which they cause. [A. R.]

2.—Will be abstracted when concluded.

3.—Finkelstein reports in detail 94 cases **of thoracic in-**

juries, caused by penetrating and incised wounds. In 60 patients the left, and in 32 the right, pleura was penetrated, while in 2 both pleuræ. In 2 the arteries of the chest wall were injured, necessitating ligation. In one patient the thoracic duct was injured. Pneumothorax complicated all but 4 cases, and there was no indication that it, in itself, is a serious complication. Subcutaneous emphysema was observed in 47 patients. Hemothorax occurred in 27 patients, developing into pyothorax in 14. In the diagnosis of obscure cases of thoracic wounds the author advises enlarging the wound as the only means of ascertaining the degree and extent of penetration. Other diagnostic points, as well as the treatment, are fully discussed. [A. R.]

July 17, 1902. (Vol. XIII, No. 29.)

1. On Rigidity of the Spine (the form of Prof. V. M. Bechtereff) and Chronic Ankylosed Spondylitis (The Form of Strumpell-Marie). P. OSTANKOFF.
2. Do Intestinal Parasites Bear Any Relation to Appendicitis? S. S. VIRSALADZE.
3. Pregnancy, Labor and Postpuerperal Period in the Course of Mitral Insufficiency and Stenosis of the Left Venous Opening. U. E. VERTZINSKY.
4. Through Germany. V. KASCHKADAMOFF.
5. The Conditions Under Which the Medical Students of the Urjeff University. A. VINOGRADOFF.

1.—Ostankoff discusses the 2 forms of **spondylitis** and describes 3 cases, illustrating the distinctive characteristics of each. [A. R.]

2.—Visaladze examined the **fecal discharges** of 60 patients suffering from either acute or recurrent **appendicitis** with a view of verifying Metchnikoff's theory about the etiology of appendicitis. In each patient repeated search for intestinal parasites was made, but none was found, nor was there any indication in the history of the patients that they were affected with intestinal worms prior to the disease. [A. R.]

3.—Vertzinsky reports 12 cases of **pregnancy complicated by pre-existing mitral insufficiency.** Of the 10 patients affected more seriously, 3 died during the postpuerperal period, 5 were improved after labor, and in 2 compensation was fully established. Of the children, but 2 were born at term and lived, 3 were not carried to term, but lived, 3 were premature and died soon after birth, one was macerated, and one was a miscarriage. It is thus seen that half of the number of children are either stillborn or doomed to perish. The opinion is expressed that in many cases the loss of compensation has no connection with the pregnancy, and in this respect the danger from pregnancy occurring in women subject to cardiac disease is exaggerated. He does not consider it altogether rational to interdict marriage to girls suffering from cardiac affections, as a rule. On the other hand, in the case of a multipara of more or less advanced age, especially when disturbance of compensation occurred at a previous pregnancy, the danger from a new pregnancy is real. Inasmuch as the advice in such cases of continence will surely not be heeded, it is quite appropriate to employ means for the prevention of conception. If pregnancy does occur, the patient should be placed under conditions of perfect physical and mental rest, and the diet as well as the body functions should be carefully regulated. As to medication, it need not differ from that administered to patients with cardiac affections who are not pregnant. Some obstetricians are against the administration of ergot, but the author has not observed any ill effects from the use of this drug. In the majority of cases the pregnancy terminates prematurely, and it is advisable in all cases of repeated miscarriages or premature births to examine the heart. Labor should always be hastened, and the careful administration of chloroform is not contradicted. As the uterus is emptied, the lessened intra-abdominal pressure should be counteracted by a sandbag placed on the abdomen. The author sees no reason why these women should not nurse their children. He deprecates the performance of artificial abortion during the second half of pregnancy, but considers such intervention indicated during the first half, especially if dangerous symptoms supervene. [A. R.]

July 24, 1902. (Vol. XIII, No. 30.)

1. Some Data from the Hospital Statistics of St. Petersburg. A. A. LIPSKY.
2. A Typhoid Epidemic During November of 1901 in Tzarskoje Sjelo. S. UNTERBERGER.
3. On the Change in the Hemolytic Strength of the Blood-serum During the Various Periods of Digestion. V. I. GLINTCHIKOFF.

2.—Unterberger describes a **typhoid epidemic** which occurred in Tzarskoje Sjelo under the following conditions: Owing to a drought it was found necessary to connect the springs furnishing the village with pure water with other springs which were fed by an underdrain from St. Petersburg and the immediate environs. As soon as this connection was made, typhoid fever broke out in the village. As no direct contamination of the water occurred, the author advances the hypothesis that the soil of St. Petersburg is always saturated with typhoid bacilli in a state of saprophytic existence. When these saprophytes gained access to the water-supply of the village through the underdrain and found favorable conditions, they assumed a parasitic existence. However, incidentally the fact is mentioned that there is a canal several miles long leading from the pure springs to the main reservoir, and that this canal is in bad repair and is often used by peasants for washing clothes, untensils and drowning pugs, but notwithstanding this contamination, the water, the author believes, purifies itself, and as a proof he adduces the fact that typhoid fever, occurring authochtonously, has never been known in the village. [A. R.]

3.—Will be abstracted when concluded.

July 31, 1902. (Vol. XIII, No. 31.)

1. Albumosuria (Peptonuria) as a Clinical Symptom. A. SVOJECHOTOFF.
2. Some Data from Hospital Statistics of St. Petersburg. A. A. LIPSKY.
3. On the Change in the Hemolytic Strength of the Blood-serum During the Various Periods of Digestion. V. I. GLINTCHIKOFF.
3. Through Germany. V. KASCHKADAMOFF.

1.—Will be abstracted when concluded.

3.—Glintchikoff determined by experiments on dogs **the effect of digestion and diet on the hemolytic power of the bloodserum.** One series of experiments showed that the hemolytic power of the blood is increased in proportion to the development of digestion, reaching the maximum strength between 6 and 9 hours of digestion, when it gradually begins to decline. A marked heightening of the hemolytic power is noticed from the third hour of digestion. The experiments with various foods showed the following: (1) Different foods affect differently the hemolytic power of the bloodserum; (2) in this respect, fat has a marked influence, greatly increasing the hemolytic power; (3) the influence of meat is insignificant; (4) bread and milk occupy a median position between fat and meat; (5) fat increases the hemolytic power of the bloodserum to a much greater proportion than an equal amount of mixed food. [A. R.]

LA RIFORMA MEDICA.

November 13 and 14, 1902.

1. Upon the Agglutinability of the Tubercle Bacillus by Different Serums and Its Diagnostic Importance. A. ILVENTO.

1.—The work done in this line of research is reviewed by Ilvento, and his personal findings are summed up as follows: (1) The degree of agglutination of the serum of tuberculous blood is always equal, and sometimes superior to that found by Arloing (1: 10). (2) Similarly, the degree of agglutination of the pleuritic fluid of those suspected to be tubercular conforms to Courmont's finding (agglutination 1: 5—1: 20). (3) The pleuritic and ascitic fluids of patients who are nontubercular do not agglutinate the tubercle bacillus, or, if they do, to only an insignificant degree. (4) The bloodserum of patients in whom tuberculosis was diagnosed clinically, and through the specific bacillus, has shown agglutination to 1:50 in 2 cases, and 1:100 in 2 others. (5) A high degree of agglutination in human blood (1:100) and even a low degree in serous exudates (1:5) may, unless proof to the contrary be afforded, be considered as proof positive of tuberculosis. (6) The agglutinating power of serum in man, as well as in animals, is an index of the degree of relative immunity possessed by the organism. [R. L. F.]

November 15 and 17, 1902.

1. Medullary and Radicular Metamerism in Syringomyelia. L. FERRANNINI.

1.—Ferrannini discusses the distribution of sensory disorders in syringomyelia, and presents a description of 2 cases, which, he believes, goes to show that sensory disorders may follow a medullary or radicular distribution, according as the cavity involves the medulla or the spinal roots at their point of emergence from the cord. That the distribution in transverse segments upon the limbs may exist in the sensory disorders of syringomyelia is beyond question, in the author's opinion, whether Brissaud's hypothetical explanation of it through secondary metamerism be tenable or not. [R. F. L.]

November 18 and 19, 1902.

1. Effect of Alternate Freezing and Thawing upon the Vitality and Virulence of Certain Pathogenic Bacteria. F. TESTI.

1.—Testi gives the outcome of his experiments along this line as follows: (1) Microscopical examination of bacteria subjected to such alternations of temperature showed a marked diminution in the motility of the bacillus typhosus and of the spirillum choleræ. In stained preparations of the spirillum choleræ, the form was seen to be changed to rather a round shape similar to cocci, but of various dimensions, and sometimes united in pairs. A plasmolytic state obtained in the bacillus of typhoid, glanders and diphtheria; but there was no morphological change in the bacillus of chicken cholera. Microscopical examination of cultures in the ordinary media showed no change in the bacteria, the normal morphological characteristics of each having been restored. (2) Cultural development of all the bacteria, including 2 specimens of bacilli of chicken cholera, took place after 12 successive freezings and thawings, though that of the bacillus of chicken cholera was noticeably retarded. There was also some retardation of cultural development of the glanders and diphtheria bacilli. Cholera and typhoid bacilli developed regularly within 24 hours. (3) In general, the number of bacteria after treatment varied but little from that seen before treatment; but, frequently, in chicken cholera and, rarely, in glanders and diphtheria, there was noticeable diminution, this often corresponding to retarded cultural development. (4) In all the cases, when cultural development took place, biological experiments were practiced upon animals, who died under the same conditions, with the same anatomopathological and bacterial findings, and within the same time as those inoculated with germs which had not been subjected to treatment; save in the 3 cases in which experimental inoculation of the culture of chicken cholera was made, no manifestation of the disease was seen. [R. L. F.]

REVISTA DE MEDICINA Y CIRUGIA DE LA HABANA.

November 10, 1902.

1. Surgery of the Biliary Passages. Two Cholecystectomies for Cholecystitis Calculosa. J. A. PRESNO y BASTIONY.
2. A Case of Exophthalmic Goiter Treated by Bilateral Resection of the Superior Ganglion of the Cervical Sympathetic. E. NUNEZ.

1.—In practice the numerous measures proposed for the surgical cure of vesicular lithiasis may be reduced to 2: cholecystotomy and cholecystectomy, says Presno y Bastiony. Of the 2 operations, the author gives the preference to cholecystectomy as being the most rational and radical, in that the gall-bladder is not essential to the physical well being, calculi are secondary to lesions of the gall-bladder, and extirpation of this, the principal laboratory for calculi, is desirable. In the author's belief there are but 2 contra-indications to cholecystectomy, namely: infection of the biliary passages, and occlusion of the choledochus. When the gall-bladder is found decreased in size, sclerotic, with hard walls, without fluid and with calculi present, as was seen in the author's first case, he believes that no operative measure is so rational as extirpation of the useless organ. Further, if the gall-bladder is cut off from the biliary passages by obliteration of the cystic duct, it becomes a useless or even dangerous sac, and its extirpation is necessary; as it is also when the patient's age suggests the possible evolution of a neoplasm from the chronically inflamed organ. The last named consideration induced the performance of cholecystectomy in the author's second patient. The vertical, lateral incision along the external border of the rectus is believed to be the most desirable as affording the best view of the operative field, and facilitating manipulation. Two silk sutures sufficed for the ligature of the cystic duct. The operation was entirely successful in the 2 cases reported, and a complete cure was effected. [R. L. F.]

2.—Nunez reports successful results from the treatment of a patient with exophthalmic goiter by this means, improvement in the exophthalmos ensuing within 2 hours after the operation, and the patient's general condition was so far improved that she was able to leave her room upon the second day. Distinct diminution in the size of the gland was seen within a month. [R. L. F.]

IL POLICLINICO. (SEZIONE PRATICO.)

November 15, 1902. (Year IX, Fasc. 3.)

1. Concerning Anastomosis of the Portal Vein with the Vena Cava, and Ligature of the Hepatic Artery. I. ANGELO.
2. Treatment of Lupus Vulgaris. A. M. GIUSEPPI.
3. A Contribution to the Treatment of Surgical Tuberculosis with Injections of Durante's Iodine-Iodide. G. URSO.

1.—Angelo details the effects upon dogs of such operative measures. Upon microscopical examination of the livers of dogs who survived the operation for a time, suggestions of fatty degeneration were seen, also an elementary necrosis in the center of the lobules; again, the liver was normal, and in these cases abundant neoformative connective tissue was seen about the glass tube uniting the 2 vessels; thereby, in great part, occluding the lumen: while the portal blood was partly returned to the liver through the numerous vascular connections formed between that organ and the epiploon, and by the accessory portal veins. The author proposes to repeat the operation with a modified technique, in the future, that obstruction at the point of anastomosis may be eliminated before definite conclusions are drawn. Some interesting points are presented which bear upon the mooted question of the liver's protective function; especially with regard to the intestinal toxins. The urotoxic coefficient of the urine of dogs subjected to this operation did not exceed that of normal dogs; and it reached its maximum with a milk diet and minimum with a meat diet. The author holds that the increased renal activity, and consequent augmented quantity of urine, under the diuretic influence of milk, accounts for the greater amount of toxic substances eliminated. Both surgically-treated and normal dogs showed no signs of poisoning after ingestion of atropine 0.25 to the kilogram of body weight; contrary to the finding of Kotliar. Examination of the urine for sugar and biliary pigment in the dogs operated upon, was negative; but there was slight diminution of urea, an increase of ethereal sulphates was noted, the quantity of the latter being greatest with a meat diet and least with a milk diet, in normal dogs, as well as in those operated upon. [R. L. F.]

2.—Giuseppi has seen what he considers surprisingly good results from the treatment of lupus vulgaris with a 10% picric acid ointment, the basis of which is white vaseline. As the effect of picric acid is somewhat painful, he alternates its use with bromphenol powder, or simple lavage with boracic acid solution; and the effect of the picric acid is mitigated by preliminary application of cocaine when deemed necessary. [R. L. F.]

3.—Urso reports 3 cases successfully treated with injections of aqueous solutions of iodine and potassium iodide, according to Durante's formula, beginning with daily injections of iodine 1 cgm. and increasing to 3 cgm. The author states that, aside from its beneficent constitutional effects, the treatment induces absorption of hyperplastic glands, and, although in osseous tuberculosis its action is slow, it, none the less, facilitates the absorption of tubercular foci, and stimulates the nutritive processes. No specification upon the bacillus tuberculosis is claimed for the remedy; but its favorable influence is thought to depend upon its power to stimulate organic activity and so increase the resistance of the organism to infections in general and tubercular infection in particular. [R .L. F.]

THE UNIVERSITY OF PENNSYLVANIA MEDICAL BULLETIN.

November, 1902.

1. Bubonic Plague: Its Nature, Mode of Spread, and Clinical Manifestations. SIMON FLEXNER.
2. The Pathology of Lymphotoxic and Myelotoxic Intoxication. SIMON FLEXNER.
3. The Interaction of the Blood of Cold-Blooded Animals, With Reference to Hemolysis, Agglutination and Precipitation. HIDEYO NOGUCHI.
4. A Study of Immunization Hemolysins, Agglutinins, Precipitins and Coagulins in Cold-blooded Animals. HIDEYO NOGUCHI.
5. Vaccination and Serum Therapy Against the Bacillus of Dysentery: An Experimental Study. FREDERICK P. GAY.
6. Leptothrix Infection in Animals. RICHARD MILLS PEARCE.
7. Thrombi Composed of Agglutinated Red Bloodcorpuscles; Preliminary Communication. SIMON FLEXNER.
8. The Antihemolytic Action of Bloodserum, Milk and Cholesterin Upon Agaricin, Saponin and Tetanolysin. Together With Observations Upon the Agglutination of Hardened Red Corpuscles. HIDEYO NOGUCHI.
9. Study of the Bacteriolytic Serum-Complements in Disease: A Contribution to Our Knowledge of Terminal and Other Infections. WARFIELD T. LONGCOPE.
10. The Constitution of Snake Venom and Snake Serums. SIMON FLEXNER and HIDEYO NOGUCHI.

1.—Flexner contributes a study of **bubonic plague; its nature; mode of spread, and clinical manifestations.** He presents the salient facts representing our present knowledge of plague and the great advances which have been made in this direction since 1894. The study of the life-history of the bacillus of plague has eliminated the indefinite agents of conveyance included in air, soil and water and substituted tangible means of dissemination. There is no good reason for believing, despite the efforts which have been made, that any germ once started on a course of invasion has been destroyed. **Limitation, not annihilation,** is the result to be aimed at and achieved. Sanitary measures will accomplish much toward this end, but Flexner also points out the importance of rendering the soil destined for the growth and multiplication of the germ barren or unsuitable; this is the effect attempted in the **Haffkine antiplague inoculations.** These have been made on many thousands of persons in India and similar vaccinations have been conducted on lower animals, notably upon monkeys. The conclusion to be drawn from them is, that **antiplague inoculations successfully protect certain animals from subsequent infection with virulent plague bacilli,** and the results seem, also, to point to their unquestioned value in preventing infection in human beings and modifying favorably the progress of the disease, even when contracted. He quotes the Indian Commission upon this point, and also upon the question of treatment with **Yersin's and Lustig's serum.** It is stated that, though the method of serum-therapy, as applied to plague, has not been crowned with a therapeutic success in any way comparable to that obtained in the treatment of diphtheria, nevertheless, the method of serum-therapy is the only one which holds forth a prospect of success. Flexner points out the great danger to this country of the presence of a plague focus on its western coast. Many observations go to show that a **long interval may intervene between importation of infection and the outbreak of an epidemic.** The possibility of the occurrence of such an interval is of the utmost importance as indicating that the danger of the spread of plague cannot be regarded as over until a prolonged interval has elapsed after the last human case has come under observation. [T. L. C.]

2.—Flexner presents a study of the **pathology of lymphotoxic and myelotoxic intoxication.** He gives a résumé of our knowledge of the cellular poisons and states the object of his own inquiry, **the determination of the organic changes which follow injections of leukotoxic sera derived from different sources; the lymphatic glands, spleen and bone marrow.** The results of his work are briefly presented. Among the points elucidated is the fact that bone marrow, under the influence of lymphotoxin, responds with an increase of mononuclear nongranular cells, and under the influence of myelotoxin with a new production of granular mononuclear and polymorphonuclear cells. [T. L. C.]

3.—Noguchi has studied the **interaction of the blood of cold-blooded animals with reference to hemolysis, agglutination and precipitation.** His conclusions are as follows: (1) The serum of many cold-blooded animals contains both agglutinins and hemolysins. (2) The serum of some cold-blooded animals contains precipitins. (3) The amount of agglutinin, hemolysin or precipitin in any given serum is no measure of the amount of either of the other principles. (4) The serum of some species of animals, while strikingly agglutinative for certain kinds of corpuscles, may be entirely or almost devoid of hemolysins for these or even other kinds of corpuscles. Conversely, the occurrence of active hemolysins in a given serum is likely to be attended with the existence of marked agglutinating properties for some species of corpuscles. (5) From their manner of action, the conclusion that a multiplicity of agglutinins and hemolysins occur in serum is rendered highly probable. (6) The agglutinins are active upon red and white corpuscles irrespective of whether the animal yielding them possesses both red and white, or only white corpuscles. The hemolysins are erythrolytic if obtained from animals possessing red and white corpuscles; white in certain animals possessing only white corpuscles; hemolysins, in contradistinction to agglutinins, are wholly or almost entirely absent. (7) The serum of certain warm-blooded animals, *e. g.*, the horse, exhibits agglutinating power over the red corpuscles of some species of cold-blooded animals, and causes slight precipitation with a few kinds, at least, of serums of these animals. [T. L. C.]

4.—Noguchi contributes a study of **immunization hemolysins, agglutinins, precipitins and coagulins in cold-blooded animals.** The conclusions drawn from his work are as follows: (1) Artificial hemolysins, agglutinins, anti-agglutinins, serum-precipitins, aqueous humor precipitins and milk coagulins can be produced through immunization in certain cold-blooded animals. (2) The hemolysins and agglutinins for erythrocytes can be produced in animals which do not possess erythrocytes. (3) Iso-agglutinins and isohemolysins can be produced in certain species of turtle. The iso-bodies thus developed have a slight erythrolytic action upon the blood of other, though related, species of turtles. (4) The complements of turtles' blood are rendered inactive by a temperature of 50° C., maintained for 30 minutes. (5) The precipitins and coagulins for aqueous humor and milk, respectively, can be produced in animals which do not possess the corresponding fluids in the strict sense. (6) The above facts demonstrate the widespread distribution of common receptors through the animal kingdom, and **extend the chief tenets of Ehrlich's hypothesis to vertebrates and invertebrates among the cold-blooded animals.** [T. L. C.]

5.—Gay has conducted an **experimental study in vaccination and serum therapy against the bacillus of dysentery.** He epitomizes his work as follows: (1) The bacillus of dysentery (Shiga) is the cause of acute and other forms of dysentery in tropical and temperate climates, and, probably, of a part of the summer diarrheas prevailing in warm countries among infants. (2) Guinea-pigs are susceptible to experimental infection with the bacillus of dysentery and react to inoculation in a characteristic manner. (3) The bacillus of dysentery, cultivated outside of the body, quickly suffers a reduction in virulence for guinea-pigs, but the virulence can easily be increased by successive passages through the bodies of these animals. (4) The passage of the bacillus of dysentery through guinea-pigs permits of the establishment of a uniform grade or degree of virulence in the organism, irrespective of its source, which adapts it for the production of vaccines of quite uniform activity. (5) The vaccines consist of suspensions of dysentery bacilli, killed by the addition of trikresol, the activity of which undergoes an increase, for a time, at least, that is coincident with disintegrative changes taking place in the micro-organisms. (6) This vaccine suffices to protect guinea-pigs from a succeeding multiple fatal dose of living dysentery bacilli, and to produce in the horse an active serum. (7) The immune serum of the horse exhibits marked protective properties in preventing fatal infection with the bacillus of dysentery or intoxication with its vaccine in guinea-pigs. (8) While the several dysentery bacilli used in this investigation belong to one definite species, minor distinctions were present among them. The most marked differences noted were the weaker virulence of the "Kruse" strain as compared with the other strains of the bacilli, and the slightly reduced activity both of vaccine and immune serum when directed against strains of organisms other than that from which they were prepared. (9) The bacillus of dysentery resists bacteriolysis by bloodserum to a greater extent than some other members of the colon-typhoid group of bacilli. (10) **A useful serum therapy for bacillary dysentery and for certain forms of the summer diarrheas of infants is rendered highly promising.** [T.L.C.]

6.—Pearce presents a study of **leptothrix infection** in animals, basing his work upon material obtained from rabbits dead of a leptothrix infection. He reports his results with the inoculation experiments and cultures of these organisms. He further presents a review of the literature of the subject and comments upon the confusion which exists concerning the **filiform organism** which is the subject of his communication. He discusses the variations and classification which several investigators have adopted and believes that this is not so much due to variation in the results of cultivation as it is to lack of uniformity in methods of cultivation. Until fresh material permits a new comparative study, Pearce believes it is advisable to consider the forms described as identical. He adopts the term **leptothrix necrophorus.** [T. L. C.]

7.—Flexner contributes a preliminary communication dealing with the study of **thrombi composed of agglutinated red bloodcorpuscles.** His conclusions are: (1) Agglutination of red corpuscles *intra vitam* is not uncommon in infectious diseases in man and animals. (2) A special variety of thrombus is produced through this agglutination, which may be denominated agglutinative thrombus. (3) When such thrombi are old, or when the agglutination is compact, they may present appearances to which the name of "hyaline thrombus" has been applied. (4) Other alterations of the blood than those arising in infectious diseases may bring about agglutinative thrombosis, the nature of this alteration being little understood. (5) Poisons which destroy corpuscles rapidly are provocative of agglutinative thrombosis. (6) The so-called "fibrin ferment thrombi" are probably nothing less than agglutinative thrombi. [T. L. C.]

8.—Noguchi discusses the **antihemolytic action of bloodserum, milk and cholesterin upon agaricin, saponin and tetanolysin, together with observations upon the agglutination of hardened red corpuscles.** He states: (1) Bloodserum and milk exert more or less antihemolytic action against certain phytohemolysins and bacterial hemolysins, and their action is nonspecific. (2) The manner of antihemolytic action of serum and milk agrees with the manner of action of cholesterin and lecithin against these hemolytic agents. (3) It is highly probable that this antihemolytic action of serum and milk depends either wholly or in part upon their cholesterin constituent. (4) Agaricin contains a hemolytic principle of considerable activity. (5) Hardened red corpuscles may still be agglutinated by ricin, venom-agglutins, and serum-agglutinins. [T. L. C.]

9.—Longcope presents a **contribution to the knowledge of terminal and other infections which is a study of the bacteriolytic serum complements in disease.** His conclusions are thus stated: (1) Normal individuals show slight fluctuations in the bacteriolytic complement-content of their blood. (2) In many prolonged chronic affections, such as nephritis, cirrhosis of the liver and diabetes mellitus, there is a marked decrease in the bacteriolytic blood complement, which becomes more marked toward the end of the disease. (3) Terminal infection in chronic disease is probably the direct result of the diminished state of the bacteriolytic complement. (4) The bloodserum of certain individuals suffering from chronic disease does not show a reduction in complement; these individuals appear to escape terminal infection. (5) Hyperleukocytosis is frequently associated with high complement-content of the bloodserum for the typhoid and colon bacilli. (6) The bloodserum of some typhoid fever patients shows a diminution in the specific complement for the typhoid bacillus. (7) Human bloodserum contains a multiplicity of bacteriolytic complement. [T. L. C.]

10.—Flexner and Noguchi present a continuation of their studies upon the **constitution of snake venom.** The experiments deal with new and additional questions of the chemical (or physiological) constitution of venom. This paper, which is an elaborate study of the subject, cannot be abstracted with profit to the reader. [T. L. C.]

REVUE DE MEDECINE.

October 10, 1902. (22me. Année, No. 10.)

1. Concerning Some Hemorrhagiparous Arterial Changes in Cirrhosis. CH. BOUCHARD.
2. Hematology of Carcinoma of the Stomach. MOUISSET and TOLOT.
3. Anguish. P. LONDE.
4. Edemas and Hydrorrheas in the Course of Chronic Nephritis. CH. VALENTINO.

1.—Bouchard says that abdominal plethora is not the only cause of **hemorrhage from the digestive tract in cirrhosis.** The hemorrhages that occur at a distance from the region of the portal vein and which are frequent in cirrhosis cannot be accounted for by abdominal plethora. Extra-abdominal hemorrhages in patients suffering from cirrhosis are related to pre-existing arterial lesions that may result in the production of nevi in the skin, in the mucous membrane of the mouth, of the pharynx or of the esophagus. The gastrorrhagias of the cirrhoses have their origin, also, in pre-existing arterial lesions. Epistaxis from an arterial lesion has intimate relations with cirrhosis. [J. M. S.]

2.—Mouisset and Tolot report in detail the **hematology of 8 cases of carcinoma of the stomach.** In all of these cases, except one, the diminution of the erythrocytes appeared to the authors to be distinctly in relation with the change in the general condition of the patient. They consider that the diminution of the color index (*valeur globulaire*) is an excellent sign of carcinoma of the stomach; but this sign may be wanting because of the recent appearance or the slow course of the lesion or on account of a sharp increase in the number of erythrocytes. Consequently, it is necessary to make several blood examinations within a few days of each other before drawing conclusions. From the 8 cases reported, they decide that leukocytosis is a phenomenon which is, as a rule, late in appearance in carcinoma of the stomach, developing only in the period of cachexia; at least, it is not the result of inflammatory complications. They consider it impossible to make a diagnosis of carcinoma of the stomach by the leukocytic formula. [J. M. S.]

3.—Londe considers **anguish** to be a symptom complex, at the same time mental and somatic. It may result from any perturbation of the physical or organic life. The conditions for the appearance of this phenomenon are the transmission to the medulla of some perturbation. When the cause of the symptom is of organic origin the medulla is interested, either directly or by the reflex path of the pneumogastric nerve. The manifestation of the symptom is often a simple indefinable malaise; it may be psychic, even delirious or somatic, and then may localize itself in one of the principal territories of the splanchnic nerve. Anguish is accompanied by different medullary troubles which frequently dominate the clinical picture. Subjective by definition, the symptom then permits of objective disorders. Anguish is always more or less paroxysmal, nevertheless conditions of chronic anguish with recrudescences have been described. Cheyne-Stokes respiration causes a sort of disease of anguish. The causes of the condition are extremely variable; so that one should very often seek the cause of the anguish in other regions than the cardio-aortic, of which angina pectoris is only a particular instance. The diagnosis of the condition has for its objects, (1) not to misunderstand the syndrome in its most varied aspects, (2) to recognize its point of origin and (3) to decide whether it is the result of a lesion or of a functional trouble. The prognosis and the treatment depend upon the diagnosis. From the viewpoint of general semiology, the study of anguish clears the pathogenesis of varied symptoms, co-ordinates them and explains the co-existence of troubles that are incongruous in appearance. It shows how organic diseases react upon the morale of the patient and indicates the importance of nervous symptoms in general medicine. [J. M. S.]

4.—Valentino reports a case of chronic parenchymatous nephritis, with edema of the eylids and ankles, co-existent with lingual and uterine edema. He also reports a case of chronic interstitial nephritis, with edema of the thorax, accompanied by edema of the tongue, lachrymal and nasal edema. The uterine edema in the first case, and the lachrymal and nasal edema in the second, were accompanied by catarrh. The author is of the opinion that the **hydrorrheas** called essential are the result of an humoral dyscrasia and he attributes to them all the pathogenic and clinical qualities of edemas. These manifestations have, nevertheless, the great advantage of earlier appearance than the common edemas; they also have the quality of not existing unperceived, as the discrete edemas which mark the beginning of these diseases do; by their characters the hydrorrheas force the attention of the patient and demands his care. If one establishes the truth of the statement that, on the one hand, the remedies advocated for treatment of these discharges are often highly toxic (strychnine) and if, on the other hand, he establishes the truth of the statement that certain of these discharges by their tenacity and by the train of pseudo-inflammatory symptoms that accompany them (voluminous edemas, pains, etc.) are capable, at certain times, of simulating a phlegmasia suitable for surgical treatment, one conceives with what interest the morbid cause should be sought. Valentine believes that the **essential hydrorrheas** are excellent **symptoms of dyscrasic affections, particularly renal,** and that, in the majority of cases, they may aid in diagnosis. [J. M. S.]

LA SEMAINE MEDICALE.

October 1, 1902.

Technique of Autopsy of the Heart. V. CORNIL.

October 8, 1902.

Hypertrophic Tuberculoma of the Cecum; Diagnosis of Tumors of the Right Iliac Fossa. DIEULAFOY.

Dieulafoy states that the ordinary form of intestinal tuberculosis, which is of ulcerative type, is rarely primary, but usually occurs during the course of a pulmonary tuberculosis. In this communication he describes a **hypertrophic tuberculoma** of the cecum, in which the tuberculous process begins in the cecum and remains localized there. This type of local tuberculosis is characterized by the formation of fibrous tissue, the ulcerations occupying a very insignificant place. It is always primary and occurs in patients who are not affected elsewhere with tuberculosis; is extremely chronic in its course and there is gradually formed a **large, indurated tumor in the right iliac fossa which simulates cancer.** Taken in time, this form of tuberculosis is amenable to operation and cure. The condition may be differentiated from cancer by its slow and protracted course, and sometimes a valuable point in favor of cancer may be discovered should the patient suffer from tuberculosis of the lungs. [T. L. C.]

October 15, 1902.

Transmission of Bovine Tuberculosis to Man by Accidental Inoculation and Re-inoculation Experiments on the Calf. C. H. H. SPRONC and K. HOEFNAGEL.

These writers report the case of a man who suffered from **cutaneous tuberculosis** at the seat of a slight wound received in May, 1900, at the autopsy of a tuberculous cow. Inoculation of the tissue cut from the affected spot produced a generalized tuberculosis in a guinea-pig. After a second passage through the guinea-pig the tuberculous virus was inoculated May 15, 1902, into the skin of a sound heifer, about 3 months old. The animal succumbed to tuberculosis. The result of subcutaneous inoculation in the calf demonstrated clearly that the man had been the carrier of a pathological condition produced by bovine tuberculosis. Their observations demonstrate, at the same time, that the bacillus of bovine tuberculosis does not lose its virulence rapidly in the human organism. In the present case, after 20 months, the virulence for the calf was not less than if the culture had been directly injected from the wound of the affected patient. [T. L. C.]

October 22, 1902.

Agitation: Its Causes and Treatment. M. G. DENY.

Deny groups those nervous patients to whom attention is immediately called by the constant changing of their facial expression, sudden and unexpected bodily movements and disorders of speech. The disorders of speech consist in incoherency, unusual vulgarity, cries, exclamations and singing. The disorders of bodily movement include the impossibility of remaining quiet in one position, excessive gesticulation, dancing, breaking of objects, tearing of the clothing and acts of violence. This syndrome is a manifestation of **functional disturbance of the cortical centers, not alone of the sensory and psychomotor,** but also of the higher psychical centers of memory, judgment, attention, etc. Etiologically, the cause may reside in an **infection**, as during the infectious fevers, to various **intoxications** or to a state of **complete exhaustion** due to overtaxing the mental faculties beyond their limits. The principal indications for treatment are dependent upon the cause, which must be determined by most careful and repeated examinations. It is necessary to counteract the irritation of the central nervous system, to secure the elimination of all toxic products and to increase the nervous nutrition as far as possible. [T. L. C.]

October 29, 1902.

The First International Congress of Tuberculosis and the Present Actual State of our Knowledge of this Disease. L. CHEINISSE.

The writer describes the work accomplished by the Berlin Congress, of 1899, and reviews the several National and International conferences since that date. He also sets forth our present knowledge of the disease and presents a critical summary of some of the discussions which have been waged. [T. L. C.]

November 5, 1902.

The League Against Tuberculosis After the Work of the Berlin Conference. L. CHEINISSE.

Cheinisse describes the work of the French Antituberculosis League, the object of which is to familiarize the public with the nature of tuberculosis, its contagiousness, prevention and curability. The League has inaugurated a tractarian movement, disseminating literature containing practical points on the control and treatment of the disease. Considerable space has been devoted in these publications to the description of sanitary precautions in the care of the tuberculous of our various sanatoria, etc. [T. L. C.]

Society Reports.

NEW YORK ACADEMY OF MEDICINE.

SECTION ON ORTHOPEDIC SURGERY.

Meeting held November 21, Dr. G. R. Elliott in the chair.

Dr. Homer Gibney showed a case of **Pott's disease** in a child 3 years old. After the condition had existed 6 months, a frame was applied, and all deformity disappeared in 5 months more. A permanent jacket was applied for 2 months longer, complete fixation resulting, in an overcorrected position. Since that time the child has been perfectly well, not showing any evidence of the disease. The frame used was a modified Bradford frame, made of canvas over gas-piping. Dr. Charlton Wallace presented 3 more cases of Pott's disease, now under treatment with the Whitman modification of the Bradford frame. One of these patients was 4 years old and was doing well, although patients over 18 months of age are not, as a rule, treated by the frame. Dr. R. H. Sayre thought this treatment excellent. He believed, however, that Dr. Wallace allowed the last patient too much freedom of motion. Dr. Royal Whitman, who had described this method of treatment some years ago, thought it the best because it allowed over-extension.

Dr. Whitman presented a girl, 11 years old, operated upon 5 years ago for **congenital dislocation of the hip** by the open method. Only one side was operated upon, as anchylosis appeared probable. Now she limps on the unoperated side and considers the anchylosed leg her good one. The operated limb is 2 inches longer than the other and there is no deformity. Dr. V. P. Gibney referred to a similar case. Dr. Whitman believed that the open operation could be performed on older patients than those suitable for the Lorenz operation.

Dr. Sayre showed a patient with the history of slight curvature of the spine accompanied by **crackling of the muscles** over the scapula on moving the shoulders. There was also pain over the deltoid on that side. He referred to a similar case affecting the erector spinæ muscles in an athlete. Dr. Gibney had a case under observation at present. He considered the symptom hysterical, marked improvement following applications of the cautery. Dr. Elliott has also seen similar cases.

Dr. L. W. Ely read a paper entitled a **"Case of Typhoid Spine."** After reporting the history of the case, which occurred in a physician, aged 33 years, he stated that he believed the condition to be an osteitis, probably combined with periostitis and neuritis. Dr. Whitman agreed with Dr. Ely that cases of typhoid spine were not so very uncommon. Dr. Gibney also considered the condition frequent, but obtained relief from the cautery. Dr. Sayre referred to what he called "diphtheritic spine."

Dr. A. A. Berg, after presenting a case of acute arthritis, read a paper on **the joint complications of acute pyogenic osteomyelitis;** with especial reference to the treatment of the purulent forms of arthritis. He divides joint manifestations into pseudarthritis and inflammatory arthritis, the latter always being due to bacterial invasion. He laid stress upon the fact that periarthritis always accompanies joint inflammation, whether mild or severe. In the treatment he uses multiple incisions, evacuation and drainage, and has had excellent results. Dr. Elliott referred to a case under observation. following an accident. This case was at first mistaken for neuritis. In closing, Dr. Berg stated that there seems to be great lack of knowledge among physicians concerning joint diseases. He believed that sepsis following osteomyelitis was exceptionally rapid in its course.

PHILADELPHIA OBSTETRICAL SOCIETY.

Meeting held December 4, the president, Dr. J. M. Fisher, in the chair.

Dr. H. A. Kelly, of Johns Hopkins University, read, by invitation, a paper entitled **"Some Practical Points in the Examination and Treatment of Diseases of the Urethra, Including Skene's Glands."** Under the term labia urethræ he described a well-defined, important anatomical structure which has hitherto escaped attention. These labia consist, not in the rounded margins of the external urethral orifice. which have been erroneously termed labia, but in well-defined lips. or labia, which project from 2 to 4 mm. beyond the external meatus and by mutual approximation cover and protect the orifice from the bacterial flora constantly bathing the vulva. If a trivalve speculum is introduced into the vagina and the blades separated, the labia urethræ are also separated and the urethra is exposed. During coitus they also protect the urethral orifice. Sometimes these labia project beyond the urethral orifice on either side, like long elephant ears, much more conspicuous relatively than the labia minora. They disappear with age and mechanical insults. Skene's glands lie just within the urethra at the base of these labia. Their function is to moisten the urethral labia, particularly with the violent displacement of the labia during coitus, when the labia urethræ need constant lubrication. They occupy the same relative position to the urethral orifice that Bartholin's glands bear to the vaginal orifice. They may become affected by catarrhal or gonorrheal inflammation. He cited a case of what was possibly cyst of the left gland. due to a closed duct. This may be treated by injection, incision or excision. After citing a number of cases treated by injection and excision, Dr. Kelly referred to an interesting case in which smegma bacilli were found in the abundant secretion from one of these glands, showing how readily tuberculosis of the urinary tract might have been inferred, even though the vulva had been cleansed before the patient urinated.

Dr. R. C. Norris said that he looks for the so-called gonorrheal maculæ of Sänger in Bartholin's glands and for a similar appearance in Skene's glands. He was sorry that Dr. Kelly did not go into the microscopical study of the anatomical structure of the labia urethræ. He frequently noted that women who have borne many children have a puffy. red, swollen and sometimes eroded area at the orifice of the urethra, without pain. He wondered whether these folds have anything in their microscopical structure to throw light upon the difference betwen the exquisitely painful caruncle and the erosion or vascularity referred to, which is unassociated with pain. Dr. O. H. Allis said that all physicians should wear gloves, and that their hands should be kept very delicate and very sensitive. He advised washing the hands with sand once a week. Dr. J. C. DaCosta asked Dr. Kelly if he had ever used the fluid extract of hydrastis. He had found it one of the most useful remedies in inflammatory affections of the urethra.

In closing, Dr. Kelly said not to draw conclusions from the first 2 or 3 women you examine. You will find the best defined urethral labia in younger women, in whom the vaginal orifice is relatively intact. He has not yet been able to make microscopical examinations of these structures. He expects that they would be much like the hymen in structure, as they seem to form a part of the hymenial system. He still prefers the nitrate of silver to the other preparations. In giving massage to the urethra and the glands he makes a glove by wetting a thin layer of cotton and then applying it. like a little cap, over the last joint of the finger. Sänger, in agreement with Dr. Allis, is emphatic as to the value of sand in keeping the hands fair, soft and clean, and Krönig, in Leipsic, says that it is one of the best agents in removing the epithelial roughness always found on the hands of those using bichloride of mercury.

Multiple Penetrating Stabwounds of the Abdomen, with Extirpation of the Injured Spleen.—In an extremely interesting paper, Bernhard, of Samaden (*Correspondenzblatt für Schweizer Aerzte,* August 15, 1902), reports a case of penetrating abdominal wounds, in an Italian miner, aged 24. Examination showed 7 stabwounds, 4 of them in the abdomen. Laparotomy disclosed internal hemorrhage, from the mesentery, spleen and liver. As sutures were of no avail, the spleen was extirpated. The wound granulated well, being left in the sunlight for hours at a time. This greatly influenced recovery. Subsequent blood examinations showed that the place of the spleen must have been filled, vicariously, by the bone marrow. The wounds of the liver, omentum and diaphragm all healed rapidly. Laparotomy is necessary, in such complicated cases of abdominal injury, not only therapeutically, but for the correct diagnosis of the conditions existing. **[M. O.]**

Special Articles.

LOEB'S WORK ON THE SEA-URCHIN'S EGGS.

In our issue of last week we referred to a recent criticism of Professor Loeb's work on the eggs of the sea-urchin. As the matter is one of importance, we give the following statement, which is more in detail.

In 1901, Loeb and Lewis published (*Am. J. Physiol.*, 1901, Vol. vi, p. 305) the results of some studies made on the preservation of sea-urchin eggs in sea-water to which potassium cyanide had been added. The authors concluded that the presence of potassium cyanide in sea-water prolonged the life of the eggs of the sea-urchin by preventing their decomposition. But these observers kept their specimens in loosely covered dishes in the laboratory, and they worked with natural sea-water, which had not been sterilized. In some of the experiments they heated the sea-water to 70°C. These experiments were open to the criticism that they had not been performed with solutions of known sterility. Yet this important discovery was widely advertised in the lay press. It would have been easy for the observers to place these sea-urchin eggs in sea-water that had been sterilized by boiling for one-half hour; or, still better, they could have made an artificial sea-water, the purity of which could have been proved. During the past year Gorham and Tower, working in the Scientific Laboratory of the United States Fish Commission at Woods Holl (*Am. J. Physiol.*, December 1, 1902) have reviewed the work of Loeb and Lewis. These authors experimented with eggs of the winter flounder and of the sea-urchin. The ova were kept in sea-water and potassium cyanide and in sterile sea-water. As a result of these investigations they draw the following conclusions: (1) The action of potassium cyanide is only an indirect one, i. e., killing or inhibiting the bacteria, and thus giving the eggs a more favorable environment. (2) In all experiments with unsterilized sea-water, the protozoa enter as an important bacteria-destroying factor, which must be considered in interpreting the results. (3) Sterile sea-water prolongs the life of the egg of the sea-urchin much longer than Loeb's most favorable potassium cyanide solutions. (4) Both our own experiments and those of Loeb show that too strong solutions of potassium cyanide or too long exposure to weak solutions soon kill the egg. From this the reasonable interpretation is that potassium cyanide is a poison for all living matter, but it acts more quickly on bacteria than on sea-urchin eggs; it is in no sense a prolonger of life. (5) From the fact that unfertilized eggs can be kept in sterile sea-water for eleven days or longer; it would seem that the specific mortal processes of Loeb are as yet hypothetical phenomena without any definite experimental basis.

This contradiction of the first series of experiments is an unfortunate circumstance, and one that should not have occurred. It should be a warning to the scientific men of the country and of all countries not to rush into print, particularly into lay print, with a new discovery until they have weighed all the cons as well as considered all the pros.

Original Articles.

GASTROPTOSIS: A CRITICAL AND CLINICAL STUDY[*] WITH REFERENCES TO 100 CASES.

By ALBERT P. FRANCINE, A. M., M. D.,
of Philadelphia.

Clinicians seem at last to be in a position to give a more complete and definite answer to the question: "What is gastroptosis?" than has heretofore been forthcoming. Since the earlier writings of Virchow, Chlaposki, Kussmaul, Landau and others in Germany upon abdominal displacements; and Glenard's monograph, in eighty-eight, upon gastroptosis, followed by the papers of Cheron, Féréol, Pourcelot, Trastour and others in France, much interesting and serious investigation has been devoted to this subject both in France and Germany, and more recently in this country, with the result that we are now reaching a position from which to dogmatize. To within the past few years there have been wanting the results of systematic clinical and post mortem study of these cases, and it is only from such data that we can crystallize our views and give their true value to the various physical signs and theories which have from time to time appeared. Since the post mortem studies of Niesel, Ebstein, Sandifort, Hertzfeldt, Eberle, Legroux, Cuilleret and others, and the published clinical reports of Meinert, Langerhans, Arneil, Steele and myself, we approach this subject from a point of view other than that of pure theory or a limited personal experience, and it is only by the elimination of these latter two viewpoints and the sifting of data furnished by a large series of carefully studied cases that we can hope to place the study of this phase of stomach disease on a basis with that of more exhaustively studied lesions like those of the lungs and the heart.

It should be borne in mind that in discussing gastroptosis it is not possible to separate this condition from enteroptosis or a general splanchnoptosis, and that these conditions in their etiology and clinical manifestations complement each other. The author has been led to choose gastroptosis for a title rather than a more general term, because, in his opinion, the symptoms which manifest themselves are best considered as due to, or associated with, displacement of the stomach.

Definition.—Gastroptosis may be said to consist in the descent and dilation of the pyloric end of the stomach and the downward displacement of the transverse colon, especially the right half and the hepatic flexure. The right kidney is usually movable, sometimes both kidneys, occasionally the liver and exceptionally the spleen.

Gastroptosis may be distinguished as primary, when there is descent and dilation of the pyloric end of the stomach only, as is usually seen in women; or secondary to general dilation of the stomach, when a primary gastrectasis acts by stretching and thinning the walls, thus leading to a secondary ptosis. This is frequently the type in men. It may be congenital, consisting in a persistence of the embryonal or fetal position of the abdominal viscera, as for instance in young children; or acquired, in the sense of being a retrograde movement in adult life to the fetal position of the viscera.

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[*] The portion of the paper dealing with etiology was read before the Philadelphia County Medical Society, October, 22, 1902.

Etiology.—The question of etiology is the most difficult and obscure that the clinician is called upon to discuss. From the time of Virchow's early descriptions of abdominal displacements, in 1853, to the present time, theories for the pathogenesis of this condition have been rife, hence it will be necessary to mention for completeness' sake the most noteworthy of these. The earlier writers, notably Virchow, in Germany, and Glenard, in France, maintained that splanchnoptosis was the result of adhesions between the different visceræ exerting mutual traction. These adhesions were, in their opinion, the result of localized areas of peritonitis, and were often overlooked clinically. More modern research has found this theory tenable in only a limited number of cases. Virchow attributed great importance to coloptosis as a primary factor in displacement of the abdominal visceræ, and thought the transverse colon descended most frequently, the hepatic flexure next and the splenic flexure least frequently. Glenard's view closely resembled this, *i. e.*, that the right half of the transverse colon and the hepatic flexure sank first, and that the stomach followed from traction on the gastrocolic ligament. That this state of affairs did not always obtain was shown by Niesel, who in one hundred autopsies found the hepatic flexure in its normal position in thirty-four. The descent of the liver and kidney followed subsequently to the gastroptosis in Glenard's opinion.

The question of dislocation of the liver cannot be overlooked as an etiological factor of importance in enteroptosis, and also in gastroptosis. From the difficulty of diagnosing this condition ante mortem it does not occupy as conspicuous a position as it probably deserves. Post mortem records show that it is not infrequent, and in our patients operated upon, five in number, the liver was movable in two, or 45%. General causes constricting the thorax or pleural effusions pressing down the diaphragm would tend to dislocate the liver, with the addition of disease of that organ itself increasing its weight. Carstens, of Detroit, from the analysis of the literature of ninety-eight cases, concludes that it is nearly always caused by injury, severe falls, heavy lifting or, in a few cases, malignant growths of the organ itself. From a study of these cases, tight lacing and pregnancy would seem to deserve mention. Landau, agreeing that enteroptosis was the first factor in gastroptosis, thought that disease of the abdominal walls, relaxation or loss of tonicity, was directly responsible for the former condition. Hemmeter admits this view in a restricted number of cases, but agrees with Rosengart in emphasizing the liver as the central figure in enteroptosis. Hemmeter, Langerhans, Kuttner and, most recently and convincingly, Rosengart, explain splanchnoptosis as being congenital in origin and believe that the condition itself consists in a reversion of the abdominal visceræ to the embryonal or fetal type. Kussmaul practically agrees with this view and describes two principal causes for the condition, the one heredity, and the other tight lacing. Ewald, Landau and Kusster do not believe in the congenital theory; while Schwerdt, Stiller, Fricklinger and others suggest heredity as the principal factor with constitutional anomalies or taints, as, for instance, phthisis and consequent rapid emaciation as directly responsible. Opolzer and Rollet agree that rapid emaciation is an important factor, and the latter lays particular stress on direct pressure from enlarged neighboring organs, especially the liver and spleen.

Tight lacing has many advocates as being responsible for gastroptosis in the female sex in a large number of the cases. Von Ziemssen believes that the pyloric end of the stomach is in this way pushed downward and to the left, producing the so-called vertical position of the stomach, first observed in autopsies by Meckel and subsequently clinically described by Kussmaul. Curveilhier, Chapotot and Valker lay great stress on the corset as a cause of gastroptosis, as do Einhorn, Kellogg, Dickinson, Morris and others in this country. Ebstein does not consider it a particularly important factor, though more recently both Meinert and Wiersker have supported this theory.

It is generally agreed that anything which constricts the thorax or enlarges the capacity of the abdomen tends to bring about ptosis of the abdominal visceræ. Meinert is strongly in favor of this view, and claims that faulty development of the thorax brought about by a series of generations of malhygienic clothing, occupation or disease, especially a tendency to rickets, is frequently responsible. He is to this extent a believer in the congenital theory, though, in his opinion, it is not so much a question of heredity as of faulty development. Lichtenstern has been more specific in this matter. He claims that the muscular ligaments of the colon are weak, and suggests incomplete descent or abnormal development of the cecum and great length of the mesenteries as important factors. Rosenheim practically agrees with these views. Some of the French clinicians, notably Charcot and Bouvert, consider gastroptosis secondary to neurasthenia. In 1894 Meinert, from the study of gastroptosis in chlorotic women, came to the conclusion that the former condition was an etiological factor of importance in the production of the latter. His views on this matter were not generally accepted, though his name has been frequently associated with this class of cases. It remained for Kelling, in 1896, to dispute the general application of this view. Gastroptosis is usually unaccompanied by chlorosis, though the reverse is not true, as frequently chlorotic girls suffer from gastroptosis. The proper etiological relation between chlorosis and gastroptosis, as between the latter condition and neurasthenia, is perhaps best expressed in considering neither one the direct cause of the other, but both synchronous manifestations of some constitutional weakness or anomaly. The reverse of this is equally true. If chlorosis or neurasthenia does lead to gastroptosis, as is considered to be the case in certain instances, it is, of course, by reducing the muscular tone and resistance of the subject.

It should be clearly recognized then that there are two sets of factors in the etiology of this condition: (1) The conditions predisposing to enteroptosis; (2) those directly responsible or the exciting causes. Under predisposing causes may be mentioned hereditary predisposition and constitutional weakness; while the exciting causes as outlined by Hemmeter may be mentioned. Recognizing that the first step in the vicious gastroptic circle is enteroptosis, he accepts the following: (1) Relaxation of the abdominal muscles, following repeated pregnancies, abdominal tumors, etc., fully described by Landau. (2) Hereditary predisposition to enteroptosis. (3) Pressure of badly fitting clothing, belts or corsets. (4) Chlorosis, as described by Meinert. (5) Nervous dyspepsia. (6) Displacement of the female genito-urinary organs. (7) Curvature of the spine. (8) Enlargement and increase in the weight of the liver by neoplasm, etc. (9) Lastly, traumatism.

From the above critical survey it will be seen that the pathogenesis of gastroptosis is not a simple matter nor one that is readily disposed of. However, certain general causative factors may be outlined and, in the author's opinion, it is neither wise nor necessary to try to formulate a theory that will be broad enough to explain all cases. For it must be admitted that very different exciting causes, upon which we can frequently lay a finger, are active in different individuals; and that, in a certain measure, each case is a law unto itself.

Gastroptosis is much more common in women than has been generally supposed, and in nearly all women complaining of symptoms of gastric motor insufficiency the underlying condition is gastroptosis. In this connection it may be well to call to mind Meinert's dictum, that a normal position of the stomach is the exception in the female sex.` Stockton, Boardman Reed and others estimate gastroptosis as being present in more than 50% of women. It is only just to add that the stomach in a certain number of women complaining of these symptoms is found to be normal both in size and position, even when diastasis and relaxation of the abdominal muscles exist; and that there is no good reason for supposing that, in the healthy woman, the stomach occupies other than the normal position. The same cannot in all probability be said for the intestine, and Virchow has stated that slight dislocation of the visceræ, especially enteroptosis of mild grade, exists more frequently than not.

With regard to the relative frequency of gastroptosis in the sexes, the proportion is approximately four or five to one in favor of the female sex. It is more common in women who have borne children, and in those with relaxed and pendulous abdominal walls, and in whom diastasis of the recti muscles exists (Webster). It occurs frequently, however, in young nulliparous women in whom the recti muscles are closely approximated. Gastroptosis exists at all ages, but the greatest number of cases are noted in early adult life. It may be said to occur most frequently between the years of twenty and fifty. It is, however, found in early childhood, and Hemmeter has reported three cases, two in female children of ten and twelve, and one in a boy of eleven. It would seem probable that enteroptosis and gastroptosis exist more frequently in children than is generally suspected. Considering the character of the anatomical support of the stomach in infants and young children, and its vertical position and pouch-like shape, it would seem probable that the overloading of the stomach from too frequent and too much feeding might result in dilation and ptosis. It is not improbable that there is laid here the foundation of a condition which under the stress of later life is discovered as a fully developed case of gastroptosis; offsetting this, however, is the well-known resiliency of developing organs, or those of the young, to regain lost compensation. It was from a study of cases in children that Kussmaul based his belief in the theory of the arrest of development of the visceræ in the fetal state.

Congenital tendency and heredity, faulty development, pressure from enlarged organs or those the seat of tumors, tight lacing, the corset, etc., have all been mentioned above in connection with their more prominent advocates. Muscular weakness, especially following prolonged illness, is put down as a cause. Gastroptosis not infrequently follows the infectious fevers, especially typhoid fever and scarlet fever. A certain number of cases are seen in narrow-chested, rachitic children from this cause. Rapid loss of weight is generally admitted as being very important etiologically, and is most frequently seen in cases of phthisis or severe asthma. Gastroptosis sometimes results from the artificial reduction of weight in obesity.

The effect of severe attacks of coughing in chronic disease of the lungs, pleuræ or bronchial tubes may give rise to splanchnoptosis in those otherwise predisposed. Collapse or fibroid contraction of the lung with consequent reduction in the size of the thorax, or large pleural or pericardial effusions depressing the diaphragm, as instanced by Rosengart, are factors in the pathogenesis of this condition, acting chiefly by primary dislocation of the liver. Dislocation of the abdominal visceræ, especially the liver and kidney, may occur as the result of physical shocks and jars, sudden strain or muscular effort. Persons of weak muscular organization are more prone to abdominal ptoses than others; in such, overwork or prolonged fatigue may lead to it. In this connection certain occupations might be suggested. Gastroptosis is frequently found in anemic and delicate saleswomen who stand six or eight hours a day, and in women of like mould who are called upon to do arduous household duties, especially washing. In our series several cases occurred in motormen and conductors of trolley cars, in whom the upright position and the jarring of the cars, considered in connection with irregular and too short periods for meals, suggest themselves as possible etiological factors. One case occurred in an instructor in the University, and came on suddenly after playing tennis for two afternoons when unused to violent exercise. He had previously had little or no gastric symptoms.

Weakness or loss of tonicity of the abdominal muscles following repeated pregnancies has been emphasized by Landau. Too early rising from childbed or the omission of the postpuerperal binder may also give rise to this condition. Hernia of the mesentery in the linea alba, as mentioned by Rosengart, may lead to it. Large abdominal tumors, cysts or ascites and frequent tapping and laparotomies may all, by destroying the integrity of the abdominal wall, act in the same way. Exhausting hemorrhage is put down as a cause, and also gastro-intestinal auto-intoxication, as instanced by Langerhans. Webster, of Chicago, in 1901, called attention to the separation of the recti muscles as being an important factor etiologically. This is nearly always present in multiparous women and without doubt plays an important role in destroying the integrity of the abdominal walls and disturbing intra-abdominal pressure. Diastasis of the recti muscles does not, or with extreme rarity, exist in nulliparous women or in men, so it cannot be claimed to affect this class of cases. I have seen marked diastasis of the recti in a woman who had borne thirteen children, who suffered from symptoms of gastric motor insufficiency, but in whom there was no ptosis of the stomach whatever. Anything which changes intra-abdominal pressure has been considered a cause for enteroptosis, as it is for displacement of the uterus.

Indiscretions in diet are a very widespread and potent factor in the pathogenesis of gastroptosis; overloading the stomach with either food or drink, irregular and bad habits of eating, whether by inducing gastric motor insufficiency and gastro-intestinal auto-intoxication, or by acting more directly and mechanically through a primary dilation. There can be no doubt that many cases, especially in men, are brought about in this way. Tobacco is also a factor, and the author has seen marked cases of gastroptosis coming on rather acutely in medical students who have smoked to excess, and in whom irregular habits and late hours also have played a part. It is probable that chronic constipation is a frequent cause, especially in those cases in which a primary enteroptosis exists in a colon overloaded with feces. This is not infrequently seen at autopsies, especially in the old and weak, and in the insane, in whom the colon may contain an enormous quantity of fecal matter and be found resting in the bony pelvis. Primary gastrectasis, by stretching and thinning and consequent atony of the walls of the stomach, may lead to a ptosis of that organ due purely to mechanical reasons, and in these cases the ptosis must be considered secondary to the dilation (Steele).

It seems probable that we should recognize a distinction in the form of gastroptosis occurring in the two sexes. From the study of this phase of the subject the author is led to the opinion that primary gastroptosis, *i. e.*, when the ptosis is primary and the pyloric end of the stomach is secondarily dilated, occurs most typically and frequently in women, as pointed out by Steele, while secondary gastroptosis, *i. e.*, when the ptosis is secondary to general dilation of the stomach, is the form more commonly seen in men. The figures from our statistical review afford interesting data in this connection.*

Gastroptosis with pyloric dilation (primary gastroptosis): Women, 48; men, 7.

Gastroptosis with general dilation (secondary gastroptosis): Women, 2; men, 8.

Gastroptosis of the severest grade is seen following pyloric obstruction from such causes as stenosis, inflammatory induration, new growths, etc., and such cases both for symptomatology and treatment belong under the heading of the primary condition.

In conclusion, one must admit that the etiology of gastroptosis and its associated conditions is difficult to explain, and that many of the theories offered are purely hypothetical. We must recognize two sets of causes, the predisposing and the exciting. The former are congenital weakness and hereditary predisposition; and the condition itself is shown by anatomical and physiological investigation to resemble closely the state of affairs in the fetus, and hence may be spoken of as a retroversion of the visceræ to the embryonal or fetal type. Among the more common exciting causes are tight lacing, rapid emaciation, disease of the abdominal integuments, or, briefly, anything that constricts the thorax or enlarges the capacity of the abdomen. Enteroptosis or, more specifically, coloptosis is generally agreed to be the primary factor physiologically, and to precede the gastroptosis. The kidney and liver follow subsequently. In other words, there is a vicious circle in which the colon and hepatic flexure are first involved, and secondarily the stomach and kidney. The tendency of the latest investigation seems to point to the liver as the primary factor in many cases of enteroptosis, and there can be no doubt that it would be impossible for the intestine to remain long in place after dislocation of the former organ. Chlorosis and neurasthenia should be looked upon as manifestations of a common underlying cause, supposedly constitutional weakness or faulty development, rather than as direct causative factors.

*Physical Signs and Diagnosis.***—One may often make the diagnosis of this condition from a comparatively superficial examination of the abdomen. In thin subjects of weak bony and muscular development a fair idea of the position of the stomach may frequently be made out by inspection and percussion, unaided by inflation of the organ. In typical cases of gastroptosis the chest is long, the costal angle acute, the interspaces wide and the abdomen pendulous or relaxed. Upon inspecting the abdomen of such a patient, while in the recumbent position, there may be observed a flattened area in the epigastrium immediately beneath the xiphoid cartilage, sometimes an area of prominence corresponding to the altered position of the stomach, or, if in thin subjects, the outline of the stomach itself may be noted.

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*Analysis of 70 cases of gastroptosis. Steele and Francine. J. American Medical Association, November 8, 1902.

**Read before the Philadelphia County Medical Society, December 23, 1902.

It is not always, however, a simple procedure to outline the position of the stomach in gastroptosis, as a limited experience might lead one to suppose. This is particularly true when there is much relaxation of the abdominal walls. Rarely, under inflation, the stomach may dilate and seem to occupy the whole abdomen at one examination; while at another, under the use of less air or by its premature escape into the small bowel, it may seem to occupy a much smaller area or even a different position altogether.

The method of examination suggested by Runeberg, *i. e.*, inflation with air through the stomach tube following lavage, should be employed. The older method of Frerick in which CO_2 was used has served its turn and been discarded. Its serious disadvantages need not be mentioned here; while Einhorn's gastrodiaphane and Turck's gyromele have more to discountenance than to recommend their use. After inflation, percussion is the simplest and, in the author's experience, the most accurate method of outlining the size and position of the stomach. Auscultatory percussion is preferred by some.

In gastroptosis the lower curvature of the stomach is below the umbilicus, sometimes as much as a hand's breadth. Frequently the umbilicus is the center of a three-quarter circle formed by the boundaries of the ptosed and dilated pyloric extremity of the stomach, while the cardiac end remains approximately in its normal position. In inflating the stomach with air the size of the viscus is exaggerated, and the lower boundary may reach half an inch below, and the cardiac end may rise an inch or more above, what may strictly be considered its true position. It is possible, as thought by Turck, that under inflation the stomach revolves on its longitudinal axis, and the greater curvature is thus rolled out against the abdominal wall. These points should be borne in mind, though they hardly count against the usefulness of this method, as a normal stomach always remains normal and various grades of change in position and size can thus be noted, albeit with these reservations in mind.

The position of the colon is more difficult to determine than that of the stomach, but inflation with air through the rectum may be practised. The difficulties and doubts of this procedure are many, though by it the transverse colon and the hepatic flexure may usually be mapped out. The splenic flexure, lying, as it does, behind the cardiac end of the stomach, eludes demonstration. From post mortem records, and the position of the colon as determined by laparotomies, it would appear that the transverse colon is always ptosed and that it assumes the U or M shape. Frequently it lies in the true pelvis some distance below the greater curvature of the stomach. Inflation causes it to rise, so that it will usually be found to follow closely the greater curvature of the ptosed stomach. The flexures may be in place, though the hepatic flexure frequently sinks to the level of the umbilicus. Ingalls, of Cincinnati, in a patient operated upon by him, found the hepatic flexure of the colon in about its normal position, while the splenic flexure was ptosed, the principal disturbance being from the median line to the left. The reverse of this is usually the case.

The right kidney in women is frequently movable (in 60 of 100 cases in my series),* more rarely both kidneys (in 12 out of 100), and very exceptionally the left kidney alone. Einhorn, out of 1912 patients, 347 of whom had gastroptosis, found the left kidney movable in six. Other observers of large experience, like Edebohls, Roskam and Reed, have not observed this latter condition. With regard to the best position for palpating the kidney, that usually employed with the patient in the supine position with the legs flexed, is the best, though the upright position with the body bent forward (recommended by Noble) may be tried. Getting the patient to cough or turning him on his left side may serve to render a kidney palpable which is not so in ordinary deep inspiration. Occasionally a movable kidney cannot be palpated after the patient has been in the recumbent posture for a moment or two, and, in addition to the other ordinary sources of error, care must be observed not to mistake an anomalous position of the sigmoid flexure for a movable kidney, as was done in a case operated upon at the University Hospital.

Diastasis of the recti muscles, as described by Webster, and instanced above, is an important sign and should be looked for. It occurs in the great majority of multiparous women. It does not occur, or with extreme rarity, in nulliparous women or in men.

The blood, except for a mild secondary anemia in some patients, is negative, as a rule, though there may be an associated condition of chlorosis. This latter condition was present in three of one hundred patients. Examination of the gastric contents following a test-meal usually reveals a condition of subacidity. The total acidity is often reduced to fifteen in terms of a decinormal soda solution, the free HCl being frequently almost or totally absent. Occasionally hyperacidity due to an increase in the normal acid is pronounced. There is usually in these latter patients marked gastrectasia or a strong neurotic taint. Lactic acid is rarely, if ever, present. The urine, except in bad cases, in which there may be an increased elimination of the ethereal sulphates and the presence of oxalates, indicative of gastro-intestinal fermentation, is negative.

The presence of a floating tenth rib has been pointed out by Stiller as pathognomonic of this condition. It would be conceivable that the relaxation of the diaphragmatic attachment thus brought about might possibly entail some of the far-reaching and numerous consequences detailed by that author, but the significance of this stigma would seem to consist in indicating the type of individual, who, through hereditary weakness or anomaly of both osseous and muscular structures, is constitutionally predisposed to abdominal ptoses. A floating tenth rib is, however, in the author's experience, so infrequent an occurrence as not to warrant great stress being laid upon it. In my series of 100 cases it was noted in but 5.

Much the same estimate may be made of the splashing sound, which no less an authority than under these circumstances be practised daily. As Strumpell is inclined to consider very lightly. When properly studied by a skilled observer, it may bear its quota of significance, but it is not so much the presence of a splashing sound itself as of its proper interpretation in association with other data that is of importance.

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*This series includes that of Dr. Steele and myself, referred to above, with the addition of thirty new cases.

Symptoms.—In studying the symptoms of gastroptosis it should be prefaced that downward displacement of the stomach may exist without giving rise to any symptoms whatever. In these patients it will be found that the motor and secretory functions of the stomach are normal, and, therefore, in a sense, the significance of gastroptosis, if we limit that term to mean simple ptosis of the stomach, is not clear. But this term connotes more than mere displacement; it connotes the clinical picture which we commonly recognize in the so-called nervous dispepsia. It is impossible to estimate absolutely the significance of the displacement *per se* in the causation of symptoms, though it would seem highly probable that downward displacement could not long exist without leading to secondary functional disturbance.

It should be recognized, then, that the characteristic symptoms of gastroptosis are those of gastric motor insufficiency, plus nervous influences; and that these different elements act and react upon each other. The symptoms of gastroptosis must be considered broadly, and in so doing one cannot overlook the nervous element which plays so conspicuous a part. Strumpell well points out the striking effect of emotion or autosuggestion in gastric disorder or disease, and would suggest the term "gastric neurasthenia" as more nearly implying the constitutional or central character of the symptoms than the more generally accepted one of "nervous dyspepsia."

In cases of the so-called primary gastroptosis (outlined above) the symptoms are usually those of gastric motor insufficiency of a mild grade, consisting chiefly in distress and flatulence after meals. When general dilation exists, there is apt to be more retention and, consequently, more functional disturbance. In these latter cases it is not rare to find severe gastric pain, nausea and vomiting and the symptoms of more marked auto-intoxication. The primary factor in the production of the fermentation is stagnation of the gastric contents, due to loss of motor power on the part of the stomach. There is pyrosis with distension and flatulence, usually following the ingestion of food, particularly rich, fatty or starchy foods. The production of gases and the consequent gastric irritability frequently give rise to attacks of palpitation of the heart and dyspnea.

There is usually some acute gastric pain, which may be sharp or burning in character, affecting the pit of the stomach, or sometimes involving the whole abdomen. This pain may be due to an associated gastric catarrh or to hyperacidity, being usually acute in the former and burning in the latter condition; or pain may be due, as suggested recently in Germany, to an insult to the solar plexus from the dropping of the stomach. There is occasionally an annoying "stitch" in some regions of the abdomen, probably due to adhesions.

Pain in the back or lumbar region and a sensation of weight and dragging in the abdomen are frequent symptoms due to evident causes. Headache, weakness, drowsiness and malaise are often present. Constipation is the rule, though constipation alternating with diarrhea, or diarrhea alone, may be present. Nausea may be complained of on rising. Vomiting is not usually present unless due to retention of food or to nervous influences. Palpitation of the heart, dyspnea and consequent precordial distress, or even pain, are frequent symptoms due to pressure from wind. Anorexia may be present, though occasionally a large appetite and thirst are complained of, the latter being more apt to be the case when hyperacidity exists. The tongue is usually coated, and there is some loss of flesh. Symptoms due to impaired circulation are frequently noted, like cold hands and feet, a sense of numbness in the extremities, attacks of dizziness or vertigo. These have been considered as due to cerebral anemia and to disturbed circulation, especially in the splanchnic area.

In addition there are to be found in many cases symptoms the result of nervous influence or emotion. The clinician who has seen much of this class knows only too well the vagaries and complaints of the gastroptic female. Neurasthenia finds here its choicest spirits.

In those cases in which there is pyloric obstruction, especially if of a severe grade, the symptoms are much exaggerated and should properly be considered as due to the primary factor. In such cases there is great dilation and ptosis with enormous retention, which goes on until the stomach finally rebels and expels its fermenting contents. The stomach may become so irritable as to retain nothing but small quantities of liquid food. The emaciation and anemia are severe and progressive.

Gastric crises, described in 1864 by Dietl, in connection with nephroptosis must finally be mentioned. They consist in attacks of gastric tenderness and pain, attended by a slight rise of temperature and transitory jaundice. Various explanations have been offered for their occurrence, probably as being brought about by torsion of the pedicle of the kidney; as due to kinking of the duodenum; and, quite recently, Stengel has suggested that they may be due to direct pressure of the kidney upon the duodenum.

The constitutional and neurasthenic picture produced by malposition of the uterus is similar in many respects to that produced by gastroptosis, and in the light of our present knowledge it would seem highly probable that many cases which have heretofore fallen into the hands of the gynecologists were in reality suffering from gastroptosis. The author further urges that both uterine and gastric displacement frequently go hand in hand. More attention should be directed to the stomach in these cases than is commonly done. In many cases the supposed uterine symptoms will be found to have disappeared completely with relief of the gastric condition.

Treatment.—The indications for treatment in gastroptosis are: (1) To relieve the stagnation and fermentation and to increase the motor power or peristaltic activity of the stomach; (2) to furnish support to the stomach and other abdominal viscera, thus relieving local congestion and symptoms of weight; (3) to tone up the general health and mental attitude of the patient. The means at our disposal are hygiene, diet, lavage and drugs; massage and exercises to strengthen the abdominal muscles; mechanical support, when indicated and, in bad cases with exaggerated symptoms unrelieved by other means, operation. It remains to elaborate this general outline.

As in all stomach conditions, particularly in this it is important to regulate the diet and modify the mode of life so as to relieve, as far as possible, all effort on the part of the gastro-intestinal tract and all emotional and nervous influences affecting the general health. The element of neurasthenia being frequently so marked in these cases, practical tactful advice with the view of toning up the mental condition of the patient is of great importance. The general health and mental tone should be improved by fresh air, systematic bathing, regular hours of rest and regulated exercise.

Badly fitting corsets or tight waistbands or belts should be given up, and the clothes supported by shoulder straps, or a pair of properly fitting straight-front corsets should be worn. Heavy work, like washing over a tub, sweeping or prolonged standing behind a counter, or habits of over-exercise, like long walks or shopping tours, should be strictly prohibited when possible.

Regulated exercise directed to strengthening the abdominal muscles and the back is very important, as these muscles should be made to perform their normal function when possible. Massage of the belly and electricity, particularly in those of costive habit, are of service. After the midday meal the patient should nap or rest an hour or more on the flat of the back with the clothes loosened, and in the more severe cases it is well to advise rest after each meal; in fact, prescribe a modified rest-cure.

The diet itself should consist in light, easily assimilated and nourishing food. Much food at one time should not be allowed, and overloading the stomach should be absolutely interdicted. Small amounts of food taken more frequently put less strain upon the stomach; and the ordinary indigestible articles of diet, rich, fatty or starchy foods should be cut off. If the patient is not getting sufficient nourishment under the modified diet, some form of concentrated food may be added, either between meals or at meal time. If regular habits will not suffice to keep the bowels open, daily enemata are to be preferred to drugs. A glass of hot water on rising is frequently of service in this particular, though large quantities of liquids should be forbidden.

Lavage seems to do these patients good, even when there is no retention. The mere introduction and flow of the water stimulates peristalsis and acts beneficially on the mucous membrane and muscular walls of the stomach, as held by Kussmaul, Malbranc and others. It is, of course, strictly indicated when there is retention or much mucus, and may as a rule, it is sufficient to wash the stomach out twice or three times a week in the more severe cases, while in mild cases one or two washings frequently give permanent relief. It is one of our strongest cards in the treatment of this condition.

To the above measures the addition of a prescription to combat fermentation serves in many cases to effect complete relief from symptoms. The drugs which will be found of most service in this particular are resorcin, carbolic acid, creosote, aromatic spirit of ammonia and sodium bicarbonate. Any one or more of these may be used in combination with bismuth, pepsin, or, in fact, most any stomachic with the greatest benefit. Ewald suggests the following prescriptions:

℞	Tinct. nucis vom.		fl. ʒ vi
	Resorcin resublimat.		fl. ʒ i
	Tinct. cinchon comp.		fl. ʒ iiss

M. S.: Ten to 15 drops every 2 hours.

℞	Resorcin resublimat.		
	Bismuthi subnitratis	āā	ʒ iiss
	Natrii bicarb.		
	Ext. rhiz. calami		
	Sacchar alb.	āā	ʒ ii

M. S.: Teaspoonful every 2 hours.

The following prescription used by the late William Pepper has proved of service in the author's hands:

℞	Creosote (beechwood)		gr. vi
	Sodii bicarb.		ʒ ii
	Pulv. acaciæ		
	Sacchari	āā	q. s.
	Spts. lavandluæ comp.		f. ʒ ii
	Aquæ	q. s. ad.	f. ℥ iii

M. S.: Teaspoonful after meals.

A very effective prescription, recommended by Dr. John H. Musser, known in the pharmacy of the University Hospital as "Carbol-Soda," is the following:

R	Acidi carbolici	gtts. vi
	Sodii bicarb.	ʒ ii
	Spts. ammon. aromat.	f. ʒ iv
	Spts. chloroformi	f. ʒ ii
	Mist. sodæ menthæ	f. ℥ iii

M. S.: Teaspoonful after meals and at bed time.

Creosote may be substituted in the above for carbolic acid. Carbolic acid is sometimes given in smaller doses, a twelfth of a grain in capsule, repeated every two hours. A grain of sodium bicarbonate or other suitable drugs may be given with it in this way.

Other combinations may, of course, be used, adapted to a particular case or as the physician is driven from one redout to another. Sodium bromide is frequently of service in those patients in whom a sedative would be expected to do good. Nux, in ascending doses before meals, is a favorite remedy with many when there is much loss of motor power and dilation. A pill of silver nitrate (gr. 1-6) and extract of belladonna (gr. 1-20) is frequently employed, especially when there is obstinate constipation. Diarrhea usually disappears with the reduction of the gastro-intestinal fermentation. When there is nausea and vomiting, the following does good:

℞	Bismuthi salicylatis		
	Pepsinæ	āā	ʒ ii
	Cocaine hydrochlor.		gr. i
	Aquæ cinnamomi		f. ℥ iii

Sig.: f. ʒ i t. i. d. or more frequently, as the case demands.

Finally, with regard to drugs, it may be said that their successful employment in these cases, as elsewhere in medicine, must depend on the physician's knowledge of the conditions as they exist and the factors influencing them.

In those cases in which the ptosis itself seems to be the cause of symptoms an abdominal supporter or belt may be ordered. This should be tried in any event in conjunction with diet, lavage, etc., if the latter are not of themselves successful. Care should be exercised on the part of the physician to see that the belt fits properly. It should be fitted with perineal straps, and a wedge-shaped or other pad, as frequently recommended, is not usually necessary. Once worn, the patient can rarely give up a belt. It may be added that the mere support thus furnished seems to relieve the splanchnic congestion and symptoms of weight, even though the position of the stomach is not materially helped. The best of all abdominal supports, however, are the abdominal muscles, which should be strengthened by exercise and massage and made, if possible, to fulfil their natural function.

Finally, operation may be suggested. The operation for this condition is termed "gastropexy," and in all about 15 subjects have been operated upon to date. Duret, of Lille (*Revue de Chirurgie*, Vol. 16, 1896), was the first to operate for this condition (March 14, 1894), his operation consisting in a fixation of the serosa of the lesser curvature of the stomach to the parietal peritoneum and muscular abdominal wall at a point just below the xiphoid cartilage. Similar operations have been performed by Davis in 1897, Rovesing in 1899, Hartmann in 1899 and Coffey in 1902.

Beyea, of Philadelphia, in 1898, elevated the stomach to its normal position by plicating the gastrohepatic and gastrophrenic ligaments. Bier, of Greifswald, in 1900, operated with practically the same technique. Webster, of Chicago, in 1901, advised and practised the resection and suture of the fascia of the recti muscles in those cases of enteroptosis and gastroptosis associated with diastasis of the recti abdominales. It would seem that Beyea's operation, supplemented, as he suggests, by Webster's operation, when the latter is indicated, is physiologically and surgically the most rational. The subsequent history of the patients operated upon seems to show that their symptoms, both gastric and neurasthenic, have been permanently relieved, they have gained in weight, and the stomach has remained approximately in its normal position.

However, the author would hesitate before recommending such radical measures in cases which so frequently yield to ordinary hygienic, dietetic and medicinal treatment. In the ordinary run of cases operation is not to be considered, while in the more unyielding cases resourcefulness and patience on the part of the physician, seconded by persistent effort on the part of the patient, will frequently work wonders. Whether there remains a third class so bad that nothing but operation will relieve them, and that in such cases operation may be relied upon to do this, is a question upon which clinicians are not agreed.

In closing the author desires to express his indebtedness to his association with Dr. J. Dutton Steele as the source, not only of inspiration, but also of much practical assistance in the study of this subject.

For complete bibliography of this subject the reader is referred to the article by Dr. Steele and myself in the *Journal of the American Medical Association*, November 8, 1902.

A REPORT OF A CASE OF CHRONIC SPLENIC ANEMIA.*

By JAMES ELY TALLEY, M. D.,
of Philadelphia.

Mrs. M. A., 34 years of age, married, was born in the West Indies, the daughter of an English father and an American mother. Her father died at sixty-two, of cancer of the stomach and liver. Her mother is living at seventy-three. The rest of the family history is negative. The patient lived in the West Indies until six years old, during which time she had dysentery and malaria, "with ague-cake." Since coming to the United States she has always lived in or near Philadelphia, and never has had any serious illness. She was pale and slender as a girl, but her menses appeared at the regular time and were always normal. She had frequent attacks of epistaxis which were worse before her marriage, six years ago, than they ever were before or since. Syphilis and alcohol are excluded. She has two children, five and two and a half years old. When first seen over five years ago, during her first pregnancy, she was extremely anemic looking, but she was sure that she was always pale and of a muddy complexion, and yet had good health. At that time the spleen was moderately enlarged, but the old history of malaria, the existence of mitral regurgitant disease and continued soundness of the urine led to passing over the condition with the giving of iron. She passed through the first labor without any difficulties. During the second pregnancy her condition was the same and labor easy. In June, 1901, when seven months pregnant, she was caught in a heavy rain and thoroughly soaked. Two days later she was taken ill with fever (100° to 101°) and vomiting, purging and pain and tenderness in the right iliac fossa. The attack was characteristic of appendicitis, but the acute symptoms rapidly subsided. However, distress and some tenderness persisted in the right lower quadrant of the abdomen, which disappeared only after the sudden birth of a premature child two weeks later. The child was living when born, but succumbed the first day. There was no fever following the labor nor any discharge suggestive of new infection, though the patient appeared very sick. There was moderate dilatation of the heart at this time, the pulse was rapid and irregular, there was some venous pulsation and dyspnea, but the murmurs now heard were hemic in type. It was at the beginning of this attack that the very unusual increase in the enlargement of the spleen was noticed. It appeared to fill the whole left side of the abdomen. Its lower border extended fully to the anterior superior spine of the ilium. Its upper border was some inches above the costal arch. The anterior border was to the right of the mammary line and the posterior border extended to a line drawn perpendicularly through the inferior angle of the scapula. On palpation the spleen was smooth, firm and not tender. As she lay on her back the bulging forward of the abdominal wall by its bulk was quite noticeable, though the patient herself had not observed the very evident tumor until her attention was called to it. The liver was not appreciably enlarged, there was no jaundice, no edema, no glandular enlargement, and the urine was normal. The blood, taken some hours preceding the precipitate labor, showed red bloodcorpuscles, 1,960,000; hemoglobin, 44%; white bloodcorpuscles, 12,200. There were no plasmodia present. The recovery of strength was slow, the lochia were normal, but prolonged. Six weeks after delivery the uterus was still somewhat enlarged, deflected to the right and apparently anchored by adhesions, which were probably due to an extension of the inflammation from around the appendix, as there was no previous cause known. If the pain and tenderness had not been so definitely located in the right iliac region, one might have thought of perisplenitis, a rather common condition in splenic anemia. After taking peptonated iron and arsenic for more than a year with short intermissions, the patient gradually improved, and the spleen gradually shrunk.

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*Read before the Philadelphia County Medical Society November 26, 1902.

The table giving the results of the blood examinations at intervals during this time shows almost unbroken improvement. Fresh specimens showed no poikilocytes, no megaloblasts and no nucleated red bloodcorpuscles.

Date.	Erythrocytes.	Hemoglobin.	Leukocytes.
June 13, 1901.	1,960,000	44%	12,200
June 26, 1901.	1,990,000	46%	9,200
July 10, 1901.	2,704,000	56%	4,600
February 20, 1902.	2,880,000	72%	7,200
July 15, 1902.	1,936,000	70%	11,600
September 16, 1902.	3,800,000	74%	3,800

The differential count was made from blood taken in July 1902. Of 845 leukocytes counted, there were:

Polymorphonuclear	589	69.7%
Small mononuclear	148	17.5%
Large mononuclear	67	8 %
Transitional	25	3 %
Eosinophiles	16	1.8%

The red cells did not take the stains well. There were apparently a few poikilocytes, but no nucleated erythrocytes.

On examination, September 14, 1902, the patient, though thin, said she felt as well as ever, but she was still anemic looking, and the skin was darker in hue than normal. There was no glandular enlargement; the liver was normal; the pulse was 80 and regular; the muscular sounds of the heart were good, but there was a well-marked mitral regurgitant murmur. The spleen was decreased in size, its lower border lying four finger-breadths above the anterior superior spine of the ilium, and it was narrower and flatter than a year ago. There were still occasional attacks of epistaxis. The menses were regular, and there were no nervous symptoms.

The enlarged spleen, anemia without leukocytosis and hemorrhage (here in the form of repeated attacks of epistaxis), are the most important symptom-complex in that somewhat uncertain condition called splenic anemia. In the latter condition the spleen is said to be idiopathically enlarged, while in this case there is a remote cause for the enlargement, i. e., the malaria with ague-cake of twenty-three years before. According to Osler[1] the West Indies and Central America furnish us the worst cases of malarial cachexia, a condition characterized by anemia and great enlargement of the spleen with or without frank attacks of malaria preceding it. The usual history of such cases, if the condition has not lasted long and the patient removes to a healthy climate and is treated, is the disappearance of the anemia, and the gradual reduction in the size of the spleen. "In other instances," Osler says, "the anemia gradually disappears, but the 'ague-cake' remains in spite of all treatment. After persisting for some years great reduction in this organ may occur, but I have never seen the enormous spleen of chronic malarial cachexia, reaching for example to the pubes, restored to its normal size."

Again, Machiafava and Bignami[2] say that persons in whom the malarial infection has disappeared may have for a long time enlarged spleens and livers without any interference with the blood-making functions. In this particular case more or less anemia appears to have existed during all these years, though on that point proofs are wanting, also the proofs of the condition of the spleen from the time she had malaria, twenty-three years ago, up to five and a half years ago when first seen. Moreover, in considering the anemia and epistaxis in this patient, the impaired heart must be borne in mind.

The marked increase of the splenic enlargement in June, 1901, and subsequent decrease in size probably depended upon more than one factor, namely, infection, venous congestion, crowding forward of the spleen by the enlarged uterus and a possible exacerbation of the splenic anemia itself. The acute symptoms of appendicitis were so short-lived that it could have had but little bearing on the spleen, yet there must have been a low-grade inflammatory process going on in the right iliac region for two weeks as the pain and tenderness persisted until after the premature labor, and afterward there were adhesions pulling the uterus to that side, yet the leukocyte count on the very day of delivery was only 12,200. Venous congestion, according to Rolleston[3], especially when the liver was not also enlarged, would not be a decided element in causing enlargement of the spleen. The crowding forward of the enlarged spleen by the pregnant uterus in a woman with relaxed abdominal walls certainly served to bring the spleen into prominence if the fact of pregnancy itself had no other bearing in the matter.

The possible exacerbation of the primary condition itself is hypothetical. At least no case of splenic anemia with such a sudden increase in the size of the spleen followed by a diminution has been found recorded. However, it seems proper to record this case as one of chronic splenic anemia, the malaria being so remote as not to be considered a primary etiological factor in the development of the splenic condition, and the condition in June, 1901, being due to the intercurrent pregnancy and appendicitis. The gradual improvement of the patient during the past year does not invalidate the conclusion, inasmuch as the enlarged spleen still exists, and a bloodcount of 3,800,000 red bloodcorpuscles and 74 per cent. of hemoglobin is not higher than in many cases.

A review of the literature of splenic anemia is superfluous at this time, as the article of Sippy[4] and the more recent one of Wentworth[5] cover the ground. The masterly article on this subject by Osler (*American Journal of the Medical Sciences* for November, 1902) appears to give chronic splenic anemia a definite existence and a definite name.

BIBLIOGRAPHY.
1. Allbutt's System of Medicine, Vol. II. page 736.
2. Twentieth Century Practice, Vol.XIX page 430.
3. Allbutt's System of Medicine, Vol. IV, page 530.
4. American Jour. Med. Sciencses, 1899 II.
5. Boston Medical and Surgical Journal, October, 1901.

THE PERINEUM.*

By JAMES D. LOVE, A. B., M. D.,
of Jacksonville, Florida.

In presenting this paper for your consideration, I feel that I must in the beginning confess to my inability to contribute any new information on a subject that has elicited so much investigation from gynecologists and obstetricians the world over. And in dealing with a subject so broad as the one I have selected I must of necessity omit from consideration the technique of operative procedures and the anatomical and physiological details of the structures referred to, except insofar as they directly pertain to pathology. The end I hope to achieve is a condensation of the information at our disposal bearing on etiology and pathology of perineal injuries and the most approved means of preventing them. I believe that the average practitioner often loses sight of the pathological bearing of perineal injuries and overlooks the intimate correlation between these injuries and certain symptoms, both obvious and remote, that his patients complain of. Omitting certain perineal injuries usually referred to as lacerations of the first degree, I believe that practically all unrepaired ones are attended sooner or later by a certain definite train of symptoms. And when we consider that from 35 to 50 per cent. of all multiparous women have sustained perineal injury of some degree, we must recognize the structures composing the perineum as of paramount importance, and as standing in no trivial relation to the health of the patients entrusted to our care. Hundreds of women in our midst are to-day suffering from the evils of perineal injury, and when we consider that many of these injuries may be avoided and the vast majority of the remaining so far rectified by repair as to admit of the functional integrity of the parts involved, I feel that the subject I have selected well merits your attention. I know that many cases treated as uterine and ovarian disorders, and diagnosed as such, with but an ill-conceived idea of the pathology involved, as well as etiology, can rightly be attributed to some impairment of the function of the perineum. To appreciate the importance of perineal injury it is only necessary to refer to its intimate relation to uterine subinvolution, metritis, endometritis, uterine retrodisplacement and prolapse.

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*Read before the Florida State Medical Association at Tampa, Fla., April 9, 1902.

The symptoms accompanying these disorders are too well known for me to dwell upon them, but I believe that many of these disorders are inadequately treated, because the perverted function of the perineum is either unrecognized or undue regard is paid to it as a causal factor of the disorder under consideration. Among the component parts implicated in perineal injury the levator ani muscle and the obturator fascia covering it must easily be accorded first place. The supplementary action of the levator ani muscle to the sphincter ani muscle is not only very interesting, but it must be understood in order to gain a proper conception of the pathology of the injured perineum. Under normal conditions, in the act of defecation, the levator ani muscle by contracting raises the perineum and at the same time pulls apart the fibers of the sphincter ani muscle, provided that muscle is relaxed. The perineal body then directs the fecal mass downward and backward to the anus. We know that in most serious lesions of the perineum the fibers of the levator ani muscle and its fascia are so torn or separated as to impair their functions. The integrity of the pelvic floor is no longer complete. Now the fecal mass, as it descends in the rectum, reaches the contracted sphincter ani muscle, which, lacking the supplementary action of the levator ani muscle, remains in a state of contraction, which necessitates straining efforts at expulsion. The anterior rectal wall is inefficiently supported by the perineal body, and coincident with the expulsive efforts this wall of the rectum yields to the fecal mass and, protruding into the vagina, constitutes a temporary rectocele. This process, frequently repeated, renders the rectocele permanent. The action of the rectocele is to make tense the posterior vaginal wall and drag the cervix uteri downward and backward. When this condition obtains we have the first step of uterine retrodisplacement and prolapse. For obvious reasons the pelvic venous circulation is now interfered with, leading to a state of stagnation and damming back of blood to all the organs of the pelvis. We can thus readily account for subinvolution depending on this morbid state during the puerperium, and for the various phases of uterine, tubo-ovarian, vaginal and rectal hyperemia. From hyperemia to hyperplasia is but a short step, and the vicious train of events has culminated in metritis, endometritis, descensus and their attendant local and general symptoms.

While perineal injury is in a certain number of cases unavoidable and reflects no discredit on the care and skill of the attending obstetrician, yet I believe that this accident can be avoided in a large percentage of our cases if the etiology of the lesions is carefully borne in mind and every needful precaution observed in preventive treatment. Regarding etiology, the most frequent factor is the rapid delivery of a child's head with forceps, coupled in not a few instances with a disregard for the direction of the axis of the pelvic outlet. Other causes are the unusually large size of the child's head, the unusual narrowness of the canal, premature ossification and closure of sutures preventing moulding of the head, faulty presentation and position of child, absence of elasticity of soft parts, frequently observed in elderly primiparæ; protracted labors, by rendering the parts dry and edematous; precipitate labors, too often caused by untimely use of ergot, faulty position on the part of the mother, previous injury of maternal organs resulting in formation of nonelastic cicatricial tissue, and undue manipulation culminating in conversion of a normal position of the presenting part into a faulty one. There still remain a number of cases of perineal injury for which there appears to be no assignable cause, and in which the accident occurs contrary to our expectations. As a saver of life and suffering we can scarcely compare any one surgical instrument with the obstetrical forceps, and, like all agents of usefulness, it is an instrument that, in not a few cases, is woefully abused. We are too prone to consider the entreaties of the suffering woman, the impatience of solicitous friends and relatives and our own comfort, and substitute an artificial force, with its attendant dangers, for the less dangerous, if more tedious, force of nature. At the same time I realize that ultraconservatism is equally hazardous, and that no arbitrary rule can be laid down as to the most appropriate time for instrumental interference. As to this each physician must be the judge. In the past few years I have become so impressed with the advantages of an axis-traction forceps that I wish to emphasize it as being an instrument by the judicious use of which many perineal injuries can be prevented. I believe that the only reason why this forceps is not in more general use is that the average obstetrician, not having given it a trial, fails to recognize its manifest and obvious advantages. Posterior occiput cases that have failed to rotate anteriorly constitute a large class of the cases demanding instrumental delivery, and which so frequently cause perineal injury. It is in this class of cases that the axis-traction forceps finds its chief field of usefulness, and in which its advantages can especially be appreciated. If properly adjusted and if proper traction is employed, its application interferes but little with anterior rotation of the occiput, without which phenomenon perineal injury is almost inevitable. This feature alone is sufficient to commend this forceps to the careful obstetrician. In addition to this advantage, the handles of the axis-traction forceps accurately point out the direction in which traction should be made, and no one segment of the pelvic girdle is subjected to greater strain than another. Traction employed in the direction of the axis of the pelvic outlet is less apt to destroy its integrity than if directed mainly against one segment of it. The advantages of this instrument are all the more obvious when employed for the delivery of a head high in the pelvis.

Among the causes I have assigned for perineal injury is faulty position on the part of the mother. These faulty positions mostly conduce to violent muscular efforts at expulsion and consequently precipitate delivery. The result of this factor in producing perineal injury is well exemplified in French-Canadian women, who are usually confined in a half-sitting position and in whom perineal injury is very frequent. By assuming this position, or the dorsal position, all the forces of expulsion are brought into play at a critical period when the perineum needs more time for proper dilation before the advancing head. It is my custom to deliver, all primiparæ at least, in the left lateral prone position. The advantages of this position being that the obstetrician is made in a measure master of the situation, can modify the expulsive forces, can meet undue expulsive effort by counterpressure on the head, can keep the head well flexed till the anterior fontanelle has passed the posterior vulvar commissure, can in a measure protect with his hand the external soft parts and keep the parts under more direct observance than can be well done in any other position. The only objection urged against this position is that it necessitates a slightly greater exposure of the patient, which objection, however, has its birth in a mock modesty which should have no place in obstetrical procedure. The operation of episiotomy, which a short time back had quite a number of exponents, seems to have fallen into disuse or disrepute. In properly selected cases, however, I believe it to be well worthy the performance. I would suggest especially the performance of this operation in cases in which the perineum has previously been seriously lacerated, and in which the sphincter has been torn and the lesion successfully repaired. The early performance of episiotomy will, in a certain number of cases, prevent a repetition of the laceration of the sphincter. Despite our best efforts, perineal injury, in a large percentage of our cases, is inevitable, and the obstetrician who denies encountering this accident is he who fails to look for and to recognize it. Too often a mere ocular inspection is made of the external parts, which may have sustained little or no injury, and pronounced lesions of the deeper structures are either overlooked or disregarded. Every case of suspected injury not only demands ocular inspection of the vagina itself, but of the function of the levator ani muscle; its fascia and the perineal body should be tested by the finger and thumb introduced far up into the vagina and rectum. We have but to consider that the order in which the perineal structures give way is fascia, muscle, mucous membrane and skin, and we can readily realize that the integrity of the most important parts may be impaired without occasioning any apparent injury to mucous membrane or skin. It is now universally admitted that every case of perineal laceration demands immediate repair when this is possible and the strength of the patient will permit. Any other course is a violation of the broad surgical principle that all aseptic open wounds should be immediately closed. In the after-management of these cases I believe much unnecessary discomfort is occasioned the patient by binding the knees together and by enforcing the dorsal position. Both these precautions have been proven conclusively to be unnecessary.

I refrain from the employment of the vaginal douche in these cases for two reasons; first, that the incautious introduction of the nozzle of the syringe exposes the sutured parts to risk of injury, and second, because the vagina of the puerperal woman contains the vaginal bacillus which is inimical to pathogenic bacteria. Thus, by washing out the vagina with antiseptic solutions we dispose of one of nature's safeguards against infection. But, though possibly in an inactive state, the vaginas of all puerperal patients contain pathogenic and phlogogenic organisms, and it is through fear of introducing these into the urinary bladder that I refrain from systematic employment of the catheter after perineal repair. Healthy urine does not seriously interfere with primary union of the lacerated parts, and, by having our patient turned on her side after voiding her urine, no considerable portion is left to decompose in the vagina. No matter how well the obstetrician may have done his duty, a certain number of his patients will, for obvious reasons, emerge from the puerperal state with faulty perinei subsequently to seek of the gynecologist relief from one or more of the disorders referred to in the beginning of this paper. Comparatively few old perineal injuries are evident on first inspection, for the reason that the extent and gravity of the lesion bear little relation to the laceration of the integument. A multiparous woman who presents any disorders referable to her genital organs should be placed in either the Sim's or lithotomy position and the function of the perineum carefully tested.

A merely relaxed vaginal outlet will be recognized by the flatness of the crease between the buttocks in front of the anus, the vagina will present an everted and gaping appearance, probably both rectocele and cystocele, rendered all the more pronounced by directing our patient to strain. The structures about the outlet will be found lax and incapable of resistance, the rectovaginal septum thinned and one or more heavy sulci extending up into the vagina. These sulci are due to retraction of the torn ends of the levator ani muscle and its fascia toward one or both ischial rami. There will probably be found old hemorrhoids and, if the sphincter ani muscle has been torn, possibly a prolapse of the rectum, often presenting a puffy and ulcerated appearance. The symptoms are too well known for me to dwell longer on that subject. In the past few years I have operated on quite a number of injured perinei, and invariably with such gratifying results to both myself and the patients that I regard it as an operation almost unrivaled for the relief it secures to suffering women. The operative technique and after-treatment have been rendered comparatively simple within the past few years and, when performed under aseptic conditions, is so relatively free from danger and unpleasant sequelæ as to render it an operation within the power of every practising gynecologist to perform. My individual preference is for Kelly's modification of Emmet's operation, which, when properly performed, will almost invariably furnish the patient with a perineum restored to its former function.

A LOCAL ELECTRIC LIGHT BATH.

By C. C. F. NIESCHANG, M. D.,
of Fort Wayne, Ind.

The therapeutic use of light and heat has become quite general with the medical profession, and the results from their employment are very beneficient indeed. The electric light possesses properties identical with those of the sun's rays. In the arc-light the luminous and chemical rays predominate, but in the incandescent light the heat-rays are in the ascendency. The incandescent light has also a superior heating quality, and a local application of the latter light produces intense reddening of the skin; dilatation of the bloodvessels and, besides, perspiration is induced more quickly than by any other agent. Cutaneous activity is also augmented. It induces local revulsion, thus promoting the absorption of exudates. It is very effective in the relief of pain, painful joint affections, neuralgia, etc.

It has a decided advantage over the superheated or hot-air apparatus, as the rays penetrate the tissues deeply and are readily transformed into heat in the deeper layers. The therapeutic effect is due to the peculiar activity and influence of the thermal and actinic rays on the tissue metabolism. The indication for the local application of the electric light are rheumatic and arthritic processes, diseases of the muscles and tendons, neuralgia, sciatica, gonorrhea and tubercular joint affections, pleurisy, pneumonia, abscesses, etc. Its use is almost unlimited. Apparatus in use for the application of the electric light are not portable and are expensive. As a rule, patients in need of such treatment are confined to their rooms, hence the disadvantage of the electric office apparatus now in use.

The advantage of a portable electric-light apparatus is obvious. The following cut illustrates clearly an apparatus which I use, and which was made for me by the W. S. Inst. House, of Chicago. I have had good results from this simple instrument. The instrument consists of an insulated cone, lined with asbestos sheeting. The edges of the cone are protected by a rubber cushion. It also possesses a handle, connecting cord, plug and lamp. When applied to the chest, back, hips or abdomen, the clothing about the parts must be removed and the cone directly applied to the surface, firmly pressing the pneumatic cushion to prevent injury to the skin, and connecting the plug to the lamp-socket. When applied to joints, use the cylinder in connection with

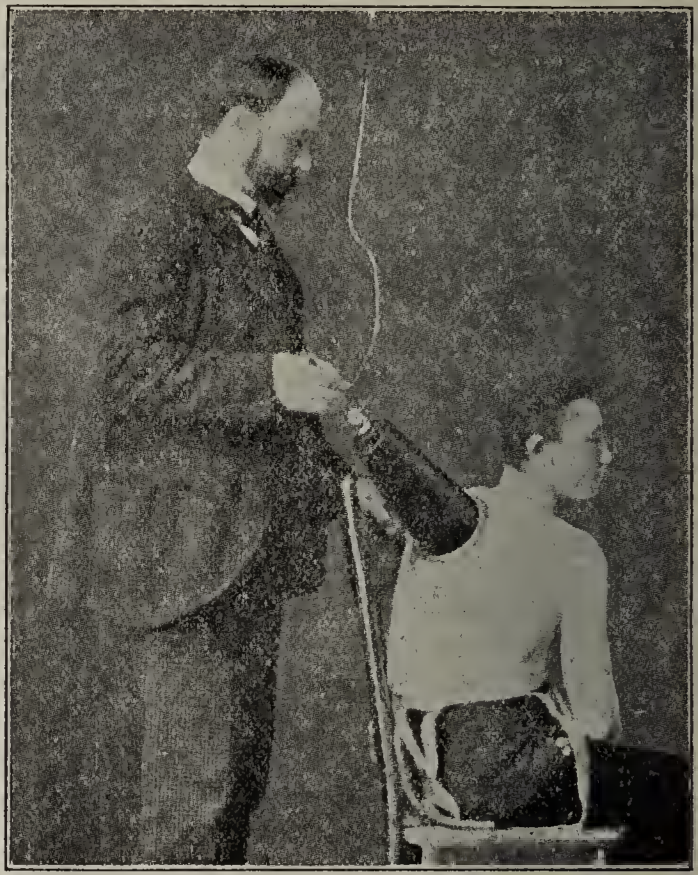


FIGURE 1.

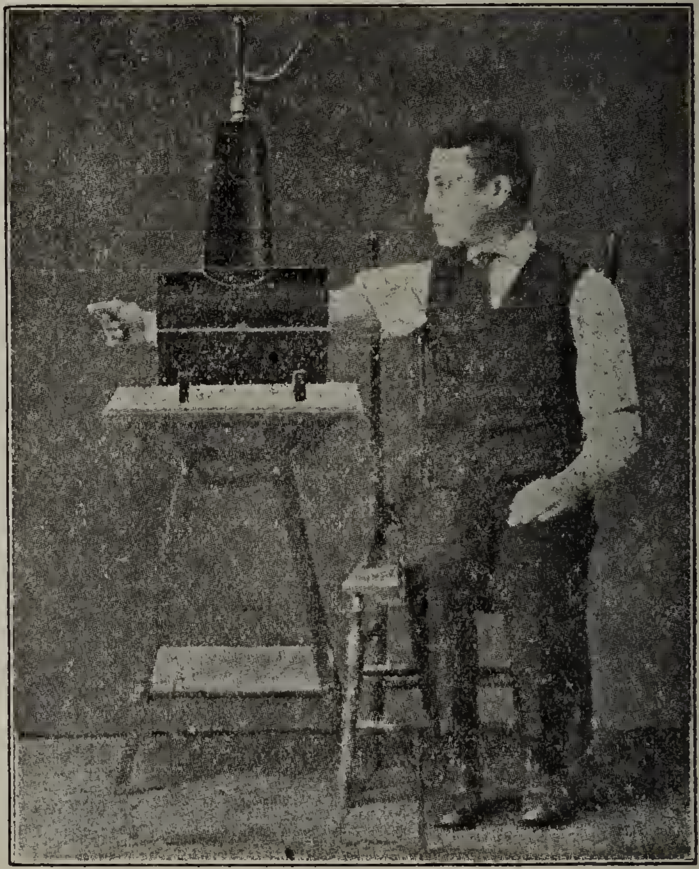


FIGURE 2

the cone, as shown in cut. It can be used instead of poultices for abscesses, boils, carbuncles, etc., for which it is cleaner, better and much less troublesome. By wringing out flannel in hot water and applying it to the parts over which the apparatus is placed, its power is increased. The wet flannel can be kept at any temperature desired.

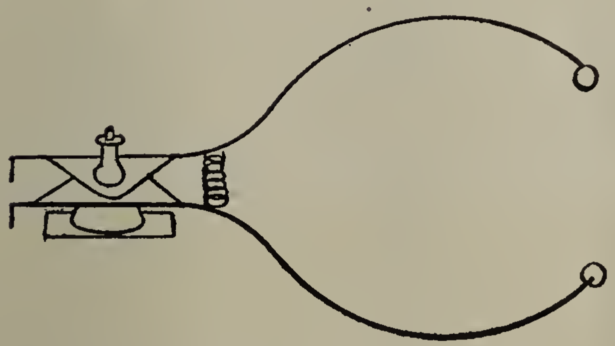
A NEW REDUCING CYRTOMETER.

By ROBERT POTTER ELMER, B. S., M. D.,
of White Haven, Pa.
Resident Physician to the Sanatorium of the Free Hospital for Poor Consumptives,

In the frequent examination of large numbers of consumptives there is obvious need of an instrument which will rapidly make a graphical record of the thoracic outline which should be both accurate and of convenient size. The forms of apparatus already in use are either too expensive or too clumsy, or else do not make diagrams of small size.

The instrument shown in the first illustration seems to meet all requirements. It is absolutely accurate, very simple, comparatively inexpensive, easily transported, requires very little experience in technique, does not hurt the patient and can be made so as to produce a tracing of any size.

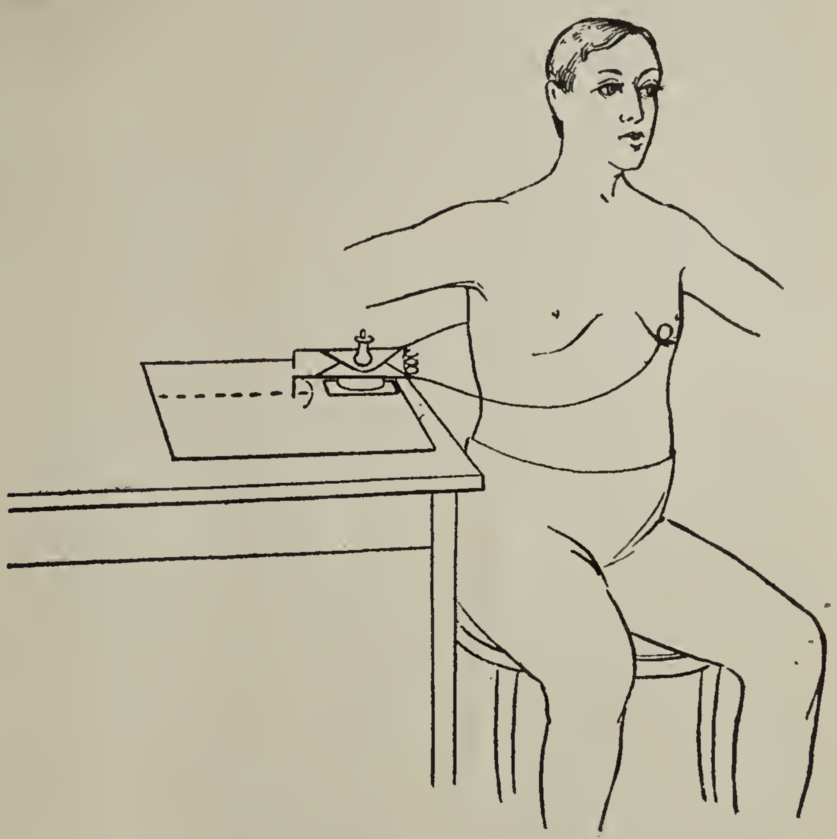
Nº 1



It consists of two S-shaped rods, hinged like scissors near one end. The longer arm of each rod terminates in a small ball, as does the blade of a pelvimeter. The short end is bent downward, perpendicular to the plane of the instrument, and ends in a point. A spring is attached to the instrument, which tends to keep it closed, in which position the points and rounded ends of both blades should touch. At the junction of the blades is affixed a triangular piece of metal of the same length as the points; its top is so shaped as to form the pivot on which the blades move. The relative length of the segments of the blades is determined by the size of the tracing desired, but the larger portions must be long enough to encircle a thorax.

To use the instrument, lay the paper on which the record is to be made on and near the edge of a table. Place a piece of carbon-paper, face down, upon it, and a second piece of plain paper upon that, in order to prevent tearing. Fasten all with thumbtacks. Seat the patient sidewise close to the table, with the horizontal plane of his body, of which the tracing is to be made, just above the level of the table. Draw a straight line on the paper which will point to the middle of the patient's side. Place the long parts of the blades around his chest. Adjust the lower edge of the triangular support so that it rests upon, and coincides with, part of the straight line on the paper, and then pull it away from the patient with a steady motion. In so doing the rounded ends will follow the anterior and posterior contours of the thorax and the points on the other ends, by pressing through the carbon-paper, will draw an accurate, but reversed, miniature of the rounded ends' paths.

Nº 2



Inaccuracies can occur only if the patient moves, if the draughtman's hand swerve laterally or if the blades slip up or down. The first does not often occur and neither of the others can happen if the base of the triangle be firmly pressed down and accurately kept on the straight line.

By using translucent paper, records taken at different times can be easily compared by placing one on top of the other, with the straight lines coinciding.

Tracings of the abdomen in ascites or other conditions may be taken in the same way.

A CASE OF TRAUMATIC RUPTURE OF THE BLADDER. RECOVERY.

By EDWARD A. SCHUMANN, A. B., M. D.,
of Philadelphia.

The patient, Thomas McC———, white, 41, wàs admitted to the Philadelphia Hospital on June 6, 1902, suffering from acute alcoholism with a history of absolute retention of urine for 36 hours, and a vague history of having been "run over." Upon admission, he complained of great pain and tenderness in the lower abdomen, with intense vesical tenesmus. Previous personal history was negative. On examination the patient was found to be an obese, well-developed man; apparently normal, except for the abdomen, which showed some slight contusion in the inguinal region, and was extremely painful and tender. There was very slight rigidity of the recti muscles; the abdomen was distended and tympanitic: peristalsis was well marked; bowels moved freely. There was no edema of the scrotum, penis or abdominal wall. Temperature on admission 99°, pulse 100 and respiration 28. Catheterization was easy, and about 4 oz. of ammonical and bloodstained urine were obtained. This procedure did not relieve the symptoms, and suprapubic puncture was resorted to in the belief that simple retention might be present and the signs be masked by the exceedingly thick abdominal walls. No result. The symptoms gradually increased in severity, but there was no evidence of shock, and peristalsis was well marked. Rectal examination was negative, there being no bulging of the bladder into the rectal wall. Upon the injection of 100 cc. of boric acid solution into the bladder, none returned through the catheter, and a diagnosis of traumatic rupture of the bladder was made. The patient was operated on by Dr. Edward Martin 24 hours after admission, his acute alcoholic symptoms having by this time subsided. Ether anesthesia, 12 oz., was used. The patient took ether well. An incision 3 inches long was made through the abdominal wall from the symphysis pubis upward, in the median line. The entire prevesical space and surrounding tissues were found infiltrated with urine under a moderate degree of tension. The prevesical fat was a sloughing and necrotic mass. In the fundal portion of the anterior vesical wall there was an area of necrosis, elliptical in shape and with a rent about ¾ of an inch long in its center. The ureters were intact, as was the vesical trigone. This entire area was laid freely open, the necrosed portions excised and the wound freely irrigated with a solution of protargol 1/4000. During the progress of the operation there was profuse venous hemorrhage. The bladder was drained by means of a one-half inch glass-tube introduced through the rent in the vesical wall. The wound was packed and permanent dainage maintained by means of a siphon drain, which kept the bladder always entirely empty. The patient reacted well from the anesthetic, and his condition remained good. The wound and bladder were irrigated twice daily with 2 gallons of a 1/4000 protargol solution. During the 60 hours following operation, the temperature remained fairly stationary and below 100°; there were no signs of urinary absorption, and there was a free secretion of urine, alkaline, and leaving a heavy deposit of triple phosphate crystals on the walls of the drainage tube. Upon the fifth day succeeding the operation the temperature suddenly rose to 102°, and the patient complained of pains in the pelvis and of nausea. The edges of the wound were found to be indurated, and there was a profuse discharge of foul, greenish pus. The pus came from a pocket posterior to the bladder and leading to the perirectal tissues. Rectal examination revealed a tender mass protruding into the anterior rectal wall about 2½ inches from the anus. Two days later the perirectal abscess (which was probably due to pressure necrosis from the glass drainage tube) ruptured spontaneously and a large slough was removed through the abdominal wound. This was followed by immediate relief to the patient and a drop in temperature. The discharge of foul pus, however, continued for several days, but the patient showed no sign of septic absorption, and he steadily gained strength. The protargol irrigation was maintained, and the bladder kept empty by means of the siphon drain, before mentioned. After the evacuation of the perirectal abscess, the abdominal wound healed slowly, and the rent in the bladder wall gradually decreased in size, until 10 weeks after the operation the patient was convalescent, voiding the major part of the urine normally, though a few drops still escaped from the sinus in the abdominal wall. He has gained in weight and strength, and does not suffer any discomfort save an increased frequency of micturation.

Health Reports.

Health Reports: The following cases of smallpox, yellow fever, cholera and plague, have been reported to the Surgeon-General, U. S. Public Health and Marine-Hospital Service, during the week ending December 27, 1902:

SMALLPOX—United States.

			C.	D.
CALIFORNIA:	Los Angeles	Dec. 7-14.	1	
	Sacramento	Dec. 6-13.	2	
	San Francisco	Dec. 7-14.	3	
GEORGIA:	Atlanta	Dec. 10-17.	3	1
ILLINOIS:	Chicago	Dec. 13-20.	2	
INDIANA:	Elwood	Dec. 14-21.	1	
	Indianapolis	Dec. 13-20.	22	4
KENTUCKY:	Lexington	Dec. 13-20.	1	
LOUISIANA:	New Orleans	Dec. 13-20.	1	
		Imported from Monroe, Louisiana.		
MASSACHUSETTS:	Boston	Dec. 13-20	16	6
	Everett	Dec. 13-20.		1
	Lawrence	Dec. 13-20.	2	
MICHIGAN:	Grand Rapids	Dec. 13-20.	6	
MISSOURI:	St. Louis	Dec. 7-14.	14	
NEBRASKA:	Omaha	Dec. 13-20.	5	
NEW HAMPSHIRE	Manchester	Dec. 13-20.	7	
	Nashua	Dec. 13-20.	15	
NEW JERSEY:	Camden	Dec. 13-20.	3	
	Newark	Dec. 13-20.	2	
NEW YORK:	Buffalo	Dec. 13-20.	2	
	New York	Dec. 13-20.	1	
OHIO:	Cincinnati	Dec. 12-19.	1	
	Cleveland	Dec. 13-20.	9	5
	Dayton	Dec. 13-20.	7	
	Hamilton	Dec. 13-20.	2	
PENNSYLVANIA:	Erie	Dec. 13-20.	6	
	Johnstown	Dec. 13-20.	8	2
	McKeesport	Dec. 13-20.	1	
	Philadelphia	Dec. 13-20.	15	
SOUTH CAROLINA	Charleston	Dec. 6-13.	3	1
TENNESSEE:	Memphis	Dec. 6-13.	2	
WASHINGTON:	Tacoma	Dec. 7-14.	2	
WISCONSIN:	Milwaukee	Dec. 6-20	15	

SMALLPOX—Foreign.

			C.	D.
AUSTRIA:	Prague	Nov. 22-29.	9	1
BELGIUM:	Antwerp	Nov. 22-29.	1	1
BRAZIL:	Bahia	Nov. 15-29.	4	1
ECUADOR:	Guayaquil	Nov. 22-29.		2
GIBRALTAR:		Nov. 23-30.	1	
GREAT BRITAIN:	Birmingham	Nov. 29-Dec. 6	1	
	Edinburgh	Nov. 29-Dec. 6	1	
	Leeds	Nov. 29-Dec. 6	3	1
	Liverpool	Nov. 29-Dec. 6	18	4
	London	Nov. 22-Dec. 6	10	
INDIA:	Bombay	Nov. 11-25		4
	Calcutta	Nov. 15-22.		1
	Madras	Nov. 8-15.		1
ITALY:	Palermo	Nov. 22-29.	4	1
MEXICO:	City of Mexico	Nov. 30-Dec. 7	6	2
RUSSIA:	Moscow	Nov. 15-22	7	
	Odessa	Nov. 22-29.	1	
	St. Petersburg	Nov. 22-29.	4	1
STRAITS SETTLEMENTS:	Singapore	Oct. 8-25.		1
TURKEY:	Constantinople	Nov. 23-30.		3
URUGUAY:	Montevideo	Nov. 1-8.	16	1

YELLOW FEVER.

			C.	D.
ECUADOR:	Guayaquil	Nov. 29-Dec. 6		4
MEXICO:	Coatzacoalcos	Dec. 6-13.	1	
	Tampico	Dec. 6-13.		8
	Vera Cruz	Dec. 6-13.	13	4

CHOLERA—Foreign.

			C.	D.
PHILIPPINES:	Manila	Oct. 19-Nov. 1.	33	26
	Cebu	Oct. 30.		1
	Provinces	Oct.19-Nov.1	7764	4806

CHOLERA—Insular.

			C.	D.
EGYPT:	Alexandria	Nov. 22-29.		11
INDIA:	Bombay	Dec. 11-25.		1
	Calcutta	Nov. 15-22.		26
JAVA:	Batavia	Oct. 24-Nov. 8.	81	68
STRAITS SETTLEMENTS:	Singapore	Oct. 18-25.		17

PLAGUE.

			C.	D.
CHINA:	Hongkong	Nov. 1-8.	1	1
INDIA:	Bombay	Nov. 11-25.		253
	Calcutta	Nov. 15-22		9
	Karachi	Nov. 16-23.	19	18

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See Advertising Page 8

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Physicians as "Men of Science."—Professor J. McKeen Cattell, the editor of *Popular Science Monthly*, has undertaken, at the request of the executive committee of the Carnegie Institution, the arduous task of compiling a biographical index of the men of science of the United States. In a notice, recently published, Professor Cattell announces that this index is intended for the use of the Institution, but it will probably also be published. He says that it should include the names of all those who have carried on research in science, but the term "science" is to be used in its "narrower" sense, "so as not to include, on the one hand, philology, history, economics, etc., nor, on the other hand, medicine, engineering, education, etc., except in so far as these applied sciences may contribute to pure science." In a personal communication Professor Cattell says further that the list is to include only those physicians who might, for example, be eligible for membership in the Association of Pathologists and Bacteriologists.

We are confident that there is no intention to slight the medical profession in this scheme, and yet we should judge that there is some risk that this biographical index may be very incomplete in some real "men of science" if it includes only the names of the medical men who are eligible as pathologists and bacteriologists. We should suppose that anatomy, physiology, surgery, clinical medicine, therapeutics and toxicology, not to speak of such great specialties as psychiatry, neurology, dermatology and ophthalmology, might be considered to be as worthy of representation among the sciences as pathology and bacteriology.

The distinction between "pure" science and "practical" or "applied" science is a somewhat arbitrary one. The truth is, that in most domains of science the "pure" and the "practical" are so intermingled that it is hard to separate them. Moreover, medicine finds strange bed-fellows when classed with "philology, history, economics and engineering." The proper rank for the medical sciences is with the physical sciences.

The difficulties in the way of compiling a biographical index of science must be very great, and it is not our object to throw more trouble in the way of the compiler. We should like to suggest, however, that, so far as medical scientists are concerned, we feel that the compilation of their names should be delegated to some physician of knowledge and judgment, who would act under the chief compiler, and would not make distinctions that are too arbitrary. There are some medical scientists of distinction in this country who are not, properly speaking, either pathologists or bacteriologists in the narrow sense in which these terms are used to designate men of science.

Intravenous Administration of Antidiphtheritic Serum.—The result achieved with diphtheria antitoxin, of so markedly reducing the mortality of diphtheria, is one of the great triumphs of modern medicine; and at the present day it may be said that the consensus of opinion of the profession is that this antitoxin occupies the first place in the treatment of this disease. A most important communication appeared in the London *Lancet* of December 20, 1902, by Dr. E. Louis Cairns, in which he points out that a still greater fall in the mortality may be hoped for by the employment of larger doses than are generally used, and by the intravenous injection of the serum in certain cases. He advocated the intravenous injection of Yersin's serum in plague as a useful adjunct to the subcutaneous injection, and the encouraging results obtained in what appeared to be hopeless cases suggested the employment of this method of administration in severe cases of diphtheria. It has been demonstrated in plague that the action of the serum, given subcutaneously, is to neutralize the toxin in the infected and neighboring area, with bacillary degeneration following, while the surplus passes into the circulation. It has been suggested that the passage of the serum through the lymphatics may cause certain changes in its composition. By intravenous introduction the circulating toxin is dealt with quickly and most effectively.

Recent observation on the pathology of diphtheria has shown that in certain cases the specific bacilli are not only confined to the primary focus of infection, but also exist in the blood and invade deeper organs. In cases of diphtheria in which the exudate extends into the bronchial system, the amount of toxin absorbed into the circulation becomes enormous, overshadowing the amount eliminated from the primary focus, and in these cases most favorable results have followed intravenous injection of serum.

Cairns has given this method a trial in 20 cases of diphtheria exhibiting a high degree of toxemia, some of which were complicated with bronchopneumonia, with most satisfactory results. He has not used this method of administration in the treatment of the milder cases, and considers the following indications as calling for its use: (1) Malignant forms of the disease—i. e., those characterized by hemorrhage from the nose or into the skin, by great glandular enlargement with marked cellular infiltration, and by extreme blanching of the skin; (2) any marked involvement of the lungs, either at the time of admission or subsequently; (3) a moribund condition of the patient on admission; and (4) a profoundly toxemic condition of the patient. In all such cases an initial dose of from 20,000 to 25,000 units is perhaps not excessive, and if in 24 hours the patient fails to respond to the treatment, as indicated by persistence of the signs of toxemia, by continued rise of temperature, and increased frequency of pulse- and respiration-rates, and by an extension of the membrane, the dose may be safely repeated.

Where We Stand on the Tuberculosis Question.—The treatment of consumption is still the most important subject before the medical profession. There is no form of congress that excites so much public and medical interest as a congress upon tuberculosis. There is no statement that challenges such immediate attention on the part of the whole world as the claim by a responsible man that he has found a cure for this disease. It may be regarded as unfortunate, then, that at the International Tuberculosis Conference at Berlin, last October, it was so evident that we are practically compelled to work along the old lines of prevention, fresh air and forced feeding. Practically all were agreed that the most important feature in the combat against tuberculosis was the prevention of the spread of the disease through tuberculous sputum. All those who discussed the hygienic measures to be taken by communities, by factories and by individuals, laid the greatest stress upon this point. There is no question of its importance; there is no question that the vigorous discussion of the subject is bearing fruit; that the public is gradually being educated in methods of cleanliness in this regard. There is no doubt that the city authorities are insisting more and more resolutely upon the discontinuance of all forms of spitting in public; but, after all, it is only a part of what we are striving for. The medical profession wants to cure tuberculosis, or rather to be in a position to arrest with certainty the progress of the disease. It was only too evident that we are not in such a position.

Many other interesting things were discussed. Important were the insistence upon the proper ventilation of working places, and the State care of the poor consumptive. This latter is to be accomplished in various ways. Calmette described some dispensaries for cases of tuberculosis that they have in France, in which, in addition to medicine and advice, food, warm clothing and other necessaries are furnished to the tuberculous poor, if they are in need of them. Sanatoria are being established everywhere, and the cry is unceasingly for more. The results of sanatorial treatment appear to be reasonably favorable, although not brilliant. The great advantage is that they accomplish the segregation of consumptive patients, who under careful supervision are thus less likely to spread the disease. The Red Cross Institute of Berlin was spoken of by Becher and Lehnhoff. This receives and cares for consumptives in all stages, at any time, and selects proper cases for sanatorial treatment. It must not be forgotten that in the effort to improve their statistics, and in hope of being of the greatest use to patients still in a condition of being helped, the sanatoria insist upon this selection. It would be wise if in other places besides Berlin it could be made by well-organized institutions and not individual physicians, and that ample provision should be made for the incurable cases, not only in order to render them more comfortable, but to make them less likely to infect others.

Another subject that occupied considerable attention was the collection of statistics regarding tuberculosis. These are admittedly unsatisfactory at present. Unfortunately, not only the authorties, but also the medical profession, are very difficult to educate in this matter. The most satisfactory method appears to be the compulsory registration of all cases of tuberculosis, but there appears to be little hope that this will be instituted at present.

Finally, on the last day of the Conference the relation of human to bovine tuberculosis was discussed, and, although the Congress was not willing to affirm the identity of the two forms, it was generally agreed that, pending a definite solution of the problem, it was wise to take all precautions against animal tuberculosis. Koch was very emphatic in reaffirming his view that human beings could not be infected by tubercle bacilli derived from animals. The decision of the Congress, however, deserves, in our opinion, universal approbation.

The Hardening of Infants.—Half a century ago it was the custom to spoil the babies and spank the children. Nowadays spanking is out of fashion, but the babies seem to get the worst of it. It is not uncommon now to hear of a physician or parent who believes that a crying infant should not be taken up for fear of inducing it to wail upon a subsequent occasion; that rocking and singing children to sleep is barbarous, not apparently to the children, because no one has ever alleged that they suffered particularly from it, but because it entailed an additional amount of labor upon the parent or nurse, labor which many parents and nurses, curiously enough, appear to enjoy.

But these things are comparatively trivial, so far as the babies are concerned, compared with the doctrine of hardening. Now, there have been many methods suggested for hardening young babies, but all consist essentially in exposing these babies to low temperatures, either in the air or in the water. The subject has recently been carefully reviewed by Hecker (*Münchener medicinische Wochenschrift*, No. 46, November 18, 1902), who reports a number of cases and gives some intersting statistics. He shows that vigorous exposure to cold douching, cold baths, cold air and various other methods, advocated by the extremists, increases the tendency of the child to take cold, damages the nervous system, delays the intellectual development, impairs the general health and apparently increases the tendency to adenoid vegetations. The number of cases is, it is true, small. There were 16 cases of not hardened children, 13 in which the hardening process had been carried out in a mild manner, and 21 in which it had been carried out vigorously. Nevertheless, the differences were very pronounced.

It seems to us, when we consider that the surface of small children is relatively much greater than the surface of adults, and, therefore, the proportionate amount of heat radiated is greater; that the skin of young infants is much more delicate than that of adults and, therefore, permits the greater radiation of heat, and that the organs of young children are unquestionably more susceptible to infection, particularly if the resistance is diminished by deleterious influences, we must see that any method of hardening that may be employed is to be used only with the utmost caution and with the greatest consideration of the comfort of the child. Hecker in his conclusions is entirely of the opinion that vigorous hardening is injurious, and, of course, his opinion could not be otherwise. Any hardening that is to be used, he thinks, should be moderate and rational, and consist merely in accustoming the child to the ordinary temperature of the room and in allowing it to go out, unless the external temperature is too severe, in careful and sensible clothing, and, when the child is older, accustoming it to cool water, being particularly careful that no great discomfort is manifested.

These rules are much in accord; they appeal to us strongly, and we recommend them to the consideration of physicians and mothers. There is enough difference in children to impress the ordinary intelligence with the fact that no "system" can be applicable to all alike.

The Dissolution of Cicatricial Tissue by Internal Medication.—Rather extraordinary reports have become current relative to the destruction of cicatricial tissues by the internal administration of a certain drug. The specific agent claimed to be possessed of this power is thiosinamine, a preparation derived from the volatile oil of horse-radish, but more commonly from the volatile oil of mustard. Thiosinamine appears as a colorless crystal possessed of a faint garlicky odor and decidedly bitter taste. This substance has been used with more or less success in the treatment of keloids, lupus and even in malignant neoplasms, but for some years fell into disuse. During the past two years, however, several investigators have employed this agent in various pathological conditions due to cicatricial tissue and, in some instances, with undoubted success.

Juliusberg has employed thiosinamine in lupus, keloids and similar conditions with satisfactory results. Upson found it of value in ankylosed joints due to chronic arthritis. Suker employed it with beneficent results in the treatment of corneal opacities. Its value in urethral stricture led Telekey to employ it in strictures of the esophagus, and gratifying results were obtained. He reports a case of much interest: In this patient the drug was employed for esophageal stricture, for which a preliminary gastrostomy was performed 12 days before. A few hours after its administration there was a complete dissolution of the gastro-abdominal cicatrix, the stomach dropping back into the abdominal cavity, and the patient dying of a peritonitis. It has also been employed with varying degrees of success in the treatment of tinnitus and impaired hearing. The drug can be administered either hypodermically or by the mouth. We thus find that in thiosinamine we have a therapeutic agent which is claimed to be of much value, and possessed of a power not unlike that of the Röntgen-rays in the treatment of the pathological conditions named, and as investigations are being daily performed, in order to determine the exact changes in tissue exposed to these rays, we believe that much could be learned both from the therapeutic value of thiosinamine and from the investigation of the histological changes resulting from its use in cicatricial formation.

Cerebrin in Epilepsy.—The use of organic extracts was given tremendous impetus by the results obtained from the thyroid gland in myxedema and especially in cretinism, and yet, in spite of the extensive trial that has been given them, it can hardly be said that any satisfactory specific therapeutic effects have been obtained from any of them, except the thyroid. Nevertheless, extravagant claims are frequently put forth for various kinds of these extracts, and not the least emphatic of such claims is that made by Lion (*Deutsche med. Woch.*, December 11, p. 905) for Cerebrin-Poehl as a specific for epilepsy. His results seem extremely brilliant, so brilliant, indeed, that one can scarcely avoid the thought that some of the same self-hypnotism has been at work that led the originator of Spermin-Poehl to believe that this latter substance has a very actively curative effect in a host of diseases.

Some degree of seriousness, however, is lent to the question of the use of cerebrin in epilepsy by a note to Lion's article by so experienced an observer as Eulenberg. The latter states that he has given cerebrin a trial, and, while he does not ally himself with Lion in enthusiastically recommending it, he does consider that it had a recognizable beneficial effect in some very rebellious cases.

There may be a grain of truth in all the chaff, and not the least reason for thinking so is the increasing evidence that substances which have toxic effects upon special cells act upon these cells because they have special chemical affinities for certain component parts of the cells and enter into combination with these, leaving other tissues that have alien affinities untouched; and by satisfying these affinities of the toxic substances symptoms may be prevented or relieved. There is a general tendency, which is wholly rational, to consider epilepsy as a paroxysmal intoxication, and, if it is such, it must be due to a poison which has special affinities with the cells of the cerebral cortex. The whole therapeutic problem cannot be solved at once on this line by making epileptics eat brains, or by the use of crudely prepared brain extracts which are of complex and largely unknown composition, and which, perhaps, do quite as much harm as good in the conditions for which they are administered. It may, however, be possible to reach a vantage-point by endeavoring to demonstrate such a hypothetical poison locally, and, perhaps, it may be possible to isolate it and, more important, to produce its specific antidote. Such possibilities as the last seem as yet far away, for we are now only on the borderland of this new period of what bids fair to be rational organotherapy. These possibilities seem, however, sufficiently real to make one somewhat impatient with the blundering, hit-or-miss kind of organic extracts.

The Therapeutic Status of the Coal-Tar Products.—The meeting of the Philadelphia County Medical Society, held on December 9, 1902, (*Proc. Co. Med. Soc.*, December 31, 1902) was devoted to a discussion of the present therapeutic status of the coal-tar products. Dr. Wharton Sinkler spoke of the use of these drugs in neuralgias and other painful affections; Dr. M. B. Hartzell discussed the use of the coal-tar derivatives in diseases of the skin, and Dr. F. Savary Pearce examined them in relation to disorders of the central nervous system.

In the matter of the coal-tar products the medical profession has been guilty of that fault for which they have so often criticized the laity, enthusiasm for drugs. When the coal-tar products were first introduced into medicine, extravagant claims were made for their therapeutic value, so that they began to be used by the laity as well as by the profession. This use soon became indiscriminate. The result has been productive of much harm, as both Sinkler and Pearce showed in their paper. Another phase of the question relates to the doses employed in the administration of these remedies. We once made some observations on the value of phenacetine as an antipyretic in typhoid fever, and we found that, by giving one-grain doses, as much reduction in temperature could be obtained as could be by the use of five-grain doses in some cases. We, furthermore, have found that for the relief of headache two grains of phenacetine are as efficient as five grains, especially when combined with citrate of caffeine.

It seems to us that we might define the value of the coal-tar products by the following statements: (1) They are of benefit in proper doses in some cases. (2) They are not to be given to all patients indiscriminately. (3) They are not to be resorted to by the public for the relief of pain whenever or wherever felt. (4) They are to be given in the smallest doses that will produce the desired result. (5) When their action is no longer necessary, they are to be promptly discontinued, and the patient left powerless to continue them on his own initiative.

The Effect of Temperature on the Tubercle Bacillus.—An interesting and suggestive paper by Dr. M. A. Veeder appeared in the *Medical Record* of January 3, 1903. In this contribution the writer undertakes to show that the open air treatment of consumption succeeds not on account of the freedom of the air from impurities, but on account of its temperature. He calls to mind that cold prevents fermentation, and that Pasteur demonstrated there was an abrupt limitation of temperature effect in the case of the bacillus of anthrax. This organism cannot be cultivated at a temperature much above 100° F., and it is due to this, he believes, that birds, the temperature of which is normally 105°, are not susceptible to infection, unless the body temperature is brought to the proper degree, whereupon infection takes place. The fact is familar that the bacillus of tuberculosis has well-marked temperature limits within which its development may take place, and that this temperature begins practically at the temperature of the human body, and extends but a few degrees above that point. Veeder, in support of his contention, states that pyrexia of even a slight degree may cause an outbreak of a dormant tuberculous infection, and thus an ordinary cold may seem to become the starting-point of the disease.

There are, however, other influences at work leading to the likelihood of infection in such cases. We might mention merely the lessened vitality of the catarrhal mucous membrane, which is held to play an important part. Veeder mentions, also, the fact that cattle and birds, the temperature of which normally is somewhat higher than that of man, are very susceptible to tuberculosis, and horses, the temperature of which is below that of man, are immune. He believes that the application of cold or antipyretics in the treatment of fever acts beneficially by producing a variation of a few degrees of temperature, which greatly inhibits the development of the bacteria and their toxins. He further suggests the advisability of re-studying the action of drugs and other measures of reducing fever from the point of view of the critical temperatures of the pathogenic bacteria. It is found that tuberculosis of the lungs is somewhat more amenable to out-door treatment than tuberculosis elsewhere in the body, and this Veeder attributes to the effect of habitual living in the open air producing large temperature variations in the pulmonary structures and slight temperature variations as far as the rest of the body is concerned. A comparison of the temperature of the air exhaled with that inhaled shows that it is possible to lower the temperature of the lungs to a considerable degree by the inhalation of air at ordinarily low temperatures. Another point in reference to the value of pure air for tuberculous cases: It is well known that secondary infection is one of the dread complications which so speedily prove fatal, and in life in the open air secondary infection is far less likely to occur. The effect of sunlight and pure air itself, quite independent of its temperature, is also an important factor in this method of therapeutics.

The Danger Lurking in Gelatine.—The employment of gelatine as a hemostatic and, especially, in the treatment of aneurysm, has been followed in a large proportion of the cases by remarkable success. Unfortunately, the great value of this remedy is offset by the possibility of inoculating the patient with tetanus, the bacilli or their spores being found in gelatine. That this danger is a real one has been demonstrated by a considerable number of cases of tetanus following the hypodermic injection of gelatine. Judging *a priori*, one can hardly conceive how the tetanus germs remain in the gelatine after it has been subjected to steam during the process of manufacture, but, taking into consideration, on the other hand, the source of this product, the prevalence of tetanus germs, the resistance of their spores, and the possibility of careless handling of the finished product, we must admit the possibility of such a dangerous contamination. Moreover, tetanus bacilli have been discovered in commercial gelatine by a number of investigators. In view of these facts it seems incumbent upon the manufacturers to place on the market a gelatine which should be guaranteed to be free from tetanus bacilli, as ascertained by previous inoculations into susceptible animals, and the physician should not employ any gelatine for injections which does not bear such guarantee. While the gelatine prepared especially for this purpose will no doubt be higher in price, the latter should not stand in the way when human life is endangered. It is bad enough to lose patients from unavoidable accidents, but to cause their death by a lack of precaution or a desire to save a few pennies is nothing short of criminal.

Atropine in Intestinal Disease.—The number of new drugs provided for the benefit of suffering humanity is considerable; but we are not to infer from this that the medical profession, as a whole, or the experimental therapeutists, as a part of it, have exhausted the possibilities of the old drugs at our command. As a matter of fact, it is almost fair to say that we are not thoroughly acquainted with the action of any drug upon the human body, either in health or in disease. Belladonna is sufficiently ancient, and yet recently, in

Germany, it has been put practically to a new use in the treatment of intestinal obstruction, and lauded to the skies or condemned to the inferno, according to the success or prejudices of the particular physician using or criticising it. It seems curious, when one looks over the literature of this subject, which amounts now to about one hundred articles, that upon such an apparently simple question there should be such a wide diversity of opinion.

There are those who find that in any form of intestinal obstruction its employment in heroic doses administered hypodermically is of benefit, whether it ultimately relieves the obstruction or not. They claim that it diminishes the tendency to gangrene and peritonitis and relieves pain, whilst there are others who find nothing good in its use, claiming that it masks the symptoms, hastens the pathological process and produces various injurious symptoms in the patient, not the least of which is delirium. Then the men who attempt to take a middle course appear to be equally susceptible to criticism, because, if they restrict the employment of atropine to inoperable cases (and in these days the inoperable case is practically moribund), they lose the possibility of benefit claimed for it by its friends and are in exactly the position of the much-criticised physician of the present day who elects to delay operation in intra-abdominal conditions. If they administer conservative doses, then, according to all authorities, no good result can ensue, and there appear to be no other middle courses. Curiously enough, there seems to be some dispute among the physiologists as to just exactly what the action of these large doses of atropine is upon the intestinal tract, some claiming that it excites peristalsis, and others that it abolishes it. We think that there can be little doubt that atropine does good in some instances. About 90% of the reported cases, in which it has been employed, have recovered, and, although in only a small number has it been possible to make a positive diagnosis, nevertheless, in most of them the symptoms of intestinal obstruction were pronounced.

On the other hand, there seems to be little doubt that in some cases its employment was associated with dangerous delay in operative measures and no amelioration of the symptoms. The chief fault that is to be found with the advocates of this treatment—of whom Bartsch is the leader—appears to be that, in defiance of scientific accuracy, they have advocated it in all cases in which the symptoms of intestinal obstruction are present, without reference to the nature or cause of the obstruction. There can be no doubt that in certain forms, the nature of which has not yet been definitely ascertained, it may be of benefit. There seems, unfortunately, to be equally little doubt that in other forms, in one way or another, it is injurious. In the meantime the conservative physician must remain in a quandary, although it would appear justifiable whenever the symptoms of intestinal obstruction are pronounced, and whenever there is sufficient reason—and, of course, it must be sufficient—that operation cannot be immediately performed, to give a hypodermic injection of atropine in a dose of from 1-100 to 1-50 of a grain.

Experiments with an Emergency Ration.—The California Experiment Station reports an experiment with an emergency ration which consists of tablets approximately four inches long, three wide and three-quarters of an inch thick, weighing 142 gm. (5 ounces). A tablet of sweatened tea and small boxes of salt and pepper are also added, the whole being hermetically sealed in a tin box. A student at the University of California, who, in addition to his mental work, did manual labor from five to seven A. M. and four to six P. M., was fed exclusively with the ration for five days, a cooked tablet being given for each meal. His weight fell from 166 to 162 pounds, he became hungry before the accustomed time each day, was much weaker, had some soreness of muscles after exercising and a constant chilly sensation. The tablet was palatable, but evidently not sufficiently nutritious. Chemical analysis showed a deficiency of carbohydrates in it, the amount being much less than half that required by a well-balanced ration. As the emergency ration has practical advantages of considerable moment, it seems advisable that steps should be taken to perfect it. Carbohydrates are cheap, obtainable in many forms and easy to preserve when dry.

Mono- and Polypharmacy.—It is an old subject for discussion in the medical profession as to whether we shall employ one or more drugs. On one hand, there are the teachers who lament that the days of our ancestors, who could combine half a dozen ingredients in one elegant prescription, are past. The manufacturing chemists pander more or less to this feeling in their preparations, which often contain a dozen drugs or more. On the other hand, following the lead of the old Vienna school of nihilists, many modern physicians have fallen into the habit of prescribing a single drug and depending upon it, in combination with various hygienic and dietetic regulations. Prescriptions of single drugs, unfortunately, unless combined with various diluents, are not imposing; but this is a matter too small, really, for consideration. A great advantage of monopharmacy—if we can so term it—is that the physician learns through his own experience (and this is practically the only way he can learn) to use drugs with accuracy and success.

A Common Crime.—It is a very common thing for a man trying to support a rather doubtful proposition, or one who is too lazy to look up his literature, to fall back upon "the best authorities" or upon "the common consensus of opinion on this subject in the medical profession," or upon "the views held by the majority of the brighter minds who have been interested in this subject," or "in accordance with the opinion generally expressed," or upon some similar term, which is more or less impressive to the groundlings among us, perhaps, but which at once arouses suspicion in the wise. It is probably no exaggeration to say that 90% of the writers or speakers who use these terms have no more than a single authority, if, indeed, they have that much, upon which to base their contentions. Instead of meaning what the words imply, they really mean that the argument is doubtful, and that adequate authority upon this subject is entirely lacking. Such expressions should be discredited, for, after all, what advantage is it to a man to secure the credence of those incapable of criticism, whose opinion commands little respect, if at the same time he must jeopardize his standing with his more intelligent colleagues? Let authorities be quoted by name or not at all.

Soldiers' Homes.—The *Outlook* for December 20, 1902, contains a very readable paper on "Soldiers' Homes in the British Army." The author of this paper, W. B. Kavanaugh, describes the homelike clubs which were started, originally in Ireland, by Miss Elise Sandes for the comfort and delectation of Tommy Atkins.

These clubs are not officially connected with the army, but are conducted by private philanthropy in the neighborhood of large army posts. There's the rub, we should fear. But we are assured that these "homes" have been most successful and have spread even to distant India. The object is to give the men the comforts (and more of them), which they usually seek in the tavern or saloon. In other words, the "Home" takes the places of the tavern and also of the "canteen." No liquors are dispensed, but books and magazines are supplied and all sorts of games are encouraged.

We should suppose this would be a good subject for agitation in this country, now that we are threatened with another campaign of the canteen. We do not know how the American soldier would like to have his club organized and run for him by a bevy of ladies from the town nearest the garrison. He is not so much used to being patronized as his British confrère, and it is just possible he would prefer to conduct his own clubs. However, this could only be demonstrated by a trial. Here is a chance, we think, for some benevolent people to step in and establish soldiers' clubs—pretty much as Mr. Carnegie founds libraries in available towns.

New Zealand as a Health Resort.—Dr. Lydston has certainly fallen upon green fields and pastures new in his trip to New Zealand, and he has given us a very entertaining paper, which we are publishing in this issue. New Zealand is a big place—only one-sixth less than the whole of Great Britain and Ireland. It consists mainly of two large islands, lying south of the equator in the Pacific Ocean. It is, therefore, a far-away place—according to the old-fashioned ideas of time and space—and is not much known to the American climatologist. But steam and electricity have made a small thing out of this terrestrial globe, and there is no reason why we in America should not include New Zealand in some of our itineraries. Certainly, Dr. Lydston found no difficulty in getting to it, and his experience and observations are worth reading about.

The Pacific Ocean is becoming yearly a more and more interesting region to Americans. Political prophets say it is to be the area of great "world-politics" in this new century. Therefore, it is just as well that we should know something about its health resorts.

Mr. Hutchinson on His Travels.—We always like to keep track of Mr. Jonathan Hutchinson in these days, and we welcome with interest the announcement in the *British Medical Journal* that this distinguished surgeon left England on December 22, with the intention of proceeding to India and Ceylon. In those distant regions he will investigate the distribution of leprosy, and particularly the food of the natives with reference to the etiology of that disease. Mr. Hutchinson, as is well known, is the inventor and sole proprietor of the interesting theory that leprosy is caused by a fish diet. The more this theory is not accepted in the scientific world, the more Mr. Hutchinson evidently thinks it ought to be; and he will support and defend it against all odds. He will do this, even if he has to circumnavigate the globe for it. Already he has been in South Africa, and now he goes to India, and soon we shall probably hear of him in the Hawaiian Islands.

That Mr. Hutchinson will find people eating fish in various parts of the world, is not to be doubted, and that he will also find some cases of leprosy amongst the fish-eating peoples of various countries, is a matter of certainty. But that his theory will thereby be proven, will not be apparent to any one except Mr. Hutchinson. According to the *British Medical Journal*, Mr. Hutchinson has made some amusing reflections upon the Brahmins of India. The members of this caste, as is well known, are deprived by their religion of taking life, or even eating flesh, which would make them accomplices in the taking of life. They are, in fact, the highest grade of antivivisectionists, and the most logical. For centuries and centuries they have ostensibly conformed to the rigid tenets of their faith; but Mr. Hutchinson is not satisfied, and evidently believes that they eat fish on the sly and will not confess it. Therefore, they get leprosy. For our part, we think they deserve to get it, if they act in this way. The scientific world will await with interest the result of Mr. Hutchinson's investigations in India and Ceylon.

Current Comment.

PHILADELPHIA'S LOW DEATH-RATE.

The statistics of the Registration Division of the Bureau of Health for 1902, just compiled, show a ratio of 17.67 per 1,000 persons of estimated population, which is the lowest since 1879, when the death-rate was 17.17 per 1,000 persons.

Despite the prevalence of such a deadly foe as typhoid fever, Philadelphia can lay claim to being a pretty healthy city. The following comparisons taken from the United States vital statistics, just published, will be interesting:

In 1900 in New York the death-rate was 20.4; that of Brooklyn borough was 18.1; Boston, 20.1; Chicago, 16.2; Cincinnati, Ohio, 19.1; Charleston, S. C., 37.5. In this same year the death-rate of Philadelphia was 21.2. For 1902 the local death-rate shows a material decrease.

—*The Telegraph.*

WHAT VACCINATION DOES IN PHILADELPHIA.

The small percentage of deaths from smallpox during the year 1902 is due to the very careful efforts made in the matter of public vaccination (the entire city being canvassed by a competent corps of physicians, and free vaccination offered every one) and to the methods of disinfection. The results of all this work, in preventing the spread of smallpox, are apparent, as will be shown by the small number of cases existing in this city to-day, as compared with those existing in other localities. Furthermore, a number of cases in this city are the result of contagion brought in from outside.

—*Director English.*

MEDICAL PRACTICE IN CHINA.

It is said that in China, if a physician visits his patient at any distance, he invariably declines to see the sick man until after he has been furnished refreshments. This custom is probably a relic of the days when the doctor's head was the price of failure to cure, and is evidence of considerable circumspection on the part of the Chinese physicians. If the refreshments are not to the doctor's liking, he has handy means of retaliation, as one of their recognized methods of massage is for the operator to kneel on the abdomen of his patient, in which event both doctor and patient would appear to suffer from the same complaint.

—*Exchange.*

Correspondence.

INCONTINENCE OF URINE.

By FERD. C. VALENTINE, M. D.,
of New York.

To the Editor of the **Philadelphia Medical Journal:**

Your editorial on "Punishment as a Therapeutic Means," (p. 979, Dec. 20), recites the case of the wife of an English county magistrate, who was fined 5 pounds for cruelly punishing her young daughter for incontinence of urine.

The editorial mention contains reflections upon the physical defect which underlies incontinence of urine. These notes concisely present most important facts, that are of incalculable value to parents. I, therefore, beg to suggest that you have them reprinted for physicians to give to such people as have children with this unfortunate defect.

In this connection it seems to me that the method recently advocated by Fernand Cathélin for the treatment of these cases deserves at least preliminary notice. It consists in injecting normal salt solution into the vertebral canal, through the sacral triangle at the juncture of the sacrum with the coccyx.

I reserve details of the technique of this procedure until I shall have gathered sufficient observations to warrant its discussion in print.

My experience thus far may be briefly summed up in seeing Cathélin treat over 100 patients last summer and in about 30 patients I have treated since. As yet I have not had a single failure to cure these incontinences. However, I am not yet able to exclude a possible psychical effect that may have been produced by the puncture, nor have I had opportunity to observe my cases for sufficient time and am, therefore, unable personally to say anything regarding the permanency of my assumed cures. Cathélin's cases, however, are so encouraging that I shall persist in gathering material until I have several hundred cases upon which to base a report.

It would be selfish to withhold from the profession so promising a method of treating these cases until I can write thereon from large personal experience. I, therefore, refer my colleagues to Cathélin's book *Les Injections Epidurales*, (Bailliere et fils, Paris), in which the method is described.

As my material of essential diurnal and nocturnal incontinence is necessarily limited, both in children and adults, I shall not be able to publish extensive personal experiences as soon as I should like. To enable others, better situated in this regard to test the matter, it will afford me pleasure to demonstrate to them the technique of the operation.

Reviews.

Diseases of the Ear. By Prof. Dr. Adam Politzer. Professor of Aural Therapeutics in the University of Vienna. Translated and edited by Milton J. Ballin, Ph. D., M. D., and Clarence L. Heller, M. D. Revised and enlarged Illustrated with 346 original drawings. Pp. 884. Philadelphia and New York, Lea Brothers & Co. 1903.

This fourth English edition of Politzer's admirable textbook appears in new type, broad-faced and distinct, and with enlarged pages to facilitate the increase in contents, so that the increase of one hundred and fifty pages marks much more new matter than its mere volume would suggest, while the increase of 16 illustrations is in spite of the elimination of a number used in the previous edition. A great many of the drumhead pictures have been redrawn, and the printing of all cuts is superior to that of the previous English issue, which showed decided inferiority as compared with the German edition. The divisions of the work remain unchanged, with slight transposition of the sections to obtain more logical sequence; and the distinction by large or small print of the more or less important portions of the text has been wisely maintained. Every section gives evidence of close revision, if not rewriting; and the additions, especially the section on the ossifying changes in otosclerosis, give admirable presentation of the mature views of the veteran teacher. The most striking change is in the chapter upon suppuration of the middle ear and the operative work in the tympanum and mastoid and upon the broadening advance of aural surgery in its thorough dealings with the temporal bone and the adjacent regions involved in its infections. The otitic involvements of the brain, the meninges, the sinuses and the jugular are now handled with full and masterly detail, and nearly one hundred pages have been added to this portion. It is needless to say that the anatomical illustrations are beautiful, exact and well chosen, since this has always characterized the editions of the past; and the translators' work has been well done, with few slips and no liberties taken with the author's statements. The encyclopedic character of the work has been fully maintained, with its wealth of reference to the work of others as well as the author's great erudition; but it remains a student's textbook, with its cardinal points well emphasized, both in the major divisions of the work and in the heavy type which summarizes the contents of each section. It is characteristic of the revised edition that there is an additional page required for the table of contents, and that the index has been extended from 8 pages to 23. The strong personal spirit and detailed explicitness of the teacher remains unimpaired, but mellowed and rounded as ever by the catholicity of his grasp and his presentation of the speciality, [B. A. R.]

Transactions of the Third Annual Session of the Tri-State Medical Association of the Carolinas and Virginia, Held at Richmond, Va., February 26 and 27, 1901. Raleigh: Presses of Edwards & Broughton, 1901.

The Tri-State Medical Association includes the two Carolinas and Virginia, and the volume before us contains a report of its third meeting. This association is made up of the best medical men in these States, and at this meeting there were presented a number of interesting and instructive papers. The volume is neatly bound, and we can make but one criticism of it, which is that an index or contents of the papers read and of the contributors would be a distinct advantage. [J. H. G.]

Proceedings of the Washington Academy of Sciences. Vol. IV, 1902. Washington, D. C., Published by the Academy.

In a previous review we noted the contents of the early fasciculi of Volume IV of the proceedings of the Washington Academy of Sciences, which is composed of scientific papers on zoological, entomological and botanical subjects. We have before us for notice the eleven fasciculi that complete this volume. The fasciculi are as follows: (1) Hymenoptera, by William Harris Ashmead. (2) Brachyura and Macrura, by Mary J. Rathburn. (3) The Mosses of Alaska, by J. Cardot and J. Thériot. (4) Anemones, with Discussion of Variation in Metridium, by Harry Beal Torrey. (5) Schistocerca, Sphingonotus and Halmenus, by Robert Evans Snodgrass. (6) Mallophaga from Birds, by Vernon L. Kellog and Shinkai I. Kuwana. (7) The Birds of Clipperton and Cocos Islands, by Robert Evans Snodgrass and Edmund Heller. (8) Echinodermata, by Hubert Lyman Clark. (9) The Eyes of Rhineura Floridana, by Carl H. Eigenmann. (10) Marine Mollusca, by H. A. Pilshy and E. G. Vanatta. (11) Contents and Index.

The paper and typography of these fasciculi is of the best, and in those reports that are illustrated the drawings have been carefully made and excellently reproduced, so that it is a pleasure to examine them. We regret that the nature of the subjects treated does not warrant more extended review in this, a purely medical publication. [J. M. S.]

Regional Minor Surgery, Describing the Treatment of Those Conditions Daily Encountered by the General Practitioner. By George Gray Van Schaick, M. D., Attending Surgeon to the French Hospital, New York. The International Journal of Surgery Co., New York. Price $1.50.

Van Schaick properly concludes that minor surgery is minor in name only, as the most trivial injury may be followed by disastrous results. The same laws govern the small as well as the great operations of surgery. The author writes in a simple nonpedantic manner, avoids subjects of technical character, and gives the results of his own personal observations rather than the views of the more systematic writers. Most of the minor procedures are described in a sketchy way, and in many instances the text is reinforced by illustrations. We believe the absence of the technique of local anesthesia in a book on minor surgery to be a serious omission.

While this little volume contains little not found in the lager treatises of surgery and while it is not as complete as it should be, we have no doubt that it will prove of value to the general practitioner who has but little surgical training and a small library. [F. T. S.]

Medical Microscopy. Designed especially for students in laboratory work and practitioners. By T. E. Oertel, M. D. Small 8vo., 350 pages, index and 131 illustrations. Philadelphia, P. Blakiston's Son & Co. $2.00 net.

This compact, well-printed and well-illustrated book is designed, as the author states in the preface, for self-instruction. A commendable feature in view of this purpose is that, as a rule, only one method is given for each operation. It is very confusing to a beginner who has no opportunity to consult a teacher, to find several methods for attaining the same result and no information given as to the relative applicability of each. It is true that in many case a multitude of methods indicates a lack of one good one.

"The child whom many fathers share,
Hath seldom known a father's care."

But it is also true that some authors are too much inclined to give many methods without expressing distinct preferences. In dealing with students, a little dogmatism is often of advantage.

As far as regards the matter of the book we may say that about two dozen pages are devoted to the explanation of the theory of the compound microscope and description of the modern forms of the instrument. A general idea of the simpler optical principles involved in the construction of the higher-class lense will be obtained by the study of this chapter, but the subject is too difficult to be treated more than superficially in a treatise of this character. Descriptions of the methods of preparing tissues and specimens occupy 25 pages, being liberally illustrated. Then follow 2 pages on bacteriological methods, a few pages on staining-methods, and the remainder of the book is devoted to descriptive microscopy. We note with regret that, while there are numerous excellent drawings of microscopic appearances. the magnification is rarely given. [H. L.]

American News and Notes.

PHILADELPHIA AND PENNSYLVANIA.

Society Meetings Next Week.—The following societies will meet next week at the College of Physicians, Philadelphia, at 8.15 P. M.: Monday evening, January 12, Section on Medicine, College of Physicians; Tuesday evening, January 13, Pediatric Society; Wednesday evening, January 14, County Medical Society, and Thursday evening, January 15, Section on Gynecology, College of Physicians.

Jefferson Medical College,—Captain C. F. Kieffer, Surgeon, U. S. A., who has recently returned from the Philippines, will deliver 8 lectures before the senior class, on tropical hygiene, with a general consideration of tropical diseases. The lectures will be given on Fridays at one o'clock. The first lecture was given January 9.

Marcus Hook Quarantine Station.—At the annual meeting of the Quarantine Board of Pennsylvania, held January 5, it was announced that the State had purchased the site on which the Marcus Hook Quarantine Station is located. It is expected that new buildings will eventually be erected here. During 1902, 708 medical and 405 surgical cases were treated at this station.

Children's Hospital.—At the meeting of the Board of Directors, held January 9, Dr. D. J. Milton Miller was appointed visiting physician, replacing Dr. Alfred Stengel who recently resigned; Dr. C. Y. White was appointed pathologist, in the place of Dr. Alfred Hand, Jr., who resigned lately; and Dr. J. Claxton Gittings was appointed physician to the dispensary, in the place formerly held by Dr. Hand.

Philadelphia Hospital.—Several appointments in addition to those announced in the last issue of this journal were made by the Board of Charities and Correction last week. Dr. G. E. Pfahler, in charge of the X-ray work of the institution, who applied for a salary for his work, was not given a definite answer, the question being referred to Dr. Shoemaker. Dr. J. A. Newbold was appointed registrar, and Dr. W. C. Pickett, formerly registrar, was made examiner of the insane. It is announced that the new Children's Hospital will be opened some time this month. A case of smallpox has been found in the Philadelphia Hospital in a nurse, who was at once removed to the Municipal Hospital, accompanied by another nurse, who volunteered to nurse her companion.

Pennsylvania State Medical Examining Board.—Out of 77 applicants who took the recent examination, licenses to practise medicine in Pennsylvania were granted to 64, 16.5% having failed to pass.

Hospitals in Cities.—During the coming sessions of the Pennsylvania Legislature an attempt will be made to have the word "hospital" stricken from the clause which at present prevents the building of new hospitals within city limits. Under the present law hospitals cannot move to other parts of the city. The Presbyterian Hospital, Pittsburg, for instance, wishing to move from its present location, is forced by the law to move outside of the city. New hospitals can only be built outside of the city limits. Should the law be thus amended, the act will be prohibitive only so far as pest-houses and burying grounds are concerned.

Pennsylvania State Hospital for the Insane, Norristown.—During 1902, 66 males were discharged as recovered, and 8 improved, an increase of over 50% in recoveries, which were only 43 the year before. In the female department, 45 persons were discharged as recovered, a gain of 25% over 1901. Nine patients were also discharged improved.

The Health of Philadelphia.—During the week ending January 3, 15 cases of smallpox, with one death, were reported, as compared with 25 cases and 3 deaths during the preceding week. The cases are pretty well scattered throughout the city, a majority, however, being reported in the wards near the Municipal Hospital. There were 144 cases of typhoid fever, with 10 deaths, an increase of over 50 cases over the preceding week. There was also a slight increase in the number of scarlet fever and diphtheria cases reported. Between January 3 and 5, 7 new cases of smallpox and 44 new cases of typhoid fever have occurred.

Typhoid Fever in Oysters.—Dr. A. C. Abbott, professor of hygiene in the University of Pennsylvania and bacteriologist of the city of Philadelphia, is making extensive investigations to show that many cases of typhoid fever are due to infected oysters. His scientific experiments prove that typhoid bacilli are often present in raw oysters.

Bequests.—By the will of the late Mr. H. C. Cochran, $5000 were left to the University Hospital, the Presbyterian Hospital, to the Presbyterian Home for Widows and Single Women, to the Presbyterian Orphanage and to the Home for Aged Couples of the Presbyterian Church; $10,000 to the Pennsylvania Hospital for the Care of the Insane, $1000 to the Polyclinic Hospital, Gynecean Hospital and many other charitable organizations.

Philadelphia's Death-Rate.—The death-rate in the city of Philadelphia for the year 1902 was 17.67 per 1000. This is the lowest death-rate since 1879, when the figures were 17.16 per 1000. The principal causes of death in the past year were: Consumption, 2854; inflammation of the lungs, 2976; diseases of the heart, 1681; diphtheria, 435; scarlet fever, 143, and smallpox, 231. The low percentage of deaths from smallpox is attributed to the very careful effort made in public vaccination and to the methods of disinfection.

NEW YORK AND NEW JERSEY.

New York's Death-Rate.—During 1902 the death-rate for the city of New York was 18.74 per 1000, considerably the lowest ever reported in the city. The total number of deaths was 68,082, as compared with 70,803, and a death-rate of 20.02 per 1000 for 1901, which is a decrease in the rate of 1.28 per 1000, and indicates a saving, in 1902, of 4619 lives. The death-rate in each of the 5 boroughs of New York City is also the lowest on record. There were 4907 more births in 1902 than in the previous year. The number of deaths from tuberculosis was 582 less than in 1901.

Lorenz Orthopedic Charity Hospital, New York City.—Application was made to the State Board of Charities, January 3, for permission to incorporate a hospital under the above name. Its object is to establish a free hospital or dispensary for the charitable treatment of persons afflicted with deformities, especially congenital dislocation of the hip, the treatment to be according to the Lorenz method. Dr. Franklin E. Sylvester and Messrs. W. S. Brewer, C. F. Smith, D. B. Sanneman and B. F. Curtis are the incorporators.

No Smallpox in Vineland, N. J.—The epidemic, which was last week diagnosed as smallpox, has now been called eczema. The 3 most prominent physicians of the town have made the statement that, to the best of their knowledge and belief, the disease at present prevalent in Vineland is but a harmless form of eczema.

Smallpox in Syracuse, N. Y.—Several cases of smallpox have recently been reported in this city. The latest cases occurred in 2 employés in a prominent drug store, one of whom was in charge of the soda-water fountain. Everyone who was supposed to have been in that store lately has been vaccinated by the health authorities.

Mumps in New Jersey.—An epidemic of mumps is recorded at Hancock's Bridge, almost one half of the residents having the disease. A peculiar feature of the epidemic is that not one female resident of the city has been affected, the patients all being men and boys.

Eye Disease in New York.—In the 10 days since the Gouverneur Hospital building was transformed into an eye hospital, 2128 cases of trachoma in school children have been treated, and, in 116 of them, operations were necessary. There might have been many more operations if the doctors could have performed them, but, on account of the great number of patients, only the most severe cases could be operated upon. Instead of 2 physicians there will in the future be 4 on duty all afternoon, in order that the children may secure proper treatment. It is said that among 6000 school children on the lower East Side, from 12% to 15% have trachoma. In Brooklyn no less than 1979 children have been excluded from school since September 18 last, because of eye disease. In all, 6347 pupils were dismissed because of some disease.

SOUTHERN STATES.

To Prevent Bubonic Plague.—Surgeon-General Wyman, U. S. P. H. and M.-H. S., has caleld a meeting of representatives of the various State Boards of Health, to be held January 19, in Washington, D. C., to discuss the alleged existence of bubonic plague in San Francisco, and to formulate measures to prevent the possible spread of the disease.

Index Medicus.—It has been announced that the trustees of the Carnegie Institute, Washington, will appropriate $10,000 annually for publishing the *Index Medicus*, which ceased to appear several years ago. The annual subscription has been fixed at $5.00. It is understood that Dr. Fletcher, of the Army Medical Museum, will edit the publication.

Crime and Insanity in the United States.—In his report submitted to Congress, Dr. Arthur MacDonald, of the United States Bureau of Education, Washington, says that, with few exceptions, within the last 30 or 40 years, there has been an increase, relative to population, in crime, insanity and other forms of abnormality. This increase is only in part accounted for by the more stringent methods of gathering data. Statistics show that the States with the greatest education and intelligence, the North-Atlantic and North-Central States, also exceed in insanity, suicide, nervous diseases, juvenile criminals and almshouse paupers. The youth, as compared with adults, have committed more crimes as society has developed. Suicide among children has greatly increased, a symptom of a diseased precociousness. The recent rapid development of women, by entering more and more into man's work, a transition involving great strain, has some unwelcome accompaniments. In Vienna general paralysis is now increasing among women; in Belgium insanity and suicide are growing relatively faster in women than in men; and in Austria the criminal influx into cities is relatively greater in women than in men, as are also the effects of heredity. During the past 40 years there has been a constant condensation of population, as shown by the increase of urban over rural population. There has also been a much greater increase in the consumption of malt liquors and sugar than in that of wheat, coffee and other cereals, although the latter has also increased. This might be interpreted as a tendency toward less solid, less staple and more artificial food, since the consumption of meat and potatoes has decreased.

The Health of Baltimore.—During 1902, 10,253 deaths occurred in Baltimore, as compared with 10,479 in 1901, and 10,700 in 1900. The total number of births reported was 8950. Although there were 5530 cases of infectious diseases reported, only 29 of these were of smallpox, while 1086 of them were of typhoid fever. During the week ending January 3, 227 new cases of measles were reported and but one case of smallpox.

Cocaine Habit in Wilmington, Del.—The City Council has just passed an ordinance providing for the punishment of those who sell cocaine and other drugs to boys. The Chief of Police has secured evidence to the effect that large quantities of cocaine are continually being sold to boys in Wilmington.

Bayview Insane Asylum, Baltimore.—In order to relieve the congested condition of this institution, 40 insane patients, 18 men and 22 women, were removed, January 1, from Bayview Insane Asylum to the Springfield Insane Asylum at Sykesville, Md.

American Association for the Advancement of Science.—At the session of this association, January 1, resolutions of regret on the death of Major Walter Reed, Surgeon, U. S. A., were adopted, and a committee of 9 was appointed to secure a memorial in recognition of his benefaction to the race in solving the problem of the spread of yellow fever. Resolutions were also passed urging Congress to recognize his services and to provide a pension for his family. Physicians of Baltimore and Washington also urged that a pension be granted Mrs. Reed by Congress. Senator Martin, of Virginia, has introduced a bill providing a pension of $200 a month for Mrs. Reed.

Oil Extermination of Mosquitoes Useless.—Dr. T. W. Dupree, who has been making investigations upon mosquitoes, has reported to the Louisiana Society of Naturalists that the eggs of mosquitoes are often hatched months after they are laid, especially if deposited in ponds which subsequently dry up. He concludes that the extermination of mosquitoes by oil or by otherwise treating ponds during March and April, when the eggs are supposed to be hatching, would be useless, as the hatching is going on all the time. Dr. Dupree found 24 varieties of mosquitoes in the Louisiana ponds, most of them in the same pond. The species vary from year to year, some varieties being abundant one year and others the next.

Rockefeller Institute for Medical Research.—At the recent meeting of the Association for the Advancement of Science, in Washington, Dr. W. H. Welch, of Johns Hopkins University, who is directing the medical research work instituted under the Rockefeller fund, intimated that an important scientific endowment would shortly be made. While not yet prepared to make a formal public announcement, he assured those present that within the near future there would be a specially endowed institute or laboratory in this country, for research in scientific medicine, similar to the Pasteur Institute in Paris. Such an institute would greatly facilitate special research along lines which would be of incalculable benefit to humanity.

MISCELLANY.

The Plague in Mexico.—On account of the disquieting reports from Mazatlan, Mexico, regarding the spread of bubonic plague, Surgeon-General Wyman, of the U.S.P.H. and M.-H. Service, has ordered an assistant surgeon to Mazatlan and another to Ensenada, Cal., where the steamers touch on their way to San Francisco. Every passenger for the United States will be inspected at these ports. From a sanitary standpoint Mazatlan is defective; filth is everywhere and the poorly nourished condition of the lower classes invites disease. On this account Surgeon-General Wyman believes that the plague is more likely to obtain a foothold there than in San Francisco. As the people are fleeing from the city in great crowds, there is much danger of the disease being spread. It is said that more than 50% of the cases so far reported have occurred in women. Neighboring towns in Mexico are taking strenuous measures to improve their sanitary condition. Latest reports state that 6 deaths occurred January 1 from the plague, at Mazatlan, and several new cases were reported. The houses and personal effects of all those who died, as well as of those afflicted with the disease, have been burned. Fifty pavilions are being constructed for the use of persons who have been exposed to the disease. No vessels enter the port or leave it, and all busines is paralyzed. All Chinese entering Texas from Mexico will now be kept under surveillance for 15 days before being permitted to enter the United States. The U. S. P. H. and M.-H. S. inspectors along the Mexican border have been ordered to observe a rigid quarantine.

Cholera in the Philippines.—According to the latest mail reports the number of deaths from cholera throughout the Philippines has reached 113,273. On the day preceding the mailing of this report, 258 cases, with 138 deaths, were reported among the various provinces.

The Weight of the Brain.—Sir James Crichton Browne, lecturing the other day, gave it out with the weight of his opinion that the mass and weight of the brain were the most important criteria of intelligence. Although mind and matter had no relation to each other as cause and effect, they were, in the brain, in invariably a definite union with each other. The growth of the brain was indicative of mental activity, and the failure of mental faculties was a measure of the decay of the brain. Close attention or active exercise of the thoughts caused a rise in the temperature of the brain. The heaviest organ of the body, next to the liver, the brain of the average male European, weighed 49 ounces, and of the female four or five ounces less. There was necessarily a relation between brain bulk and body bulk, and hence it was found that the taller races were generally the most intellectual, which the lecturer sought to demonstrate by this table:

Nationality.	Ave. Stature.	Brain Wt.
Scotch	5 ft. 8¾ in.	50 oz.
English	5 ft. 7½ in.	49 oz.
German	5 ft. 6½ in.	48.3 oz.
French	5 ft. 6¼ in.	47.9 oz.
Hindu	5 ft. 1¾ in.	45 oz.
Aboriginal Australians	5 ft. ⅛ in.	42 oz.
Bushmen	4 ft. 2¾ in.	35 oz.

Although the size of the brain indicated mental power it was only one of the conditions.—*London Leader*.

Preventive Inoculation Against Cholera.—Between July and December, 1902, 21,334 people were inoculated against cholera by the Japanese sanitary authorities at Nagasaki. Of this number 110 contracted cholera afterward, 60 of whom, over 50%, died, on an average, in less than 4 days. The serum was prepared according to Cowles, and 1 cc. was injected, usually in the shoulder. These injections were followed by slight pain and fever lasting a day or 2. During this epidemic, 741 cases of cholera occurred, with a mortality of 514, a little under 70%.

Obituary.—Dr. Jacob M. Kraus, at Buffalo, N. Y., December 19, aged 36 years.—Dr. Robert H. Moore, at Hot Springs, Ark., December 15.—Dr. William P. Armstrong, at Jamestown, Cal., December 16, aged 73 years.—Dr. Malcolm Ethan Parrott, at Brooklyn, N. Y., December 16, aged 55 years.—Dr. John Bowser, at Goshen, Ind., December 19, aged 53 years.—Dr. A. Wilber Hoon, at Pittsburg, Pa., December 16, aged 25 years.—Dr. Oscar F. Seeley, at Climax, Mich., December 18, aged 72 years.—Dr. Henry N. Jones, at Kingston, Mass., December 18, aged 87 years.—Dr. Francis M. Davis, at Houston, Texas, December 16.—Dr. Lewis Wheat, at Richmond, Va., December 29, aged 45 years.—Dr. William S. White, at Lexington, Va., December 29, aged 50 years.—Dr. Rush Winslow, at Appleton, Wis., December 27, aged 59 years.—Dr. Nokaloseknek, at Belen, N. M., December 27.—Dr. E. W. Bradley, at Grass Valley, Cal., December 27, aged 48 years.—Dr. F. M. Davis, at Martinsburg, W. Va., December 28, aged 70 years.—Dr. William H. Fox, at Ashland, Va., December 30, aged 77 years.—Dr. Joseph A. Huff, at Pittsburg, Pa., December 30.—Dr. Daniel P. Buckey, at Grafton, W. Va., December 29.—Dr. George R. Weeks, at Los Angeles, Cal., January 2, aged 76 years.—Dr. J. O. Lowry, at Beckville, Texas, December 25.—Dr. Irving S. Wallandingham, at Middletown, Del., December 30, aged 62 years.—Dr. Carl Schumacher, at Syracuse, N. Y., January 3, aged 51 years.—Dr. Carl A. Eichler, at New York City, January 2, aged 76 years.—Dr. John B. Amiss, at Harrisburg, Va., January 4, aged 67 years.

GREAT BRITAIN.

Cancer in London.—The statistics of the City of London during 1902 show a slight decrease in the death-rate from cancer, being 0.93 per 1000 as compared with 0.95 in 1901. The proportion, however, has been more than doubled within 50 years, the rate between 1851 and 1860 being 0.42 per 1000. Even in 1891 it was only 0.78 per 1000. Comparatively few cases were fatal before 1855. The heaviest recorded mortality was between 1855 and 1865.

The Practitioner, London.—Dr. Malcolm Morris, editor of the *Practitioner*, retired from that post, January 1. His successor has not yet been announced.

St. Bartholomew's Hospital, London.—Dr. Norman Moore has been elected physician and Mr. W. Bruce Clark surgeon to St. Bartholomew's Hospital.

Dr. Ball Honored.—Dr. Charles Bent Ball, Regius Professor of Surgery in the University of Dublin, and surgeon to Sir Patrick Dun's Hospital, who recently operated successfully for appendicitis upon Lady Dudley, the wife of the Lord Lieutenant of Ireland, has just been knighted.

Chicken-pox no Longer to be Reported.—The order, passed by the London County Council,, November 7. 1902, making chicken-pox one of the diseases to be reported to the Health Department, expired January 6.

Influenza in London.—The epidemic of influenza this winter has not been serious and is already decreasing. During the last week of 1902 there were 28 deaths directly attributed to influenza, and but 37 in the preceding week.

A Crematory—The foundation stone of the first Australian crematory was laid in Adelaide, in October last.

Death of Dr. Fenwick.—Dr. Samuel Fenwick, F. R. C. P., consulting physician to the London Hospital, died December 11, in London, aged 81 years. He was graduated from the University of St. Andrews and also received an honorary degree from Durham University. Coming to London in 18[illegible]2, from the Durham Medical School, he became assisant physician to the Hospital for Diseases of the Chest, and later assistant physician to the London Hospital. In 1879 he was appointed physician to the London Hospital and on his retirement, in 1896, consulting physician. He published a number of medical books, including The Nature and Prevention of Diseases, Certain Affections of the Throat of a Chronic Character, Morbid States of the Stomach and Duodenum, Students' Guide to Medical Diagnosis, Outlines of Medical Treatment, and numerous articles in Quain's Dictionary of Medicine and the Medico-Chirurgical Transactions. Up to within 2 weeks of his death he was still engaged in private practice.

CONTINENTAL EUROPE.

The Rothschild Polyclinic.—This institution, erected and equipped by Baron Henri de Rothschild, M. D., in Paris, was opened December 19. The building contains dispensaries, waiting rooms, wards, operating room and an isolation department. The Polyclinic is especially intended for the treatment of children under 15 years of age, and milk and drugs will be given without charge to the children of the 3 districts of Paris near the hospital. There are specialists attached to the hospital for treating diseases of the nose, throat, ear, eyes and nerves and medical and surgical affections; there are also wards for children, wards for infants accompanied by their mothers, and an automobile ambulance. Attached to the hospital is a library, consisting of 10,000 volumes, including everything published on the subject of the diseases of children. There are also chemical and bacteriological laboratories and a clinical amphitheatre. At the opening exercises, addresses were made by Dr. Budin and the Minister of Public Instruction.

Plague in Odessa.—It has now been announced that the first victims of the recent epidemic in Odessa, Russia, were Jews of the poorest class. Physicians believe that the disease was brought to Odessa in a cargo of damaged Persian paddy last spring, plague-stricken rats having first been discovered in the warehouse in which the paddy was stored. In all there were 50 cases of plague during the recent epidemic.

Factory Legislation in Germany.—In Germany, children under 13 years of age may not be occupied in workshops or factories, and above that age they can only be employed after they have finished their course in the schools. Children and young women may not be employed in such factories regarded as dangerous to health and morality. This latter regulation now includes glassworks, wire-drawing mills, sugar refineries, rolling mills, brick works, coal mines, tin and lead mines, etc. Children under 14 years of age must not work longer than 6 hours per day, and young people between 14 and 16 years cannot be employed longer than 10 hours per day. Their work shall not begin earlier than 5.30 in the morning, and shall not be continued later than 8.30 in the evening, and must be interrupted by regular intervals of rest. Similar regulations are in force regarding females, and, even if they are over 16 years of age, they must not be employed more than 11 hours per day, or 10 hours on Saturdays and the days preceding holidays. All working people are entitled to 24 hours' rest on Sunday as well as holidays; 36 hours' rest when 2 such days are consecutive, and 48 hours' rest at Christmas, Easter and Whitsuntide. When exceptions are allowed, an equivalent rest must be permitted on ordinary week-days to such persons as are occupied during the said days of rest.

University Notes.—**Berlin:** Virchow's *Jahresberichte über die Fortschritte und Leistungen der gesammten Medicin* will be published this year by Professors Waldeyer and Posner. Virchow's *Archiv* will be published by Professor Orth and edited by Professor Israel.—Dr. Lexer has been appointed professor.—Dr. Arthur Hartmann has been granted the title of professor of otology.—Dr. Ernst Remak has been appointed professor of neurology and Dr. Oskar Lassar, professor of dermatology.—**Charkow:** The centennial anniversary of the creation of this university will be held January 17. A bibliography of all the professors attached to the university since its foundation will be then issued. There are at present 113 medical students in the graduating class.—**Cracow:** Dr. Johann Raczynski has been appointed professor of pediatrics.—**Dorpat:** Dr. Flechszig, professor of nervous diseases in Leipsic, has been made an honorary member of the University.—**Erfurt:** Dr. Wilms celebrated his fiftieth anniversary as a physician, October 26.—**Tübingen:** Dr. Grunert has been awarded the title of professor of ophthalmology.—**Vienna:** Dr. Ernst Finger has been appointed director of the department of dermatology and syphilis in the Wieden Hospital.—Dr. Johann Lang celebrated his twenty-fifth anniversary as a physician early in December.—Dr. Hermann Nothnagel, professor of medicine and director of the first medical clinic, has been made a life member of the Upper House of the Austrian Parliament.

The Latest Literature.

BRITISH MEDICAL JOURNAL.

December 20, 1902. (No. 2190.)

1. An Address on the Transference of Bovine Tuberculosis to Man. ROBERT KOCH.
2. A Lecture on Malaria. WILLIAM MacGREGOR.
3. Report of a Case of Bilharzia from the West Indies. P. MANSON.
4. Serum Reaction of "Bacillus Pestis" in Plague. R. ROW.
5. Unrecognized Influenza. J. W. WASHBOURN and J. W. H. EYRE.
6. On Dysphasia or Aphasia as an Initial Symptom of Tuberculous Meningitis. M. McINTYRE SINCLAIR.
7. A Note on Some Cases Mistaken for Smallpox During the Recent Epidemic. CHARLES FRASER.

1.—The first paper in the current number of the *British Medical Journal* is the address on **the transference of bovine tuberculosis to man**, which Koch delivered at the International Conference on Tuberculosis, in Berlin. He says that we shall not arrive at facts for consideration concerning primary intestinal tuberculosis, which shall be acknowledged on all hands as reliable, until we have agreed upon exactly what is meant by the term primary intestinal tuberculosis. He believes that, if tuberculous infection from partaking of meat and milk infected with *perlsucht* really occurs as frequently as it is said to, direct observation of the question has been neglected up to the present. He compares the behavior of other infectious diseases which are conveyed to man by feeding on meat and milk with the behavior of tuberculosis. After discussing the reported instances of the infection of human beings with tuberculosis from eating infected meat or drinking infected milk and passing them in a critical review, he says, in order prove that tuberculous infection passed from one of the lower animals to man, the cases must fulfil the following conditions: (1) They must furnish certain proof of tubercle in general and, when possible, the primary focus must be supplied; such proof as may be obtained from the existence of unassailable clinical symptoms or, in the absence of these, the evidence of a necropsy. (2) Other sources of infection must be excluded with certainty. (3) In each case of alleged infection from milk infected with *perlsucht*, the condition of the rest of the people who have taken the same milk should be borne in mind. (4) The source of the milk should be attended to. Of all the cases reported in the literature as being examples of infection from animals, in only 10 is it stated that a necropsy was held and only 7 of these are said to have had intestinal tuberculosis. In only 3 cases is it asserted that the milk came from a cow with tuberculous udders. In not a single one are other possibilities of infection excluded with certainty. In no case is anything stated about the condition of other people concerned. Provisionally, we can only say that the injurious effects of milk infected with *perlsucht* and its products are not proven. The fight against tuberculosis must aim at shutting off the chief and, indeed, almost the only source of infection. This source of infection is in those consumptives who, in consequence of the unfavorable conditions under which they live or because they obstinately set aside the simplest rules for the prevention of infection, are a danger to their companions. In some way or other we must look after these sick people so that they may cease to be a danger to their neighbors. [J. M. S.]

2.—McGregor says that Best examined the blood of 320 children under 15 years of age, all presumably healthy, who lived in the town of Lagos. Fifty per cent. of these children were found to have malarial parasites or pigmented leukocytes in their blood. He describes Ross's method of searching for malarial parasites in suspected blood: Twenty cmm. of blood are spread slightly on a slide by means of a needle. It is allowed to dry and is then covered with an aqueous solution of eosin, such as is used in producing the Romanowsky effect. In a quarter of an hour this solution is washed off and a weak solution of methylene blue such as is used for the Romanowsky method is allowed to stain the blood for a few seconds. This stain is then washed off, the film is dried and mounted in Canada balsam. He then refers to Koch's method for the **prevention of malaria** and says that, while it can be worked successfully on a small scale, it is impossible to carry it out in a wholesale manner. An adult should absorb at least 15 grains of quinine a week. MacGregor says that no European that cannot or that will not take quinine, both in curative and preventive doses, should be sent out to malarial colonies. Such a person risks his own health and existence and is also a standing public danger as a center of infection for other people. Ross's method for the prevention of malaria includes drying up all fresh-water pools and puddles by draining and reclaiming, or, if this is impossible, covering them periodically with crude petroleum. It has been found in Amsterdam that the anopheles mosquito will not breed in water that contains 2 or 2½ parts of salt in 1000 parts. MacGregor believes that blackwater fever is malarial and that the most successful treatment for it is the subcutaneous injection of normal salt solution. In mild cases the salt solution may be given in 200 cc. doses as rectal enemata. In the great struggle against malaria he attaches greatest importance to the education of the people who remain at home, as well as those who live in malarious countries. [J. M. S.]

3.—Manson reports a case of **bilharzia from the West Indies.** [J. M. S.]

4.—Row, from a study of the **bloodserum of patients suffering** or convalescent from **plague** has found (1) that serum of plague convalescents is remarkable for its bactericidal properties against the bacillus pestis. This property has been observed in convalescents of over 6 weeks and, in 2 cases, was observed for 12 and 18 months respectively. (2) The serum of patients in the very early stages of the disease is inhibitory to the growth of the bacillus pestis. (3) The serum from normal individuals, as a rule, does not inhibit the growth of the organism. The author thinks that the value of this reaction is of more scientific than practical importance. [J. M. S.]

5.—Washbourn and Eyre report 8 cases of **unrecognized influenza.** [J M. S.]

6.—Sinclair reports a case and gives a synopsis of 2 other cases from the literature, from which he concludes that the occurrence of an **aphasia**, even of a transitory character, **in a person already suffering from** any form of **tuberculous disease**, should be looked upon with gravest suspicion and as the probable **precursor** of **meningeal trouble.** [J. M. S.]

7.—In a recent epidemic of **smallpox** Frazer saw 30 cases of chicken-pox which had been diagnosed smallpox. In addition to these, smallpox was diagnosed erroneously 4 times in cases of acne, once in a case of impetigo, once in a case of scabies, once in a case of urticaria, once in a case of iodism, twice in cases of lobar pneumonia, twice in cases of vaccinal eruption, once in a case of ptomaine poisoning, once in a case of German measles, once in a case of scarlet fever and twice in cases of measles. [J. M. S.]

LANCET.

December 20, 1902.

1. A Lecture on Acute Poliomyelitis and Encephalitis. FREDERICK E. BATTEN.
2. Congenital Hypertrophic Stenosis of the Pylorus and its Treatment by Pyloroplasty. E. CAUTLEY and C. T. DENT.
3. On the Treatment of Diphtheria by the Intravenous Administration of Antidiphtheritic Serum. D. LOUIS CAIRNS.
4. Some Facts Bearing on the Vaccination Controversy Drawn From the Recent Epidemic of Smallpox in Southwest Essex. CHARLES FRASER.
5. Volvulus of the Small Intestine. ARTHUR H. BURGESS.

1.—Batten delivered a lecture at the National Hospital for the Paralyzed and Epileptic on **acute poliomyelitis and encephalitis.** He points out that the cases may be, for convenience, divided into 3 groups: (1) Acute polio-encephalitis superior; (2) acute polio-encephalitis inferior, and (3) acute poliomyelitis anterior. Under the first form (polioencephalitis superior) are grouped those cases in which the frontal, motor and occipital regions of the cortex are affected and also cases in which the lesion probably exists in the cerebellum. The second group (polio-encephalitis inferior) comprises cases in which the various nuclei of the cranial nerves are affected. The third group (poliomyelitis anterior) includes those cases in which the gray matter of the anterior cornua below the medulla is affected. He discusses the symptomatology, first treating the general symptoms and then the local symptoms depending on the site of the lesion. A number of case-reports are included in his article. He then discusses the pathology and finally points out that there are many points in favor of the disease being due directly to a primary vascular thrombosis; that the disease is of direct bacterial origin is favored by its prevalence during a certain part of the year, becoming epidemic at times, and its occurrence in several members of a family in its various forms, either cerebral or spinal. [F. J. K.]

2.—To be treated editorially.

3.—Cairns contributes an article **on the treatment of diphtheria by the intravenous administration of antidiphtheritic serum.** He contends it is probably by the intravenous method that the maximum influence of the serum on the tissues and also on the organisms is obtained with greater rapidity than when the serum is used subcutaneously. He has given this method of administration a thorough trial in a number of cases; the prognosis in many was highly unfavorable and his results were very good. The dosage employed intravenously varied from 20,000 to 35,000 units, and the largest amount injected was 82,000 units in 3 separate doses. No untoward results beyond the usual serum rash, pyrexia, etc., were observed. The indications for the intravenous method of injection he considers are: (1) Malignant forms of the disease—*i. e.*, those characterized by hemorrhage, from the nose or into the skin, by great glandular enlargement with marked cellular infiltration, and by extreme blanching of the skin; (2) any marked involvement of the lungs either at the time of admission or subsequently; (3) a moribund condition of the patient on admission and (4) a profoundly toxemic condition of the patient. [F. J. K.]

4.—Fraser presents **some facts bearing on the vaccination controversy** drawn from the recent epidemic of smallpox in Southwest Essex. This article deals with the subject of vaccination and is an important contribution to the literature, showing the necessity for the practice of vaccination and revaccination. [F. J. K.]

5.—Burgess reports an interesting case of **volvulus** occurring in an 8-year-old boy. The volvulus involved the mesenteric attachment of the whole of the small intestine. The patient sank and died 16 hours after the onset of the first symptoms. No operation was performed. The case is unique in that so large a portion of the intestinal canal was involved. [J. H. G.]

MEDICAL RECORD.

January 3, 1903.

1. How to Study Anatomy. STEPHEN SMITH.
2. Headache in Its Relation to Disorders of the General Health. WILLIAM M. LESZYNSKY.
3. Why the Open Air Treatment of Consumption Succeeds. M. D. VEEDER.
4. Cold and Disease. H. RANDOLPH TUTHILL.
5. The Close Analogy of Trachoma to Adenoids. RALPH OPDYKE.

1.—Smith in answer to the question: "How should anatomy be studied?" states that it should be undertaken precisely as one would begin, continue and finish the study of any other mechanism with the structure and functions of which one wishes to become as familiar as was the inventor. This would require that the student should place himself in such relations to him as to think his thoughts from his first conception of the needs of such an apparatus, or organism, to its completion in the perfected instrument. [T. L. C.]

2.—Leszynsky discusses **headache in its relation to the disorders of the general health.** He excludes headache due to true neuralgia. The idea that the location of the pain in any particular region of the head is directly related to some special underlying, adjacent or remote pathological process (excepting pericranial inflammation) has not been substantiated by clinical experience. He divides headaches into the **functional** and **organic.** The first, resulting from various constitutional or pyschical disorders and from causes not situated in the skull or cranial cavity, excepting the disturbance of special sense organs. Some disorders of the cerebral circulation may also be placed in this category. The **organic form** includes all types of intracranial disease, whether vascular, meningeal or cerebral, and disease of the cranial bones. In a large majority of instances in which headache is complained of, it is due to toxemia resulting either from constipation, intestinal or gastric indigestion. The various forms of headache as manifestations of the causes upon which they depend are set forth. [T. L. C.]

3.—Veeder attributes the **benefit of the open air treatment of consumption not alone to the purity of the air, but its temperature.** The sharpness of limitation of temperature effects is especially well defined in the case of the tubercle bacillus. Its ability to thrive and form colonies begins almost precisely at the temperature of the human body and extends with some increase a few degrees above that point. Hence feverishness of any sort, even when attended by a rise in temperature of but a degree or 2, may light up tuberculous infection previously dormant and an ordinary cold or other slight ailment may seem to become the starting point of consumption. That it is possible to lower the temperature of the lungs to a considerable degree by the inhalation of air, such as is met with in ordinary out-door living, may be shown positively by comparing the temperature of the air exhaled with that inhaled. [T. L. C.]

5.—Opdyke discusses **the close analogy of trachoma to adenoids.** He has frequently found adenoid vegetations of the superior and posterior nasopharyngeal space in those affected with severe forms of trachoma. It is his opinion that the adenoid vegetations are the primary factor in inducing the weakened physical state which renders trachoma infection likely, and, if these vegetations are treated and the child's health improved, the subsequent trachoma should not occur. [T. L. C.]

MEDICAL NEWS.

January 3, 1903. (Vol. 82, No. 1.)

1. Disappearance of Yellow Fever from Havana, Cuba. W. C. GORGAS.
2. Tabes Dorsalis: A Study of 140 Cases of Locomotor Ataxia. JOSEPH COLLINS.
3. A Case of Supernumerary Breast in the Axilla of an Adult Male. FREDERIC GRIFFITH.
4. The Diuretic Action of Rectal Irrigation. The Specific Action of Normal Saline Solution in the Production of Diuresis. ROBERT COLEMAN KEMP.
5. Hematocele. W. C. BOWEN.
6. Why Should Chloroform be Used in Puerperal Eclampsia? DOUGLAS H. STEWART.

1.—Gorgas, in his article on the **disappearance of yellow fever from Havana, Cuba,** gives the procedures carried out in the prevention of this disease: (1) They tried to keep the female **stegomyia** from biting the yellow fever patient. This was done by having the quarters of the patient entirely screened so as completely to prevent access of mosquitoes. A guard is left at the door to see that the only door communicating with the quarantined area is kept closed and that only those designated by the sanitary authorities have access to the rooms. (1) The destroying of such insects as might have become infected in spite of precautions or before the patient was screened; pyrethrum powder is burned in all the rooms of the house and in all the contiguous houses, the rooms having first been made as tight as possible and the precaution having been taken to sweep up the mosquitoes from the floor immediately after the fumigation, as pyrethrum does not kill the insects. (3)

To destroy the mosquito larvæ systematically, as it was found that the principal points for the breeding of stegomyia mosquitoes were fresh-water collections about the houses of the city. An ordinance was passed requiring all collections of fresh-water to be made mosquito-proof. Petroleum was also placed in the cesspools every month, and was also used on marshy ground which could not be drained. [T. M. T.]

2.—Collins mentions the various theories to which this condition is due: Gowers assumes it is an inherent weakness of the neuron, an abiotrophy of those cells and an inherent condition; or an acquired weakness brought about by excess known to be injurious to highly developed nerve substance and by mental and physical fatigue, particularly the latter. Others maintain that exposure, chilling or injury are the causative factors that alter the resistance of the sensory neurons, so that the real cause of the disease may become operative. The author's cases do not support these views, and he states that the disease occurs in civilized mature men and women who have had syphilis, and in children who inherit syphilis. [T. M. T.]

4.—Kemp advocates the use of the **double current irrigator**, for by this means the temperature and quality of the solution can be definitely regulated, and continuous heat can be kept up. Rectal irrigation with a decinormal salt solution has a specific effect on the kidney-cells in promoting diuresis, besides, it is of great importance in oliguria and acute renal congestion. The method is to place the patient in the dorsal position, with the foot of the bed slightly elevated. Discard the bedpan and protect the bed by rubber sheeting. Drain by a carry-off tube into a pail. The outflow tube must be pinched, as its caliber is larger than the inflow, otherwise the fluid would not pass up the bowel. Employ from 3 to 12 gallons at a sitting, from a pint to a quart being kept continuously in the bowels. The bowels should be moved before the irrigation if possible. The irrigation may be given every 2 or 3 hours, if necessary, in severe cases, as threatened suppression of urine. [T. M. T.]

5.—Bowen gives 2 kinds: (1) Of the cord, (2) of effusion of blood from a ruptured vessel in the tunica vaginalis. Of the tunica vaginalis we have enlargement of the testis with the effused blood pointing upward following the cord. The **treatment for the hemorrhage**, either in the tunica vaginalis or cord, is alike and in the same way as hemorrhage in any other part of the body; first apply ice packs alternated with hot lotions and leeches, elevating the scrotum and perfect rest. Should the hematocele remain the same for some time, tap with trocar. Very often rest and icebags will cause the blood to be absorbed. [T. M. T.]

6.—Stewart advises the use of **chloroform in puerperal eclampsia**, even with its accompanying glycosuria. Not that it will inhibit the development of all the poisons in the toxemia, but that it will limit the production of the chief one. [T. M. T.]

NEW YORK MEDICAL JOURNAL.

January 3, 1903.

1. Dr. Adolf Lorenz at the Hospital for Ruptured and Crippled, Monday Afternoon, December 15. V. P GIBNEY.
2. The "Lorenz Hip Redresseur" and "Lorenz Spica." CHARLES H. JAEGER.
3. A Case of Ovarian Fibroma. H. A. ROYSTER.
4. The Present Status of Treatment of Hypertrophy of the Prostate. N. P. DAND.
5. The Diagnostic Value of Abdominal Rigidity. JOSEPH A. BLAKE.
6. Morphine Habituation and Its Treatment by Hyoscine Hydrobromide. S. ORMOND GOLDAN.
7. Bronchial Phthisis. ALBERT ABRAMS.
8. The Successful Treatment of Pulmonary Tuberculosis, Mechanical and Medicinal. DAVID WARK.
9. The Physician and the Pharmacopeia. M. I. WILBERT.

3.—Royster reports an interesting case-history of **ovarian fibroma**. These tumors are rather of infrequent occurrence, hence the diagnosis is a matter of more or less difficulty, and most operators come upon them unawares. A full pathological report of the growth is given. [P. B. B.]

4.—Dandridge, in considering the **treatment of the hypertrophied prostate**, reviews the evolution of the operative technique. He favors the operation of complete prostatectomy as performed by Murphy. He does, however, believe in conservatism in prostatic surgery and not in the marked tendency of the present time to subject the victims of prostatic obstruction to mutilating operations. For here, as in all operations upon the urinary organs in man, the kidneys dominate the situation and herein lies the danger, and the very success of the method is likely to sweep us onward with the current into useless and perhaps harmful operations. He is convinced that the method of choice of the large proportion of hypertrophies is still the judicious use of the catheter. The danger of this instrument, too, he realizes and always feels the responsibility of urging a patient to commence catheter life. He says that most patients afflicted with prostatic hypertrophy will do well with careful attention to hygiene with the proper use of the catheter and with or without local treatment of the bladder. Operation should be done early if at all. There is, however, a large class of cases which sooner or later demands operative interference, and a certain proportion of these will often yield favorable results, indeed even complete relief, by simple perineal incision and drainage for a few weeks. But of all the methods employed for the relief of this condition he rather inclines to the catheter and asepsis. [P. B. B.]

5.—Blake says that in making diagnoses we too often rely upon a grouping of the symptoms. Yet it is often the predominance of one that leads us to a definite conclusion. The value of a sign or symptom, especially in abdominal cases, depends largely upon the period of its incidence. **Abdominal rigidity** is one of the most valuable signs and usually is **companioned with pain.** Rigidity varies in degree as well as in extent. Hence we are able to measure to a certain degree the amount of peritoneal involvement. When well marked, this sign is unmistakable, but, when slight, it may be confounded with voluntary contraction of the abdominal muscles. Abdominal rigidity is caused by 2 factors, irritation and inflammation. It occurs in hemorrhage, in the escape of urine or the contents of the stomach and intestines even before there has been time for inflammation to commence. It is invariably present in peritonitis, usually absent, however, in the chronic forms. In lead colic there is also a certain amount of rigidity. He says that this sign is of the utmost value in typhoid perforation, and its absence is a contra-indication to operation. It should be borne in mind that in thoracic inflammations there is also more or less supra-abdominal rigidity, which may lead to mistaken diagnoses. [P. B. B.]

6.—In the realm of therapeutics there is no drug more valuable, on the one hand, and more pernicious, on the other, than opium and its alkaloids. Morphine in many instances saves life, and the use of this drug is often the unavoidable means of habituation. Many avoidable cases of **morphinism** might be traced to the repetition of the prescription. Therefore, Goldan says, this is best prevented by the phrase "not to be renewed." Neither should it be exhibited by the needle when administration by mouth will answer. Laws regarding the sale of morphine without prescription should be rigidly enforced, as should also laws prohibiting the indiscriminate sale of all preparations containing opium in any form. In the cure of morphinism it is particularly important to ascertain whether the condition has ceased for which the drug was originally employed. Remove the cause, and the cure is comparatively easy. The keynote to the treatment is that morphine loses its effect somewhere between 6 and 24 hours. Hence a method of treatment which will carry the patient some days with absolute restriction of the drug and without pain must appeal to us as the acme of rationality. Goldan says the so-called cure for drugs advertised in the journals should be condemned. He does not favor numerous advertised sanatoria and believes that the patient can be treated better at home. Hyoscine hydrobromide has proved satisfactory in his hands in the treatment of these cases. The method employed is described in full. He also sets forth 2 interesting case-histories treated with this agent. [P. B. B.]

7.—Abrams defines **bronchial phthisis** as a tuberculous inflammation of the tracheobronchial lymphnodes. He says the literature on this subject would lead many to believe that the disease is confined to children. Hence he presents several case-histories of the disease occurring in the adult. He describes the anatomy and topography of these glands, and says they can be recognized by the increased pigmentary deposits. Tubercular adenitis of the bronchial glands is unquestionably the forerunner of pulmonary tuberculosis in many cases. The changes that these glands undergo are the following: (1) They may heal spontaneously; (2) they may perforate the vessels and lead to systemic infection; (3) they may suppurate and perforate the esophagus or bronchus. When they perforate the bronchus the symptomatic picture will be that of pulmonary tuberculosis. The symptoms, diagnosis, course and treatment of the condition are fully discussed. [P. B. B.]

8.—Wark contributes an interesting paper on the successful treatment of **pulmonary tuberculosis,** mechanical and medical. He says that formerly pulmonary tuberculosis, Pott's disease and hip disease were treated alike, and the result in the latter was very ungratifying; but since the introduction of mechanical treatment the results have become almost perfect. There are 4 morbid conditions present in every case of pulmonary tuberculosis, the correction of which is absolutely essential to successful treatment. These are restricted respiration, defective blood circulation, depraved nutrition and defective assimilation of fats. And these, in his opinion, can all be alleviated by certain mechanical movements of the chest with proper hygiene. [P. B. B.]

9.—Wilbert discusses the **relation of the physician to the** pharmacopeia. He says many of the younger physicians have a poorly defined idea as to what the United States Pharmacopeia is, how it originated, what it represents and what it contains. He speaks of the function of this book. He also thinks that there should be more uniformity in the preparations as described in the United States Pharmacopeia and in that of other countries. He endorses the step taken in this direction at the recent International Convention held in Brussels. He would advise that local medical societies adopt resolutions favoring the change or endorse the action of the Brussels convention. [P. B. B.]

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

December 25, 1902. (Vol. CXLVII, No. 26.)

1. On the Teaching of Physical Diagnosis. WILLIAM SYDNEY THAYER.
2. Two Cases of So-Called Landry's Paralysis: Autopsies. E. W. TAYLOR and G. A. WATERMAN.
3. Obstetrical Antisepsis. WARREN R. GILMAN.
4. Errors in the Estimation of Urea by the Hypobromite Method. ELLIOTT P. JOSLIN.

1.—Thayer gives these important points in the teaching of physical diagnosis: **(1) The necessity of a good knowledge of regional anatomy and of practice in the physical examination of the normal subject; (2) the importance of understanding the physical basis of auscultation and percussion; (3) the necessity of a good training in pathological anatomy; (4) the importance of approaching the physical subject without preconceived ideas; (5) the advantage of subdivision of classes into small sections; (6) the importance of practice in an out-patient department as a part of the course in physical diagnosis; (7) the necessity of bedside experience as a part of the school training of the student of medicine.** [T. M. T.]

2.—Taylor and Waterman report 2 cases of **Landry's paralysis** which came to autopsy, and make the statement that nothing definite is added beyond a further demonstration of the general fact that it is a fatal disease of the nervous system not uncommon, which is not explainable by the post mortem findings. [T. M. T.]

3.—Gilman believes that it is better for physicians to decline to attend a woman who refuses to make proper preparations for her confinement. She asks him to assume unnecessary risks, and, if disaster follows, the blame is placed upon his shoulders. He believes, if women are unable to meet the modest requirements of cleanliness, it would be better for them to go to a hospital. [T. M. T.]

4.—Joslin's experience shows that the **hypobromite method** is not safe clinically when **ammonia, acetone and beta-oxybutyric acid** are in the urine. Other bodies like **creatinin, uric acid** and **urates** also interfere with the test, but to a less extent. Since the first-named substances are chiefly found in diabetic patients, it is a good rule carefully to scrutinize reports of large quantities of urea in this disease. The test for the presence of these substances is the ferric chloride test for diacetic acid. When this is positive, acetone and beta-oxybutyric acid are always present and an excess of ammonia is probable. [T. M. T.]

January 1, 1903. (Vol. CXLVIII, No. 1.)

1. Notes on Multiple Primary Tumors. PAUL G. WOOLLEY.
2. Percentage Modification of Milk in Infant Feeding. MAYNARD LADD.
3. Foot and Mouth Disease. LANGDON FROTHINGHAM.
4. Chloride of Ethyl as a General Anesthetic. CHARLES GREENE CUMSTON.

1.—Woolley states that the prophylactic and therapeutic measures against new growths will be those which tend to a normal physiological life, but in the treatment of other diseases, we must have recourse to active measures, too; surgical means are not to be neglected. Serumtherapy is beginning to throw some light on this dense subject. The author begs observers to watch for cases of multiple primary growths and record with them careful studies of the general conditions, as well as of the special ones surrounding the patients. Such records in cases of tumors in paired organs, such as the breasts, adrenals, ovaries, etc., would be of great interest and value in determining whether metastasis or biological change is the more obvious factor in the production of such cases. [T. M. T.]

2.—Ladd says that the use of **whey** as a diluent in place of water has of late come into prominence and has been given a sufficient trial to warrant the opinion that its use in cases of very difficult digestion, in which only low percentages of caseinogen are tolerated, is often of great value. It allows a physician to give a higher total proteid than would otherwise be possible. [T. M. T.]

4.—Cumston gives the advantages as follows: (1) Small quantities of ethyl chloride, from 2-4 gm., are sufficient for producing a narcosis lasting 4 minutes, and can be renewed indefinitely. (2) Rapidity of the anesthesia (from 24 to 40 seconds). (3) Practically no congestion of the face or conjunctiva; never any cyanosis. (4) The period of excitement is reduced to a few defensive movements, and these only in neurotic or alcoholic patients. (5) Contraction in the beginning rarely exists and immediately disappears; no trismus, no salivation. Occasionally emission of urine. (6) The age of the patient is indifferent, and no disturbing symptoms occur. (7) Vomiting after administration of ethyl chloride alone does not occur; vomiting occurring after a mixed anesthesia is not frequent, and if present rapidly subsides. (8) Rapid return to consciousness. [T. M. T.]

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

January 3, 1903.

1. A Contribution to the Subject of Radiotherapy and Phototherapy in Carcinoma, Tuberculosis and other Diseases of the Skin. JAMES NEVINS HYDE, FRANK H. MONTGOMERY and OLIVER S. ORMSBY.
2. Notes on X-Ray Treatment of Cancer, with Report of Cases. G. E. PFAHLER.
3. The Technique of X-Ray Therapy as Applied to Diseases of the Skin. LOUIS E. SCHMIDT.

4. Treatment of Fractures of the Neck of the Femur. CHARLES E. THOMSON.
5. The Treatment of Transverse Fractures of the Patella by Subcutaneous Purse-String Sutures. JOHN B. ROBERTS.
6. Uncinariasis or Ankylostomiasis. With Report of a Case. JOSEPH A. CAPPS.
7. Prognosis in Mental Diseases. FRANK P. NORBURY.

1.—Hyde, Montgomery and Ormsby present a **contribution to the subject of radiotherapy and phototherapy in carcinoma, tuberculosis and other diseases of the skin.** They discuss the literature of the subject from its present viewpoint, and give a number of case-histories and illustrations. They point out that definite conclusions cannot be drawn at this time regarding the value of radiotherapy and phototherapy in all the affections in which they have been employed. Their experience leads them to believe that in tuberculosis of the skin these methods of treatment are superior to other known methods, while phototherapy has given very satisfactory results in lupus erythematosus. In superficial carcinoma radiotherapy is undoubtedly preferable to all other known methods of treatment. Circumscribed lesions can, in many instances, be removed more promptly by excision. For many of these circumscribed growths they recommend removal by the knife or currette, followed by a series of treatments with the X-rays. In operable carcinoma of the skin involving deeper tissues they recommend complete extirpation, followed by X-ray treatment. In inoperable cases radiotherapy offers a possible chance of recovery or lessens the discomfort of the patient. They believe that the greatest of all the dangers which have not been seriously recognized in the treatment of carcinoma by the X-rays, is that of exciting an inflammation which encourages extensions of the growth to normal or inflamed tissue surrounding the growth, and favors metastasis. They have had excellent results in the treatment of carcinoma with radiotherapy, also in many of the inflamed chronic diseases of the skin, especially in acne rosacea, folliculitis and suppurating wounds, but they remark that, until radiotherapy can be employed with greater accuracy, it should be reserved generally for those cases in which known or better methods are not successful. In tuberculosis of the skin the results of phototherapy are as rapid as those obtained with the X-rays, but with better cosmetic effects and without danger of deep burns. They finally point out that phototherapy and radiotherapy are valuable additions to our methods of treatment in certain diseases, but they think great harm can be done in the hands of the unskilled and unscrupulous. [F. J. K.]

2.—Pfahler contributes notes **on the X-ray treatment of cancer,** with the reports of cases. The article is illustrated. He also contributes a brief review of the technique used in this work. He holds the view that the use of the X-rays is to be recommended in all carcinomata, but especially those that are inoperable or in which operation is refused. He recommends its use in all cases operated on, as bringing about most rapid and successful results. [F. J. K.]

3.—Schmidt contributes an article **on the technique of X-ray therapy as applied to diseases of the skin.** [F. J. K.]

4.—Thomson discusses the **treatment of fracture of the neck of the femur** and reaches the following conclusions: (1) I believe that the teachings and writings of surgical authors have been rather discouraging to the general practitioner on this subject. (2) That, in all cases of fractured femoral neck, firm bony union and useful limbs may be anticipated. (3) That age is not a contra-indication to treatment nor to obtaining bony union. (4) That the patient is best treated by reducing the fracture and immobilizing it. (5) That this is best accomplished under anesthesia and by the use of the plaster-of-Paris spica. (6) That the immobilization should be continued for a long time, and 3 months should elapse before allowing weight on the limb. (7) That Buck's extension with weight and pulley is not sufficient immobilization to obtain bony union. (8) That the use of apparatus in these cases is expensive, hard to obtain when needed, not so efficient in immobilization and less convenient for the patient and nurse than plaster-of-Paris spica. (9) That the operative treatment in old and neglected cases has succeeded beyond all expectations and deserves a place in surgery among the radical cures for troublesome conditions. (10) That the patients who usually suffer from the accident are old and enfeebled is a good reason why the physician should make their declining years as peaceful and pleasant as possible. [J. H. G.]

5.—See **Philadelphia Medical Journal,** June 21, 1902, page 1103.

6.—Capps contributes an article **on uncinariasis or ankylostomiasis.** Two species of hookworm infect man; they are uncinaria duodenalis or the old-world hookworm, and the uncinaria Americana, recently identified by Stiles as a new-world species. The life-history of both these parasites is probably the same, and he presents a description which applies to both forms. The author points out a fact of importance that the species found in animals has not been observed in man, and that the human species is not kown to infect the lower animals. A report of a case is given, and a list of cases presented which have been previously reported by other observers. In all, 51 cases have been recorded. Man contracts the disease by swallowing the living larvæ which may be contained in the food and drinking-water. The author also discusses the symptomatology, the diagnosis and the treatment of this condition. [F. J. K.]

AMERICAN MEDICINE.

January 3, 1903.

1. Some Cardiorespiratory Phenomena Revealed by the Röntgen Rays. ALBERT ABRAMS.
2. A Case of Subacute Combined Sclerosis of the Spinal Cord. CHARLES S. POTTS.
3. The Etiology of Uterine and Pelvic Disease. CLARENCE L. WHEATON.
4. Transverse Position of the Child With Prolapse of the Arm and Impaction. STRICKER COLES.
5. Two Examples of Parasitic Hematuria. L. NAPOLEON BOSTON.
6. Exophthalmic Goiter: Report of a Case. K. S. HOWLETT.

1.—Abrams discusses physiological doctrines which have been changed by the revelations of the X-rays. The diaphragm does not flatten with each inspiration; on the contrary, its curve is always maintained unaltered and in its excursions it plunges piston-wise up and down. The lines of the diaphragm on both sides are not on the same level, and the excursions of the diaphragm are slightly greater on the left than on the right side. The heart is not stationary during the phase of respiration, but with each inspiration there is a decided downward movement of the organ following the inclined plane of the central tendon of the diaphragm. The rays prove that the cardiac apex-beat may be palpated at a point remote from the anatomical apex, hence, the impulse felt may be due to the impact of the ventricle against the chest wall. It has been taught that the disappearance of the apex-beat when the breath is held after a deep inspiration is caused by a dilated right ventricle pushing the left aside. Abrams' observations show that this manoeuver causes no dilation of the right ventricle nor dislocation of the left. The real explanation of the phenomenon is that the triangular space in front of the heart widens and lengthens in deep inspiration and causes a slight recession of the apex-beat from the chest wall. In this contribution Abrams has studied the **effect of attitude, respiration and aneurysm on the position of the heart, the position of the diaphragm and the effect of amyl nitrite ammonia and rarefied and compressed air on the heart.** [T. L. C.]

3.—Potts reports a case of **subacute combined sclerosis of the spinal cord.** The diagnosis was made upon the following symptoms: (1) Early paresthesia; (2) slight ataxia, spastic paralysis, with increased reflexes and no sensory paralysis, becoming later transformed into a flaccid paralysis. The Babinski phenomenon was present, otherwise there were absent reflexes. No autopsy was obtained. [T. L. C.]

3.—Wheaton discusses the **etiology of uterine and pelvic disease,** which he studies under the following headings: Indiscretions at the menstrual period; imprudence while the uterus is in the process of involution, tears of the perineum and their neglect and gonorrheal infections. [T. L. C.]

4.—Coles reports 6 cases in which the children lay in the transverse position with prolapse of the arm and impaction. The condition is invariably due to neglect, the child, lying in the transverse position with the advent of labor and rupture of the membranes, will become impacted unless there is spontaneous version or evolution, which rarely happens when the child is of average size. [T. L. C.]

5.—Boston reports 2 cases of parasitic hematuria. The nature of one of the parasites found in the first case is still in doubt. C. W. Stiles has been unable to make a specific or even a generic determination. Ova of the **trichocephalus dispar** were present. In Boston's second case the patient suffered from hematuria resulting from the development of an **echinococcus cyst,** the products of which were eliminated through the urine. [T. L. C.]

BERLINER KLINISCHE WOCHENSCHRIFT.

December 8, 1902. (39 Jahrgang, No. 49.)

1. The Assimilation of Fat in the Organism. H. LEO.
2. Photography of the Eyegrounds. FRIEDRICH DIMMER.
3. The Influence of Albumin Bodies on Blood Clotting. H. BRAT.
4. The Relations of Animal Cells to Stains. MAX MOSSE.
5. A Curative Serum for Combating Morphine Poisoning and Similar Intoxications. LEO HIRSCHLAFF.
6. Antistreptococcus Serum in Scarlet Fever. ADOLF BAGINSKY.
7. The Question of Hemolysins in Human Serum. M. HALPERN.

1.—Leo has found that some of the **fat ingested becomes glycerine** in the intestines, and part of this only is absorbed. The fatty acids and the glycerine are absorbed in the intestines. In diseases affecting fat absorption, the glycerine produced undoubtedly irritates the intestine, causing diarrhea. Not even traces of glycerine were found in the urine or feces examined in his cases. The details of his method of testing for glycerine follow. Only in one case, diabetes insipidus in a young child, was a trace of glycerine found in the urine. [M. O.]

2.—Because Thorner, in a recent article, failed to have mentioned the excellent results obtained in **photographing the eyegrounds** by Dimmer, **Dimmer describes his apparatus,** and reports his splendid results, with photographs. [M. O.]

3.—Will be abstracted when concluded.

4.—Mosse gives in detail the results of his method of **staining animal cells with a modification of Ehrlich's triple stain.** [M. O.]

5.—Will be abstracted when concluded.

6.—Baginsky found **streptococci** in the throats of 696 out of 701 children examined. In 100 cadavers examined after death from **scarlet fever, streptococci were found in** the organs, blood, marrow, etc., in all cases. Therefore, **Baginsky believes streptococci to be the cause of scarlet fever.** With the former Aronson antistreptococcus serum 11% died, while 14% died without receiving the injections. But the new Aronson serum causes marked diminution of all symptoms, almost at once. The case-histories of 4 children who grew worse with the former serum, and 4 more who improved upon the latter serum, are shown in contrast. Together with the new Moser serum, the outlook seems bright for the future treatment of scarlet fever, both in Vienna and Berlin. [M. O.]

7.—After reviewing the literature, Halpern reports a great quantity of experiments showing **the hemolytic power of human serum** and its variation in septicemia and typhoid fever. It becomes much stronger in typhoid fever, much weaker in septicemia. [M. O.]

MEDICINSKOIE OBOSRENIE.

Vol. LVII, No. 12.

1. On the Casuistics of Abscess of the Liver. A Case of Atypical Actinomycosis of the Liver. L. E. IOCHELES.
2. On the Affection of the Kidneys in Croupous Pneumonia. S. S. ABRAMOFF.
3. Laparotomy on the Pregnant. L. N. VARNEK.
4. Complete Extirpation of the Uterus by Abdominal Section. A. EBERLIN.
5. A Note on Hot Air in the Treatment of Some Affections of the Nose and Throat. L. SVERZSHEVSKY.

1.—Iocheles reports the case of a woman, aged 36, who took suddenly ill with symptoms which at first suggested the existence of malaria complicated with gastro-enteritis. As quinine had no effect and the examination of the blood proved negative, typhoid fever was considered, although the Widal reaction was negative, and, besides, the sudden onset was against this diagnosis. No symptoms of any affection of the liver appeared until a few days before death, when to the enlargement of that viscus were added pain in the hepatic region, chills, septic temperature and peritonitis. The patient died from gradual exhaustion on the forty-ninth day of the disease. At the autopsy the **liver was found permeated with small and large abscesses,** the former the size of a millet seed or a pea and the latter as large as a walnut. Histological examination showed the typical picture of **purulent angioperiangiocholitis described** by Chauffard. The most surprising feature, however, was the discovery of branching actinomyces belonging to the atypical **actinomyces farciniens** Eppinger and actinomyces of Sabrazes and Rivier. No indications could be found of the mode or source of infection. [A. R.]

2.—Abramoff made histological examinations of the **kidneys** of 12 patients who died of **croupous pneumonia.** In 6 the immediate cause of death was some affection of the kidneys. Histological examination showed a round-cell infiltration of the Malpighian tufts and capsules and marked albuminous degeneration of the convoluted uriniferous tubules, together with hyperemia of the renal vessels and peripheral accumulation of leukocytes. The changes were limited to the cortical portion of the kidneys, and the condition, therefore, is one of **acute glomerulonephritis.** [A. R.]

3.—Varnek performed **laparotomy on 17 women in various periods of gestation.** Ovariotomy was performed in 10; in one a co-existent tubal pregnancy was removed, in 2 a fibroid uterus was extirpated, and in one a radical cure for umbilical hernia was performed. In 3 others laparotomy was performed for various reasons. The results of the operations were as follows: Not one of the patients died as a result of the operation, nor were any postoperative complications present. The operation was performed on one patient during the first month of pregnancy, the latter progressing to a normal termination. In 3, the operation was performed during the third month. Gestation continued and terminated in the eighth month in one; the fate of the other 2 is not known. In 6, operation was performed during the fourth month. Pregnancy was interrupted in 2 and continued in 4, terminating in the eighth month in one and at term in 2. In 2, operation performed during the fifth month. In one the pregnancy was interrupted and continued in the other (further progress not known). In 4, operation performed during the sixth month. Pregnancy continued in all, terminating at term in 3 (the fate of the fourth not known). In one, operation performed during the seventh month. Pregnancy continued, but final result unknown. The author, therefore, concludes that, with strict asepsis, laparotomy is not contra-indicated by pregnancy. He also finds no contra-indication in menstruation, having for the past 8 years performed major gynecological operations during the menstrual period without any bad effects. [A. R.]

4.—Eberlin concludes his report of 5 cases of **abdominal hysterectomy** by giving the following indications for the abdominal route: (1) In carcinoma of the body of the uterus with disintegration of the growth, especially when the vagina is narrow and rigid, so that opening of the uterine cavity would be necessary, were vaginal hysterectomy performed. (2) In cases of suspected sarcoma of the uterus, and consequently in many cases of so-called pure fibroma. (3) In fibromyoma of the cervix when amputation is difficult and enucleation impossible, owing to large size of the uterus. [A. R.]

5.—Sverzshevsky employed **hot air** in 40 cases of diverse affections of the nose and throat, using Hollander's apparatus. In 25 of the cases he obtained considerable improvement. He concludes by stating that while his results are not as good as those reported by other authors, the method nevertheless, merits attention and further clinical and experimental investigation. [A. R.]

Vol. LVII, Nos. 13 and 14.

1. On the Etiology of Acute Ascending Paralysis. MURAVJEFF and TUTURIN.
2. A Rare Case of Crossed Traumatic Paralysis. BELSKY and KAPLAN.
3. On the Symptomatology of Malignant Growths of the Pleurae. GOLUBININ.
4. A Review of the Literature on Diagnosis, Special Pathology and Therapy of the Lungs and Pleura, for 1901. KOTOVSCHIKOFF.
5. On the Treatment of Sydenham's Chorea With Arsenic. TIMASCHEFF.

1.—Muravjeff and Tuturin report the case of a man, 55 years old, who entered the hospital complaining of **pain in the legs, inability to walk and paralysis of the arms.** The only point of interest in the family and personal history is a disposition to bleeding, to which both he and his brother were subject. The predominant symptoms in this case were hemorrhagic sports all over the body, a slight elevation of temperature, ascending paralysis of the extremities with atrophy of the muscles of the wrist, loss of electrical irritability, some anesthesia in the region of the left ulnar nerve, absence of the tendon and cutaneous reflexes, retention of urine and constipation. The condition was evidently one of **affection of the spinal cord and the peripheral nerves,** the pathological changes being greater in the former. The patient grew progressively worse and died on the tenth day after admission. An examination of the blood, made several days before death revealed the presense of the **staphylococcus albus,** which was grown in pure culture. The abundance of the organism precluded the possibility of a chance contamination, and the authors believe that this was a case of **staphylococcic septicemia.** In support of this view, they quote a number of authorities who found that staphylococci may and do affect the central nervous system. [A. R.]

2.—Belsky and Kaplan report a case of **crossed paralysis** in a man, 35 years old, which developed as a **result of a blow over the right eye.** The symptoms present were: On the right side, paralysis of the sixth nerve, ptosis and paralysis of the superior rectus muscle and the muscles of accommodation; on the left side, paralysis of the terminations and lower branches of the facial nerve and hypalgesia of the entire half of the body. A critical analysis of the symptoms leads the authors to the conclusion that in this case there were 2 points of injury, an upper on the boundary of the right crus cerebri and pons Varolii (in the region of the third pair of cranial nerves), and a lower in the pons (on a level with the sixth pair). The case is of interest from a medicolegal standpoint. [A. R.]

3.—Golubinin presents a critical analysis of the **diagnostic signs and symptoms of malignant tumors of the pleuræ.** These are: (1) Pain. (2) Pleuritis with effusion without any febrile state. (3) The exudate is rarely serous or purulent, more often hemorrhagic and sometimes chylous. (4) The exudate is not profuse and the dulness not as uniform as in the case of ordinary pleuritis with effusion. (5) Presence of enlarged lymphatic glands and metastatic growths in the skin and subcutaneous tissue. (6) Presence of particles of the tumor in the exudate. (7) Bloody sputum, if the growth involves the lungs and undergoes disintegration. (8) Contraction of the chest wall on the affected side, owing to the formation of cicatricial tissue. (9) Pressure on internal organs, if the tumor has assumed a large size. (10) Rapidly developing cachexia. The author reports an illustrative case and concludes that none of the symptoms is sufficiently constant to be of great diagnostic value. The only pathognomonic sign is the presence of metastatic growths in the glands or internal organs. Of the other signs, the more characteristic are the hemorrhagic character of the exudate, the slow nonfebrile and paroxysmal course of the disease, the irregular outline of the area of dulness and occasionally the severe pain. [A. R.]

5.—Timascheff reports his observations on 26 cases of **chorea** treated with various preparations of **arsenic,** and concludes that the best is arsenous acid in watery solution, which should be administered in smaller doses and at less frequent intervals than is recommended by Comby. He has also observed that the duration of the disease bears no relation to the length of treatment, nor will relapses be prevented by any method of treatment. He agrees with Tchernoff that "each cause bringing about St. Vitus's dance demands special measures" and that "chorea can only then be successfully treated when the underlying causes are removed." [A. R.]

AMERICAN JOURNAL OF MEDICAL SCIENCES.

October, 1902.

1. Two Conditions Simulating Ectopic Gestation. E. P. DAVIS.
2. A Rapid Reaction for Bence-Jones Albumose. L. N. BOSTON.
3. A Case of Adiposis Dolorosa (Dercum's Disease). M. BOCHROCH.
4. A Further Contribution to Our Knowledge of the Histology of the Gastric Mucosa in Pathological Conditions of the Organ. M. EINHORN.
5. Infection of Ovarian Cysts During Typhoid Fever; Report of Two Cases; Operation; Relapse—Recovery. M. LEWIS and R. LE CONTE.
6. Clinic of Dr. Joseph Bryant; (1) Excision of the Breast. (2) Hemophilia. (3) Excision of the Knee. (Reported.) W. LUSK.
7. Keratosis of the Pharynx. C. RICHARDSON.
8. Preliminary Study of the Ocular Changes Produced by the Injection of Pure Cultures of the Bacillus Typhosus Into the Vitreous Chambers of Rabbits and Guinea-Pigs. C. OLIVER.
9. Perforated Gastric Ulcer; Peritonitis; Death; Diagnosis at Autopsy. A. ASHHURST.
10. Malaria: A Summary of the Recent Progress in the Knowledge of its Etiology and Prophylaxis. B. WRIGHT.
11. Theory of Cross Education as Applied to the Auditory Apparatus. L. SOMERS.
12. Acute Lymphatic Leukemia Without Enlargement of the Lymphglands. DOROTHY REED.
13. Report of a Case of Severe, Probably Pernicious, Anemia, With Marked General and Coronary Atheroma, in Which Many Evidences of Aneurysm Were Present Without Anatomical Explanation for Them. A. EDWARDS.
14. The Pathology of Pernicious Anemia with Special Reference to Changes Occurring in the Hemolymphnodes (8 Autopsy Cases). A. WARTHIN.

1.—Davis reports the case of a woman. 29 years of age, who had had 2 children and 2 miscarriages. She then was exposed to cold during menstruation and had some pain in the abdomen. A sound was introduced, and subsequently the patient was seen by Davis who found nothing abnormal. Later a mass of soft material was found in the pelvis and, although the patient had just menstruated, extra-uterine pregnancy was considered as a possible condition. Vaginal section showed the presence of a large clot which did not contain decidua or embryonal tissue. The patient finally developed peritonitis and died, no autopsy being obtained. In a second case the patient had some of the signs of pregnancy, and upon examination a soft tumor was found occupying the posterior cul-de-sac. As the patient was profoundly anemic and had a rapid pulse, operation was performed to render the diagnosis certain, when the uterus was found completely retroverted and very soft. It was raised to its normal position and the pregnancy proceeded without interruption. Davis believes that in cases in which there is doubt the diagnosis should be confirmed by operation. In cases of retroflexion and retroversion the replacement of the uterus by abdominal section is safer than to allow the continuation of the condition. [J. S.]

2.—Boston describes the following test for the Bence-Jones albumose: Fifteen cc. of filtered urine are placed in a test-tube and an equal quantity of saturated solution of sodium chloride mixed with it. Then 2 or 3 cc. of a 30% solution of sodium hydroxide are thoroughly mixed and the upper fourth of the column of liquid gradually heated over the flame of a Bunsen burner until it boils. Then a saturated solution of lead acetate is added drop by drop whilst the boiling is continued. A pearly cloud forms when the drop of lead solution touches the liquid; this becomes fainter as the boiling-point is approached and after boiling from half to one minute there is browning of the upper strata which gradually deepens to a dull black, shading into brown toward the bottom of the tube. Standing intensifies the reaction, but later the black precipitate falls to the bottom. The reaction depends upon the presence of loosely combined sulphur, which causes the lead to be precipitated in the form of lead sulphide. [J. S.]

3.—Bochroch reports a case of adiposis dolorosa occurring in a woman, 56 years of age, who began to grow fat irregurarly shortly after her marriage, at the age of 19. She had had sharp, shooting pains in the arms and hands and became easily bruised. Her present weight is 236 lbs. There is some impairment of the memory, but otherwise she is normal. The case presents the 4 cardinal symptoms: Enlargement, pain, neurasthenia and psychical disturbances. [J. S.]

4.—Einhorn has examined pieces of gastric mucous membrane obtained in the wash-water in various conditions. He reviews the literature of the subject very carefully, gives in tabulated form the results of the examination in 34 cases, and publishes some very excellent illustrations of histological results. The most important change is, of course, signs of cancerous invasion of the tissue. This is positive and, as far as he knows, the only absolutely positive sign of carcinoma. In discussing the treatment of these conditions he suggests that the therapeutic measures should be directed, not against the stomach alone, but should take in the consideration of the entire bodily state. Nevertheless, any anomalies should be corrected as far as possible. The patient should at first be given tonics, hydrotherapy, perhaps change of climate, and the diet should be regulated, with particular attention paid to the fact that enough is eaten. Einhorn believes in a meat diet in hyperchlorhydria and that, in both hyperchlorhydria and achylia, the food should be rich in proteids. Butter is a particularly valuable element in the diet. He does not think that ordinarily periods of rest, that is, purely liquid diet, should be employed. In conclusion, he states that secretory functional disturbances are not based upon changes in the mucous membrane of the stomach. They may, however, if they last any length of time, produce lesions in the mucosa. Under ordinary conditions the diagnosis may be made from a piece of gastric mucosa. [J. S.]

5.—Lewis and LeConte report 2 interesting cases. First, a woman of 28 years was delivered of a full-term child but had fever, and 5 weeks after the delivery the patient was admitted to the hospital with a diagnosis of puerperal sepsis. The Widal reaction was positive. During the fourth week of her stay in the hospital the temperature began to be hectic, and a vaginl examination showed the presence of a large fluctuating mass in Douglas's cul-de-sac which was supposed to contain from one to 2 pints of pus. A week later this abscess was opened through the posterior wall of the vagina and the tumor found to be a teratomatous cyst containing cartilage and pus. The pus contained a pure culture of the typhoid bacillus. Later the patient had a typhoid relapse, from which she recovered, and still later the ovarian cyst was removed by laparotomy. The second patient, a woman of 30, developed typhoid fever, and on the thirty-seventh day the temperature became hectic and later developed chills, there was a slight leukocytosis, and a vaginal examination showed a bulging in Douglas's cul-de-sac sensitive to pressure. An operation was performed and a large cystic tumor adherent to the rectum and the left Fallopian tube was removed. This contained some coffee-colored offensive material, and in this material a pure culture of typhoid bacilli was found. The patient made a satisfactory recovery from the operation, then had a typhoid relapse from which she also subsequently recovered. The interesting feature of these conditions is that in both relapses occurred 5 days after the operation. In the second case there was a very slight leukocytosis, 9200, with 92% polymorphonuclear cells. Altogether 7 other cases have been reported. [J. S.]

6.—Bryant discusses excision of **cancer of the breast**, believing that the only treatment is operative. He urges that, whenever a patient comes to a physician for consultation, the diagnosis be made at once and operation never deferred. The patient upon whom he operated was a woman of 62, and a German, a fact that was of interest because Germans appear to be more subject to cancer than other nationalties, especially in Buffalo. In performing the operation the axilla should always be thoroughly cleansed and the thoracic portion of the pectoralis major removed. During the operation enlarged glands which had not hitherto been discovered were found beneath the pectoralis major and upon the first rib. In regard to the removal of the glands above the clavicle, this should only be done when by careful palpation evidences of disease in this region have been found. The removal of the mdiastinal glands is rarely indicated and increases the danger of the operation, too, considerably. A week after the operation the patient was again shown to the class, and union was found to have taken place by first intention. Microscopically the tissue showed that the glands were extensively involved. The patients are usually instructed to come to the physician once a month in order that any evidence of recurrence may be detected. Bryant suggests that, in cases of patients requiring surgical interference who give histories of being bleeders, a slight incision be made in order to test the accuracy of this statement. He also describes an operation in the case of a foot-ball player, who, 8 years previously, had injured his left knee, which afterward became ankylosed at right angles. The important point in this operation is to have the roots of the bones come together easily without undue tension, and for this purpose a sufficient amount of bone must be removed. The subsequent report of this case was that there was primary union of the 2 structures and firm fibrous union between the bones. [J. S.]

7.—Richardson reports a case of **leptokeratosis of the**

pharynx which may appear as minute pin-point-like white spots on the mucous membrane, as broad white masses projecting above the surface of the mucous membrane, and as conical, triangular-like horny projections from the mucous membrane. This condition occurs more frequently in the female sex. It does not affect the general health of the patient, but causes a sense of scratching and pricking or stiffness about the region of the fauces, and occasionally difficulty in swallowing. Many patients become easily tired when speaking. The case is probably one of the varieties of leptothrix buccalis. A very good illustration is given of a section from one of Richardson's cases. [J. S.]

8.—Oliver has injected **pure cultures of the typhoid bacillus into the upper outer portion of the vitreous chamber of rabbits.** The animals developed fever, refused food, lost weight, had asthenia, and some developed myelitis. There was cellular infiltration of the posterior chamber of the eye and some congestion and infiltration of the cornea. Later edema and swelling of the corneoscleral junction without involvement of the eyelid, and only slight involvement of the palpebral conjunctiva. Typhoid bacilli were found motile in the vitreous fluid. Histological section showed signs of inflammation often associated with acute arteritis, and in the later stages connective tissue hyperplasia. [J. S.]

9.—Ashhurst reports the case of a woman, 57 years of age, whose mother died of cancer at the age of 56. After an indiscretion in diet she lost her appetite and became unusually constipated. Later she was lightly jaundiced and had profuse diarrhea. She then developed difficulty in breathing, became partly collapsed, had some sharp pain in the stomach and died. At the autopsy a **perforated ulcer was found in the stomach,** which had caused an abscess beneath the left lobe of the liver. The interesting feature of the case is the latency of all the symptoms, even after fatal peritonitis had developed. [J. S.]

10.—Wright contributes a brief description of **malaria,** including a comparison between the anopheles and the culex mosquitoes, and some discussion regarding prophylaxis. He believes that all hollows around cities should be graded; marsh lands drained, all collections of water made mosquito-proof, either with petroleum or the introduction of fish; all cases of malarial fever should be reported to the Board of Health, the patients transported to the hospital and kept in screened isolated wards, and all mosquitoes in the rooms should be carefully destroyed. Pyrethrum powder is the most effective agent, one pound being required for every thousand cubic feet. [J. S.]

11.—Somers suggests that, in view of the education received by the passive hand during exercise with the other hand which has been proved to exist by Scripture, it might be possible to educate one ear in the same way. He therefore, made a series of tests upon some persons who had defective hearing, due to sclerosis, but in whom the perceptive portions of the auditory apparatus were normal. The hearing was first tested and then the tympanic membrane in one ear removed by means of the Politzer bag and the Siegle otoscope. Fifteen seances were given on the right ear alone on alternate days, and it was found that at the end of this period the left ear had gained very remarkably in hearing perception. In the cases tested there was considerable improvement in the tinnitus, giving the patients a great deal of relief. It is possible that the association of the 2 ears which renders education so effective may account for the rapid deterioration in the previously sound ear after it has been affected with sclerosis as was the other. [J. S.]

12.—Reed reports the case of a man of 47, who at the age of 32 had a severe attack of malaria; one month before his death he had had severe hemorrhage from the nose. From then on he was sick, pale and, shortly before his death, complaining of dyspnea and weakness, he called a physician. Just before he died his blood was counted, and an enormous increase in the leukocytes was found. At the autopsy the spleen and liver were found considerably enlarged, the lymphglands were pigmented, but not particularly enlarged. Smears made at the autopsy showed a great excess of lymphoid cells, the bone marrow showed disappearance of the fat; there was infiltration of the lymphglands by small lymphoid cells and in the mesenteric glands mastcells and eosinophiles were numerous. The spleen was intensely congested. There was some infiltration of the liver, and the case indicates—according to Reed—that **lymphocytosis** may occur as a result of proliferation of the lymphoid cells in the bone marrow. She suggests that it is not impossible that there may be some close relation between the nucleated red bloodcells and the lymphcells. Finally, in discussing the literature of **leukemia** she suggests that there are 3 forms of this disease, all due to myelogenous change: The myelocytic, lymphoid and mixed cell varieties, and any of these 3 forms may be either acute or chronic. [J. S.]

13.—Edwards reports the case of a man, 31 years of age, who had had a venereal sore when 23 years old. He had gradually grown weaker, had had pain over the lower left chest, dyspnea and some gastric disturbance. There was a murmur, probably hemic, and an accentuated second aortic sound. Over the lower left chest there was a diffuse pulsation extending from the lower angle of the chest to the left scapula, into Traube's space and below the left costal arch. This was expansile, and a systolic bruit was heard over this area. The liver was barely palpable and the spleen not felt. There was profonud anemia and the patient finally died. The clinical diagnosis was: Arteriosclerosis, abdominal aneurysm, dilatation of the left ventricle, anemia, catarrhal icterus. At the autopsy a severe atheromatous change in all the bloodvessels was found, but no bulging or aneurysm of the aorta. The right pleural cavity contained 300 cc. of clear serum. The lungs were normal. The liver was slightly enlarged. The kidney showed little change. No satisfactory explanation of the expansile pulsation in the left chest could be found. [J. S.]

14.—Warthin has carefully studied the **lymphglands in 8 cases of pernicious anemia,** giving clinical histories, autopsy protocols and the results of the histological examinations in each. He tabulates the gross and microscopical appearance of the lymphglands in all the cases, the prevailing changes being the presence of phagocytes in the lymph sinuses of the glands. The general summary of the cases is as follows: They were typical cases of progressive pernicious anemia clinically. No cause for the anemia was found pathologically; there was apparent increase in the number and hyperplasia of the hemolymphglands with dialatation of the bloodvessels, increase of the phagocytes which contained disintegrated red cells and pigment; dilatation of the lymph sinuses, and congestion. Similar, but less pronounced, changes were found in the other lymphnodes. In the different cases the changes differed very greatly in degree. In continuation of his studies of the hemolymphglands he classifies those found in the human body into 3 groups: Glands with blood sinuses only; glands with blood sinuses communicating with lymph sinuses directly; glands with very slight capillary connection between bloodvessels and lymph sinuses. Apparently the results of these investigations show that the hemolysis of pernicious anemia does not differ from those occurring in normal or in certain disease conditions; the difference is in degree only. Warthin concludes his valuable paper as follows: That pernicious anemia is essentially a hemolytic disease due to some unknown poison which stimulates the phagocytes of the spleen, lymph and hemolymphglands and bone marrow to increase hemolysis. It is not improbable that the destruction of hemoglobin causes poisonous products that give rise to a vicious circle that the hemolysis is not confined to the portal circulation, but involves the prevertebral lymph- and hemolymphnodes and bone morrow, and in the majority of cases the spleen is the chief seat. In most instances, when an iron reaction was found at the seat of actual hemolysis, the varying pathological conditions could be explained by supposing that it is cyclical or intermittent. The changes in the bone marrow do not form an essential part of the pathology. [J. S.]

ARCHIVES OF PEDIATRICS.

August, 1902. (19th. year, No. 8.)

1. A Case of Chondrodystrophy Fetalis.
   JOHN LOVETT MORSE.
2. The Management of Rheumatic Children.
   FLOYD M. CRANDALL.
3. The Use of the Term Enanthem. F. FORCEHHEIMER.
4. Report of a Case of Typhoid Fever, Complicated with Pneumonia and Followed by Laryngeal Diphtheria.
   EDWIN ROSENTHAL.

1.—Morse reports the case of a boy, aged 2 months, who had very short legs. There was a slight umbilical hernia and a large inguinal hernia. Many of the bones in the skeleton were diseased, as is shown by 3 X-ray photographs. The case was diagnosed **chondrodystrophy fetalis.** The most important pathological process in the disease is a disturbance of the normal process of ossification of the primary cartilage. The disease is distinct from rickets. In the latter disease, the enlargement of the ends of the long bones is due to the abnormal development of the epiphyseal cartilage; in the former, on the other hand, it is due to periosteal overgrowth. In rickets the proliferating zone is much wider than normal; the vascularization is marked; the membrane bones are involved. In chondrodystrophy the proliferating zone is narrower than normal; the vascularization is not marked, and the membrane bones are not involved. That chondrodystrophy and cretinism are different diseases is shown by the facts that the parents of no child with chondrodystrophy have been cretins; no case has been reported in regions in which cretinism occurs; women with chondrodystrophy have borne children with the same disease; and the children, if they live, have normal intelligence. In the majority of cases the fetus dies *in utero*; but if the child is born alive it usually dies a few days after birth. The mild cases, however, may reach adult life. [J. M. S.]

2.—Crandall says that the rheumatic child should wear flannel at all seasons; that exercise and out-of-door life should receive particular attention; and that a plain but generous and nourishing diet which contains some nitrogeneous matter is the best. As a prophylactic measure the care of the throat and the removal of adenoids and enlarged tonsils is strongly recommended. Sodium salicylate may be given for a week or two at a time for long periods. After the disappearance of the acute symptoms the treatment should be continued for a long time. The **indications in a case of acute rheumatism are:** (1) To control the fever, (2) to relieve the pain and render the patient comfortable, (3) to check the arthritis and other local symptoms, and (4) to prevent involvement of the serous structures. The author is in favor of the use of the salicylates rather than the alkalis in the treatment of the disease. He has found sodium salicylate to be the most satisfactory preparation, and he gives this in doses of 5 grains every 3 hours to a child 6 years of age. [J. M. S.]

4.—Rosenthal reports a case of **thyphoid fever complicated with pneumonia and followed by laryngeal diphtheria.** The patient was a girl, aged 6 years. The total course of the disease was about 90 days. [J. M. S.]

September, 1902. (19th. year, No. 9.)

1. Report of a Case of Extreme Enlargement of the Spleen with Anemia. SAMUEL McC. HAMILL.
2. Some Remote Diseases Arising from Tonsillar Infection. F. FORCHHEIMER.
3. Conclusions as to the Treatment of Tuberculous Peritonitis in Children. THOMAS MORGAN ROTCH.
4. Two Cases of Umbilical Fistulæ, Due to Tuberculous Peritonitis. GEORGE N. ACKER.
5. Typhoidal Appendicitis in Children. A. SEIBERT.

1.—Hamill reports a case of **extreme enlargement of the spleen with anemia.** The interesting features of the case are the great size of the spleen, the early beginning of the splenic enlargement, a series of profuse hemorrhages, the length and duration of the disease, with its small amount of influence upon the health of the patient, an attack of extensive abdominal ascites, which entirely disappeared, and the mild degree of the anemia, which was of the chlorotic type with leukopenia. The autopsy was interesting on account of the presence of a large amount of fat of a peculiar bright-yellow color, which was extensively deposited in the mesentery; on account of the apparent general hyperplasia of the fibrous tissues; on account of the pearly appearance of the visceral peritoneum; on account of the microscopic evidences of old hemorrhage into the spleen; and on account of the resemblance of the mesenteric lymphnodes to the hemolymph glands. [J. M. S.]

2.—Forchheimer reports **cases of appendicitis and of jaundice following infection of the tonsil.** He refers to 5 cases of the latter condition, 3 of which were in one family. [J. M. S.]

3.—Rotch presents a study of 69 cases of **tuberculous peritonitis in children.** He says that, in the first year of life, tuberculous peritonitis is rare, and that, when it does occur at that age, it is almost universally fatal, because it is a part of a general tuberculosis and is not amenable to treatment by laparotomy. The disease usually appears between the ages of 1½ and 4 years. The cases may be divided into primary and secondary; the latter being those in which the infection comes to the peritoneum from the lungs, the intestines, or the mesenteric lymphnodes. When the lung or any other important organ is the primary cause of the disease, the prognosis is that of general tuberculosis, and laparotomy is seldom of any avail. Tuberculosis of the mesenteric lymphnodes, however, associated with tuberculous peritonitis can be relieved by laparotomy in some instances. If the tuberculous disease of the peritoneum is primary, laparotomy is essentially indicated and is often followed by complete cure. A distinction must be made between those primary cases in which there are many thick adhesions and advanced tuberculous lesions without much fluid and those in which there is a miliary tuberculosis of the peritoneum with ascites. [J. M. S.]

4.—Acker reports 2 cases of **umbilical fistulæ due to tuberculous peritonitis.** [J. M. S.]

5.—Seibert reports 2 cases of **typhoid appendicitis in children.** In the first patient an ulcerated appendix was removed and in the second patient the appendix was thickened and surrounded by adhesions. [J. M. S.]

ARCHIV FUER KINDERHEILKUNDE.

1902. (Vol. 34, Nos. 5 and 6.)

14. Buttermilk as an Infant Food. W. CARO.
15. A Case of Persistent Ductus Botalli.
    HERMANN SIDLAUER.
16. Tuberculous Meningitis with Peculiar Onset.
    EUGEN SCHLESINGER.
17. Portative Orthopedic Apparatus in Pediatrics.
    ERNST MAYER.

14.—Caro shows that **buttermilk**, which contains low fat, high sugar and proteid percentages with high acidity, is an excellent artificial food for infants. He reports the case-histories of 7 infants, one of them normal, 4 with acute and 2 with chronic gastro-enteritis, all of whom thrived on buttermilk. And this was in spite of the fact that all disliked it at first. Caro gave it after cooking it for 2 minutes with flour and sugar. Out of 198 infants, 157 were fed successfully upon buttermilk. Many details follow. [M. O.]

15.—Sidlauer, after reviewing the literature, describes the case of a girl of 4, with cardiac hypertrophy, diastolic thrill and murmur at the pulmonary area, general arrest of development, osteoma of the upper border of the scapula, bradycardia and rapid respiration. There was no cyanosis. This heart condition was first noted at 11 months. Sidlauer's diagnosis of **persistent ductus Botalli** was based upon the diastolic murmur and thrill, loudest in the pulmonary area, evidently due to defects of both aorta and pulmonary artery; hypertrophy of the right ventricle, dulness along the sternum, rapid pulse with intact aortic valves, and the absence of cyanosis and all signs of congestion. The prognosis in such cases is favorable. Full details are given. [M. O.]

16.—Schlesinger reports a case of **tuberculous meningitis** in a girl of 2½ years, **beginning with a sudden apoplectiform attack.** Suddenly she had right-sided convulsions, followed by complete right hemiplegia with aphasia. Then the ordinary prodromal symptoms of tuberculous meningitis appeared, with death in 15 days. Her brother had also died of tuberculous meningitis. The diagnosis was again confirmed by autopsy. Schlesinger comments upon the peculiar onset of the disease. [M. O.]

17.—By **portative orthopedic apparatus** Mayer means that which is not too heavy, is effective, and yet does not hinder locomotion. He describes a corset to take the place of the plaster jacket, applicable in constitutional, painful and paralytic scoliosis. He also describes similar apparatus for conditions affecting the hip, leg, etc. [M. O.]

JAHRBUCH FUER KINDERHEILKUNDE.

July, 1902. (Volume 56, No. 1.)

1. Phosphaturia. FRANZ SOETBEER.
2. Unilateral Defects of the Chest-wall and Upper Extremity. JOHANNES SCHOEDEL.
3. A New Method of Calculating the Amount of Food for Artificially Fed Infants. MAX ADAM.
4. The Final Results in Acute Osteomyelitis in Childhood. RUDOLF GONSER.
5. Observations upon a Breast-fed Infant. NORDHEIM.

1.—Soetbeer reports a case of **phosphaturia** in a girl of 6, with attacks of pain and gastro-intestinal catarrh. Much lime was found in the urine excreted, which was due to the fact that calcium cannot be excreted by a colon affected with catarrh. The attacks of pain followed when lime salts had accumulated in the large intestine. Cloudy urine was due to the presence of the lime salts. [M. O.]

2.—Schödel reports a case of **absence of the sternocostal part of the pectoralis major and total absence of the pectoralis minor muscles,** with absence of about 1 cm. of the sternal end of the third rib, on the left side. Slight scoliosis existed. Besides, there was atrophy of the left arm, with syndactylia and brachydactylia. Similar cases are quoted from the literature. The condition is congenital, due to mechanical action lasting some time. Schödel believes pressure of the fetal chin to be the cause of this deformity. [M. O.]

3.—From 12 case-histories of infants upon the Gaertner "Fettmilch," Adam found that infants weighing over 2600 gm. at birth ingested from 400 to 800 cc. from the second to seventh week of life. The amount then remains the same until after the third month. From his researches Adam gives a **table by which the quantity of the** Biedert, Escherich or Heubner **milk mixture may easily be estimated** from the age of the infant in weeks and the weight in kilograms. Interesting details are given. [M. O.]

4.—Gonser reports 32 cases of **osteomyelitis in children,** with the symptomology, etiology, localization, results and treatment. Staphylococci were found in 11 cases, streptococci, typhoid bacilli and pneumococci in one case each. In young children the prognosis is grave; otherwise the results were excellent. Death occurred in 12.5%. In the treatment Gonser advises incision or chiseling, as needed. [M. O.]

5.—Nordheim reports an immense number of **observations made upon his own child,** breast-fed, during the first 100 days of his life. The child was fed when he wished, yet never demanded the breast inside of 2 hours. He nursed for from 5 to 10 minutes at a time; and slept 6 hours at night without nursing. The weight tables follow. [M. O.]

August, 1902. (Volume 56, No. 2.)

1. Two Cases of Anencephalia. MAX WICHURA.
2. The Buelau Aspiration Drainage in the Treatment of Empyema. PAUL OLOFF.
3. The Various Forms of Jaundice in Infancy. B. SKORMIN.
4. Calomel in Pediatrics. SIMON SCHOEN-LADNIEWSKI.
5. Death from the Aspiration of Necrotic Masses following the Perforation of a Tracheal Lymphnode. A. HORST.
6. A Case of Congenital Lateral Ventral Hernia. J. STEINHARDT.

1.—Wichura reports the case-histories of 2 **living anencephalic monsters,** one of which lived 3 days, the other half a day. Not only are all details given, but full autopsy reports follow. Both infants, whose photographs accompany the article, were born in the eighth month. In the first case the father is supposed to have had congenital dislocation of the hips, while the mother injured her abdomen, about the position of the infant's head, in the second month of pregnancy. In the second case fire in the house frightened the mother when but 2 weeks pregnant. The cause of the condition in the first case was fetal hydrocephalus; in the second, amniotic adhesions. Minute sensory tests were made in these cases. [M. O.]

2.—Oloff reports his results in 15 cases of **empyema, in treating which he employed the Buelau aspiration drainage method.** Seven patients recovered, one improved, one was discharged unchanged, 5 died of complications (pneumonia in 4), and in one resection of the ribs was performed with successful recovery. Their ages ranged from 1¼ to 10 years. In all but one case, due to diphtheria, the cause of the condition was pneumonia. In 2 of them the pneumonia followed measles. Pneumococci were found in 9, in one staphylococci; streptococci were found in 3 cases. The technique of the operation and full case-histories are given. [M. O.]

3.—A great number of varieties of **jaundice** are found **in infancy.** There is a benign icterus neonatorum, hematogenous in character; or the jaundice may be septic. Related to this is that rare condition called Buhl's disease. Then there are Winckel's disease, afebrile, icteric cyanosis with hemoglobinuria, easily recognized from its symptoms; infectious jaundice of the newborn, starting from the gastro-intestinal tract; pleochromic jaundice, following hemorrhage; catarrhal jaundice; toxic jaundice; jaundice with acute atrophy of the liver; and congenital icterus, due to defect or obliteration of the bile-ducts, cirrhosis of the liver, and periphlebitis or growths in the hepatic or portal veins. Not only are these conditions well described, but several case-histories are given under separate headings. [M. O.]

4.—**Calomel** is a useful disinfecting agent for the digestive tract, laxative and diuretic, and is of service in treating syphilis and ophthalmia. It is especially indicated in flatulence, colic, dyspepsia, acute and chronic gastro-intestinal catarrh, convulsions, jaundice, dropsy, etc. In pediatrics its effect is rapid and sure. [M. O.]

5.—Horst reports the case of a girl of 3½, who **died of asphyxia after having aspirated necrotic masses from a perforated tubercular tracheal lymphnode,** in spite of intubation and tracheotomy. The cause of the rupture of the tubercular lymphgland was the child's rapid head movements. [M. O.]

6.—Steinhardt reports the case of a child, aged 3 months, with **total absence of the external and internal oblique and the transverse muscles of the right side of the abdominal wall, permitting the formation of a large lateral ventral hernia.** The infant showed no other anomalies. [M. O.]

September, 1902. (Volume 56, No. 3.)

10. The Mortality among Infants in Norway. AXEL JOHANNESSEN.
11. Eczema in Infancy. STRAUSS.
12. The Etiological Relation between Infantile Eczema and the Intestinal Tract. J. G. REY.
13. Investigations on the Normal Ossification of Cartilage. DANTE PACCHIONI.
14. A Contribution to the Artificial Feeding of Infants. FELIX von SZONTAGH.
15. Experiments on the Acidity and Sugar Found in the Feces of Infants. LEO LANSTEIN.
16. More about the Meningococcus Intracellularis. O. HEUBNER.

10.—Treated editorially, October 25, 1902, page 564.

11.—Strauss admits that changes in the weather, coryza, mechanical irritation, local infection, etc., may cause **eczema in infants,** but he can see no relation between the appearance of eczema and disturbances of the gastro-intestinal tract. [M. O.]

12.—Rey reports 6 case-histories of infants in whom **eczema apparently depended upon gastro-intestinal disturbance,** quoting from the literature fully. He concludes that eczema is most frequent and most difficult to treat in infancy; that its appearance shows a distinct relation to gastro-intestinal affections; that it improves when the gastro-enteritis has been treated; that infantile eczema differs from that seen in older children; and that internal treatment is more important than local treatment. [M. O.]

13.—Pacchioni reports his observations upon **the normal ossification of cartilage,** when at rest or in action. His experiments are fully described, with minute histological details, showing how cartilage becomes bone. The function of the cartilage is to make the progress of the bony process possible, regulating it by the structural and chemical changes which occur in the development of the cartilage. [M. O.]

14.—von Szontagh reports the case of a **boy, aged 17 months, fed upon Scèkely's milk mixture,** the preparation of which he describes. From 612 to 885 gm. of this were ingested daily. The experiments showed that his assimilation of nitrogen and organic substances was excellent. His experiments prove that this particular infant thrived upon the Szèkely milk mixture. [M. O.]

15.—**The feces of breast-fed infants show a low acidity. But sugar was not found** in the feces from any breast-fed infant. In the one case in which cow's milk was given, there were also no traces of sugar in the feces examined. [M. O.]

16.—Heubner reports the case-histories of 2 children, aged 1½ and 9 years, with **epidemic cerebrospinal meningitis,** death occurring in the former only. Lumbar puncture gave pure cultures of a bacterium which in all its peculiarities deserved Heubner's term, **meningococcus intracellularis,** and not that of diplococcus intracellularis meningitidis, as described by Weichselbaum. [M. O.]

REVUE MENSUELLES DES MALADIES DE L'ENFANCE.

July, 1902. (T. 20, No. 7.)

1. The Action of the Lymphnodes on the Absorption and the Resorption of Fats. A. POULAIN.
2. Diurnal Hallucinations in Children. P. VERGELY.

1.—Poulain's studies have confirmed him in the view that the chyle not only contains fat in a state of combination with glycerine, but also a derivative of fat, which is not found in sections, because it is totally soluble in the aqueous or alcohol fixative fluids and which appears to be saponified fat. This led him to search for a fat saponifying lipasic ferment in the lymphnodes. As a result of these studies he concludes that **the lymphnodes,** as well as all organs having a lymphatic structure, **secrete a fat saponifying ferment** that is distinct from the similar ferment secreted by the pancreas. He also concludes that these organs are the sources of the ferment that Hanriot discovered in the bloodserum. In pathological conditions the infections attenuated the lipasic activity of the lymphnodes in the lymphatic territories corresponding to the diseased organs. On this account a rapid and prolonged emaciation results, particularly in cases of intestinal infection. Possibly also this lymphnode change may be counted among the etiological factors of obesity, but it is always independent of steatosis of parenchymatous tissues. [J. M. S.]

2.—Vergely reports the case of a boy, aged 7 years, who had a syphilitic family history. After an attack of appendicitis he presented a peculiar increased sharpness of hearing, and later had **diurnal hallucinations,** consisting in seeing persons standing at the foot of his bed and a negro who was always opening his mouth and his eyes. In a second case of diurnal hallucination the patient was a girl, aged 6 years, also from a syphilitic father. After an attack of appendicitis this child saw persons walking up and down the room. Both patients recovered. [J. M. S.]

August, 1902. (T. 20, No. 8.)

1. Suppurative Arthritis in the Course of Bronchopneumonia in Children. H. BICHAT and R. GOEPFERT.
2. Some Causes of Death in Diphtheria. H. BARBIER.
3. Neuroparalytic Keratitis in Children. ALBERT TERSON.

1.—Bichat and Goepfert report 4 cases of **arthritis occurring in the course of bronchopneumonia.** The first patient was a girl, aged 8 months, who was suffering from bronchopneumonia. In the course of her disease she had an attack of suppurative arthritis of the right knee, which was opened and drained; the pus contained a pure culture of the pneumococcus. The patient was finally cured. The second patient was a girl, aged 11 months, who, in the course of bronchopneumonia, had arthritis of the right knee. Puncture of the joint showed the presence of a greenish pus, which contained the pneumococcus. The final result in this case is not known. The third patient was a boy, aged 8½ months, who had an arthritis of the right knee in the course of bronchopneumonia. Puncture of the joint obtained pus which contained the pneumococcus. The knee joint was opened and drained, then the pleura was found to contain pus and it was opened and drained. The patient died, however. Bacteriological examination of pus from the knee joint showed streptococci and staphylococci. The fourth patient was a boy, aged 4 years, who, in the course of bronchopneumonia, had an arthritis of the left knee. Puncture produced a pus which contained streptococci. There was also an arthritis of the left elbow, the pus of which showed streptococci. The patient died. [J. M. S.]

2.—Barbier mentions the following **causes of death in diphtheria:** (1) Cardiac thrombosis and (2) tuberculosis. Twenty-five per cent. of his fatal cases of diphtheria showed areas of tuberculous disease developing coincidently with the diphtheria. It also appears to him that the evolution of diphtheria is aggravated by concomitant tuberculosis. [J. M. S.]

3.—Terson reports 2 cases of **neuroparalytic keratitis in children.** He thinks that it is advisable to study the condition of sensibility of the cornea in all cases of primary ulceration of that tissue. Neuroparalytic keratitis sometimes exists conjointly with lagophthalmic keratitis in the same eye, the facial and the trifacial nerves being simultaneously paralyzed. Neuroparalytic keratitis may be bilateral. More or less prolonged, partial, internal tarsorrhaphy will possibly limit the ulceration and allow the cornea to retain the greatest possible amount of transparence. [J. M. S.]

September, 1902. (T. 20, No. 9.)

1. Contribution to the Study of the Production of Medicated Milk. Ferruginous Milk. LUIGI GIORDANI.
2. Tuberculous Meningitis of Apoplectic Form Diagnosed by Lumbar Puncture. NOBECOURT and ROGER VOISIN.

3. Three Cases of Epilepsy Successfully Treated with Bromides and Without Salt. J. HALLE and L. BABONNEIX.

1.—Giordani makes a contribution to the **study of medicated milk.** He finds that iron is excreted in the milk and that its amount is increased to 5 times the ordinary quantity contained in the milk after injections of iron in ascending doses. The iron, which is found in milk after injections of iron into the tissues, is in organic combination, and, on that account, may be absorbed and assimilated. The modifications in the composition of milk produced by the injections of iron citrate are of no importance. Injections of iron citrate result in a slight reduction in the quantity of milk. Animals support large doses of this iron salt very well, when the large doses are reached by degrees and with intervals of rest from the injections. Locally the iron citrate produces no lesions. In this way it is possible to produce a **ferruginous milk particularly** useful in infantile therapeutics. [J. M. S.]

2.—Nobécourt and Voisin report the case of a girl, aged 19 months, who had a slight bronchitis. She suddenly developed coma, which gave rise to the fear of sudden death. The diagnosis lay between cerebral or meningeal hemorrhage and meningitis. Lumbar puncture 12 hours after the onset of the coma resulted in the withdrawal of a clear, limpid fluid, containing a large proportion of albumin, numerous lymphocytes and some polymorphonuclear cells. Some cerebrospinal fluid withdrawn by a second lumbar puncture was sterile on culture and did not make a mouse, into which it was injected, sick. From these facts a diagnosis of **tuberculous meningitis** was made. The coma persisted, convulsions, strabismus, disorders of the circulation and of respiration appeared and the child died in 60 hours after the development of the coma. The autopsy confirmed the diagnosis and showed also the presence of an old tuberculosis of the intestine and of the mesenteric lymphnodes, which was undoubtedly primary. There were some tuberculous tracheobronchial lymphnodes and 2 caseous meningeal tubercles. [J. M. S.]

3.—Hallé and Babonneix report 3 cases of **epilepsy** which were **treated with bromides and with the withdrawal of salt from the diet** of the patient. The results were good in all 3 cases. According to Richet and Toulouse the withdrawal of chlorides from the diet renders the patient more susceptible to the action of the bromides. The method of treatment is to put the patient on a milk diet, a liter of which contains about 1½ gm. sodium chloride, and adding a small amount of bread, so that the 2½ to 3 gm. of sodium chlohide, which is daily absolutely necessary for the organism, is furnished. The amount of bromide administered during such a diet should not exceed 2 gm. daily for children, or 4 gm. for adults. [J. M. S.]

ARCHIVES DE MEDECINE DES ENFANTS.

September, 1902. (Volume 5, No. 9.)

1. Intermittent Albuminuria in Childhood. H. MERY.
2. Two Cases of Verrucose Cutaneous Tuberculosis. M. PERRIN and R. GOEPFERT.

1.—Méry has written a monograph on the **intermittent albuminurias of childhood.** While a **few cases are chronic and of distinctly renal origin, the majority are purely functional.** Intermittent renal albuminuria may be orthostatic or cyclical; or it may follow acute nephritis, the infectious diseases, etc. Such albuminuria may either recover or will lead to Bright's disease. Functional albuminuria is rarely noted under 7 years, and is most common about puberty. Rest in the recumbent position often suffices to cause the disappearance of the albumin. Functional albuminuria may be pregouty or cyclical; hepatogenic; digestive; orthostatic or mechanical: or pretuberculous in character. Functional albuminuria generally ends in recovery. The prognosis is slightly less favorable in the digestive variety of functional albuminuria. Family history and heredity are important predisposing causes to functional albuminuria. To explain the condition 4 theories have been advanced, the humoral, dyscrasic, nervous and mechanical; but no theory will explain all cases. The diagnosis is not exceptionally difficult. Correct diet, regulation of the liquids ingested, rest, exercise, massage, baths, etc., with but few drugs, are indicated in the treatment. [M. O.]

2.—Perrin and Goepfert report 2 cases of **verrucose cutaneous tuberculosis in children.** Material curetted off and injected into guinea-pigs caused tubercular lesions. Both children were healthy and without tubercular family-history or environment. Both recovered after operation. [M. O.]

October, 1902. (Volume 5, No. 10.)

1. The Medical Treatment of Tuberculous Peritonitis. JULES COMBY.
2. Primary Vaginal Sarcoma in Infancy. RABE.
3. Convulsions in Childhood. MOUSSOUS.
4. Convulsions in Childhood. D'ESPINE.
5. Essential Infantile Convulsions. H. GILLET.
6. Subacute Progressive Anterior Poliomyelitis. MAURICE PERRIN.

1.—Comby reports the case-histories of 3 more patients with **tuberculous peritonitis,** children aged 7, 2 and 10 years. In one there was ascites, while the other 2 were fibrocaseous in form. All recovered **upon purely medical treatment.** He advises rest in bed for several weeks, with fresh air, sunlight, good food and, as soon as possible, a trip to the seashore, where the child should live in the open air. Besides, cod-liver oil, creosote and hypophosphites are given. [M. O.]

2.—Rabé reports the case of a **girl, aged 16 months, with** intermittent abdominal pain, frequent and difficult micturition. Examination disclosed a **vaginal sarcoma,** which was removed by operation. The child died 6 days afterward of bronchopneumonia. No metastases were found post mortem. The tumor was, therefore, a primary sarcoma of the vagina. Out of 17 similar cases collected by Pick, not one recovered. [M. O.]

3.—See **Philadelphia Medical Journal,** July 26, 1902, page 101.

4.—See **Philadelphia Medical Journal,** July 26, 1902, page 101.

5.—Gillet has collected statistics upon 32 cases of **essential infantile convulsions** in children under 5 years of age, seen in his dispensary. He concludes that essential convulsions are rare among children free from hereditary nervous taints or the stimgata of degeneracy. All cases occur in children who are neuropathic, who will later show some more or less marked nervous affection. The prognosis will depend on the stigmata of degeneracy present and the family history. [M. O.]

6.—Perrin reports in detail the case-history of a boy of 12, with **subacute progressive anterior poliomyelitis.** The boy was suddenly buried in a sand heap and was pulled out by both arms. Six months later his right arm began to tremble, and loss of power and muscular atrophy were noted, with the reactions of degeneration. One year afterward the left arm showed similar changes, then the body and lower extremities. Fibrillary tremors were noted without any sensory disturbances. The face and sphincters were not affected until just before death, which occurred in 18 months. The pathology of the case is discussed. [M. O.]

Special Article.

HEALTH RESORTS OF NEW ZEALAND.

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New Zealand has a far-away sound. The veil of miles and miles of ocean which lay between me and that wonderful land seemed almost impenetrable as I sat in my library planning a vacation tour. How different the reality. Three weeks of travel, three weeks of devouring of those miles of ocean by a hungry prowed steamship brought me to Auckland, the gate of New Zealand, and a beautiful gate it is, to be sure. I have seen but one harbor which, in my opinion, can be compared with it. In some respects one must yield the palm to the harbor of Sydney, N. S. W. Landlocked, surrounded by green hills, fertile slopes and prosperous towns, Auckland's harbor delights the eye of the tourist and promises safety to the storm-beaten mariner, fresh from the by no means gentle gales of that part of the world.

My own, somewhat brief, experience in New Zealand convinced me that the country is not appreciated in America as it should be. The voyage to Auckland is ideal well-nigh throughout. The rugged weather, so often experienced off the coast, serves merely to whet one's appreciation of the balmy trade-winds and blue waters of the previous days of the trip. It has been my privilege to prescribe a tour to Australia and return to several patients, and I have found that the voyage alone was extremely beneficial. I was more than glad to confirm by personal experience my previous impressions of the voyage, and still more pleased to learn by observation, something of the scenic and health-giving attractions of the country.

New Zealand consists of a group of three islands, North, South and Stewart Islands. Its total area is about 105,000 square miles, only one-seventh less than that of Great Britain and Ireland. The population is nearly 800,000, of which the remnant of that hapless once magnificent race, the Maoris, comprises about 40,000. The latitude of the country is about that of France, Spain and Italy. The climate is as near ideal as may be. The rainfall is abundant, and the soil fertile, in which respect it is unlike Australia, which is suffering from a drought that has already lasted seven long doleful years, "years of the lean kine."

In general, the aspect of New Zealand is mountainous, its volcanic origin being very apparent. Only a short walk from the center of Auckland, adjoining a beautiful mountain, Mount Eden, used by tourists for observation of the surrounding landscape, stands the crater of a volcano of the long-ago, filled with lava and pumice stone that tell their own story and bear witness to the troublesome times that once held sway in those beautiful isles.

The coast of New Zealand is noted for its wonderful sounds, which are almost as remarkable as the fiords of Norway. What, with its volcanoes, grandly beautiful mountains, smiling inland lakes, marvelous geysers, glaciers and picturesque coastline, the country has few superiors in scenic beauty. It has been well termed the "Switzerland of the Pacific." In this respect New Zealand presents unrivaled attractions for the tourist and the traveler in search of health. Health resorts are, in general, distinguished by appalling monotony. The various spas and bathing resorts have so few attractions that they pall upon one after a short sojourn. Not so New Zealand. Spas and baths are there, second to none, with, in addition, opportunities for recreation and entertainment for the lover of the grand and beautiful in nature, which are certainly unsurpassed.

For those who would hunt or fish, the country has much to offer. The red and fallow deer, wild boar and wild cattle are abundant, and small game plentiful on every hand. The rivers and lakes teem with trout, while the variety and quantity of salt-water fish are surprising.

The sounds, or inlets of the sea, that skirt the coast of New Zealand have, as I have said, been favorably compared with the fiords of Norway. The chief feature of New Zealand as a health resort is its hot springs. The lake districts of New Zealand are broadly divided into the hot and cold lake regions. The cold lake regions are in both the North and South Islands. It is in the South Island, especially, that the scenery bears such favorable comparison with Switzerland.

In Auckland Province, North Island, lies what has, not without justice, been termed "The Hot Lakes' Wonderland." So plain is the origin of the wonderful phenomena of this region that its volcanic nature is hardly likely to be disputed. Nowhere on this grand old earth of ours is there to be found such a variety of forms of thermal and mineral lakes and springs. In Iceland, the Yellowstone Park and some parts of Japan, geysers are to be found as grand as those of this district; some of the European spas have properties as excellent as have its springs and lakes, but nowhere can such a combination of wonderful geysers, curative waters and delightful scenery be found. Lessen the distance of New Zealand from America and Europe to reasonable proportions, and the tourist traffic of the country would be unrivaled anywhere in the world. Great as the distance is, a general dissemination of knowledge of the actual conditions prevailing in New Zealand should attract a large proportion of the world's leisure and health-seeking class. The thermal springs district begins near Lake Taupo, extending thence north-northeast in a broad belt for 150 miles to White Island, in the Bay of Plenty. The width of this belt is about the same as that of Lake Taupo, 25 to 30 miles. The phenomena of this area comprise three forms: (1) The Pinas or Geysers, which are intermittently active; (2) the Njawhas, or inactive Pinas, which continually emit steam, without spouting columns of hot water; (3) Waiariki, or cisterns of hot water suitable for baking, cooking, etc. There are also mud-volcanoes and numerous creeks and streams, hot, tepid or cold, into which break occasional hot springs. The latter phenomenon is observed in some of the cold lakes, such as Rotorua and Rotomahana. These hot springs are associated with cold springs of diverse mineral composition and therapeutic properties, real or imaginary.

One of the favorite resorts is the Hanmer Hot Springs. Like all New Zealand resorts, these springs would be distinguished for their scenery alone, aside from therapeutic considerations. The climate is all that could be desired, and the altitude —1,200 feet—sufficient to insure the bracing atmosphere which is so beneficial, especially to persons taking a course of hot baths. This is a feature which our own Arkansas Hot Springs lack. The atmosphere is rather depressing. An additional factor is the nearness of the sea, 32 miles, which certainly enhances the tonic effect of the climate. New Zealand resorts in this respect suggest the Santa Cruz Mountains, California.

The best route to Hanmer Springs is from Auckland by boat to Christchurch, thence 69 miles by rail and 24 miles by coach to Hanmer. This route gives a fine opportunity to view the harbor of Auckland and quite a stretch of New Zealand scenery. The countryside in the vicinity of Christchurch has been said to be "a piece taken out of an English landscape," but the eucalyptus trees rather mar the truly English tone of the picture. The coaching ride through the Amuri Plain is especially attractive, the mountain scenery *en route* being the principal feature. The Lowry Peaks, Ben Lomond, Mount St. Leonards and Mount Pam loom up, vast bluish shadow shapes, forming the eastern boundary of the plain from the Hurunui to the Waian rivers. Kaiapoi, one of the thriving railway towns *en route*, was the ancient capital of the Maoris. The history of this part of the country is replete with the warrior fame and legends of this splendid race, and was the scene of many fierce battles between rival tribes in precolonial days. All of the spas and hot springs of New Zealand are under government control and supervision, hence private cupidity has no chance at the tourist or invalid. The rates at hotels and sanatoria are less than at any health resort within my knowledge.

The Government Sanatorium at Hanmer Hot Springs is not large, but is very well appointed. It has spacious, well-kept grounds, with a profusion of beautiful trees and flowers. There is a croquet lawn, tennis court, bowling green and a well-appointed libray and reading-room. A resident physician, skilled attendants and masseurs are at hand, and their services are to be had at nominal fees fixed by the government. For invalids who do not require much care or supervision, quarters are provided by numerous hotels and boarding-houses.

The Hanmer bathhouses are commodious and well appointed. The baths comprise the ordinary tub and vapor, and two excellent swimming-pools, one for each sex. The water in these pools is kept uniformly at 85° F.

There is also a "pump-room," where water from a special spring is drawn for drinking-purposes. Great claims are made for the efficacy of this spring in gastro-intestinal, renal and hepatic disturbances. The water is of a lovely amethyst tint, but more beautiful to the eye than to the taste. It contains considerable quantities of sodium chloride and sulphurous acid, which by no means add to its palatability. The water is taken hot. The vapor from this spring is used with good effect in asthma and bronchial affections. The gas is collected from the springs and piped to the various establishments on the grounds for use in heating and illumination. The springs are ten in number, and of essentially the same composition, and they are not greatly unlike that of the famous Pagosa Spring in Colorado, which, by the way, is itself a phenomenon. The latest analysis is as follows:

Sodium chloride	62.09
Potassium "	0.15
Lithium "	Trace
Magnesium iodide	Trace
Calcium carbonate	0.55
Magnesium carbonate	1.77
Ferrum "	0.05
Sodium sulphate	7.48
Sodium carbonate	2.66
Aluminum phosphate	Trace
Silica	Trace
Total Solids, per gallon	77.38
Free hydrogen sulphide	3.43

Traces of sediment and organic matter.

It is strange that this analysis presents nothing in regard to the light carburetted hydrogen, Marsh gas, (CH_4), which probably accounts for the inflammable properties of the gases given off by the pools and springs. An earlier analysis showed free and albuminoid ammonia, free sulphur and a trace of nitric acid. The diseases in which the Hanmer Springs have been found efficacious are quite numerous. Those in which their value is apparently well attested are rheumatism, gout, lithemia in its various forms, some varieties of chronic skin disease, the various neuroses, neurasthenia, hepatic torpor, constipation, asthma, insomnia, general debility and tardy convalescence from acute diseases.

Hutton[1] says that a layer of black peat, 7 or 8 inches deep, with tough clay above and below it, underlies the Hanmer Springs at a depth of 10 to 15 feet. The free and albuminoid ammonia are absorbed by the water in passing through this peaty matter. The organic matter reduces part of the alkaline sulphates to sulphides, which, in their turn, are decomposed by carbonic acid, derived from the peat, into alkaline carbonates, liberating free sulphuretted hydrogen.

The cause of the heat has been the subject of some dispute. Considering the volcanic nature of New Zealand in general, it is by no means surprising that hot springs abound there. As the water has been estimated to come from a depth of at least 4,000 feet, that alone is a sufficient explanation—quite as logical, perhaps, as Hutton's theory that it is due to heat generated by the crushing of rocks under the mountains.

The odor of the spring water is not so offensive as one would expect from the quantity of free sulphuretted hydrogen shown analytically. The late Dr. Ginders was wont to explain this by the action of decaying vegetable matter upon the sulphuretted hydrogen in its passage through the peat layer, with resultant production of marsh gas. According to him, the reaction was as follows: $2\,H_2S+C=2\,S+CH_4$. The point which impresses one most in the administration of the baths at Hanmer is the freedom allowed, and the high temperature at which the baths are given. A daily 7 to 15-minute bath at 94° to 98° F. is about all the average bather is allowed at the Arkansas Hot Springs. At Hanmer, however, half-hour baths of 104° to 105° F. twice daily are often recommended. Surely the Arkansas Springs have a special potency, for I verily believe that such a regimen would kill a fair proportion of the bathers at that resort. At Hanmer, however, the bathers thrive on it.

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[1] Trans. New Zealand Institute, Volume 21, 1888.

Due credit is given, at Hanmer, to climate, exercise, diet, rest and change of scene as factors in the cure of disease. Considerable stress is laid upon massage as an adjuvant to the waters.

In the center of the hot lake region is the town of Rotorua, the present southern terminus of the North Island railway. Here are located a government hospital and sanatorium. Through-train service is to be had from Auckland, the distance of only 160 miles requiring about 9 hours' travel. The better way is to go from Auckland via the Thames River and Auckland Harbor by boat. Rotorua is situated on the southern shores of a lake of the same name, at an elevation of about 1000 feet. The climate is bracing, but not too cold; indeed, it is especially adapted to the health-seeker. Near Rotorua is Ohinemutu, the chief Maori village of the district, where the native race can be studied to excellent advantage, as they are more nearly in their primitive state than elsewhere in the islands. The center of the geysers is Whakarewarewa, two miles beyond Rotorua. Excellent hotels and boarding-houses are to be found in all three of these centers. From these places scenic excursions to points of interest may be made. Of these, the chain of cold lakes, Rotoiti, Rotoehu and Rotoma, offer exceptional attractions. Fifty miles from Rotorua is the Wairakei Valley, which is well worth a visit. Best of all is a trip down the Wanganui River, the scenery of which is not likely to be soon forgotten by the appreciative tourist.

The principal baths of the hot lake region are at Rotorua. The government has here a large, well equipped sanatorium under the charge of a resident medical officer. The main features of the resort are the "Blue Bath," "Priest's Bath," "Duchess Bath" and the "Rachel Pool." The Blue Bath is a hot swimming-bath, supplied with commodious dressing-rooms, hot and cold showers and douches. There are also vapor and sulphur baths. The Duchess Bath is so called because it was opened by the Duchess of Cornwall and York. With such a start, how could it help being a panacea for all British ills? It might not, however, be quite so efficacious for American ills. This bath is supplied with hot water from the Rachel Pool, and is very luxurious in all its appointments. The Priest's Bath occupies a large pavilion at the edge of Lake Rotorua. There are four bath-houses, two for each sex, with private baths for special cases, and the usual arrangements for vapor, hot douches and hot and cold showers. The Rachel Bath is in the same building and has similar appointments. There is a commodious ladies' swimming-bath attached to the pavilion.

The temperature of these various baths runs from 98° to 115° F. The water, as it issues from the ground, is, in some instances, hot enough for cooking. I was much edified to learn that the Maoris almost never build fires, doing all their cooking with the hot water. The composition of the waters varies somewhat. I have no analysis at hand, but, in a general way, they may be described as follows: The Blue Bath is strongly saline; the Rachel Pool and the baths it supplies, such as the Duchess, are alkaline silicious; the Priest's Bath is acid and aluminous. An important bath, of a nature similar to that of the latter, is the Postmaster Bath. This is outside of the sanatorium grounds, but also under government control. It has six large, excellently arranged public baths, three for men and three for women. In addition, there are such minor baths as "Cameron's," "Pain Killer," "Coffee Pot," "Stonewall Jackson," "Corbett's," "Saddlers," "Gemini" and "Vaux." At Whakarewarewa are the "Spout" and so-called "Oil Bath." The sanatorium grounds are beautifully laid out and form a very attractive feature. At the native villages of Ohinemutu and Whakarewarewa there are valuable medicinal baths, as well as geysers. The Maori population is considerable and a never-ending source of interest.

One hundred and twenty miles south of Auckland, by rail, is the beautiful little township of Te Aroha, named from the Mount Te Aroha, 3,000 feet in height, at the foot of which nestles the village on the banks of the beautiful Waihou (Thames) River. From this mountain rise numerous hot springs. These have been used for bathing for many years, and so great are their curative properties that the government established a sanatorium there several years ago.

The climate of Te Aroha is dry, salubrious and quite equable. The accommodations for visitors are really excellent, and the surrounding scenery characteristically New Zealandic.

Te Aroha Township contains 18 springs, 15 of which are hot, or at least warm. There are 7 large public bath-houses, a large building devoted to private baths and a spring house, whence the mineral waters for drinking are drawn. With the exception of the sulphur springs, all the waters are saline, feebly alkaline and heavily charged with CO_2. The last feature makes them peculiarly sparkling and pleasant to the taste. This natural effervescence, as is well known, is far superior to that of waters artificially charged. In general, the waters of Te Aroha are not unlike those of Vichy (France), Ems (Germany) and Bilin (near Teplitz, Bohemia), and they are quite as strong as those famous waters. Potash exists in all the Te Aroha waters, but in very small quantity. The appearance and color of the waters varies from colorless or pale yellow to turbid, the latter quality being due to precipitated sulphur. One of the springs (No. 15) is said by excellent authorities to be a most valuable adjuvant in the therapy of gastric and renal disorders. Another (No. 17), a cold spring, is largely used for external eye diseases, and, it is claimed, with benefit. The composition of the waters of Te Aroha varies somewhat as to proportion of ingredients, but the constituents are in general the same. They contain sodium chloride, sodium sulphate, calcium carbonate, magnesium carbonate, sodium bicarbonate and silica with, in some instances, a quantity of sulphur, free, or most often as H_2S. Traces of ferric oxide and aluminum are found in several. The temperature of the waters varies from 98° to 138° F.

Much more might be said upon the subject of New Zealand's health resorts, but I think sufficient has been presented to justify the opinion I have formed from my personal observations and notes to support me in the assertion that New Zealand is one of the most wonderful countries in the world, whether viewed from the standpoint of the physician or of the lover of Nature for her own sake.

THE GLASGOW MEDICAL JOURNAL.

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1. Notes on a Few Cases of Lupus treated in the Electrical Department of the Western Infirmary. DONALD J. MACKINTOSH.
2. Dimness of Vision in Diseases of the Kidney Characterized by Albuminuria. A. MAITLAND RAMSAY.
3. The Vision in Various Affections of the Eye. LESLIE BUCHANAN.

1.—Mackintosh reports 65 cases treated by light. In every instance but one there was marked improvement. Ten were dismissed as cured after a course of treatment varying from 3 to 6 months. In the one case that did not improve the disease was of long standing, leading to extensive necrosis of the nose and particularly of the alae and septum. The time of exposure and strength of the current used was always regulated by the patient's idiosyncrasy, while at the same time the patient was exposed for 20 minutes to a current of 12 amperes. [T. M. T.]

2.—Ramsay divides dimness of sight, connected with diseases of the kidney and characterized by albuminuria, into 2 classes: (1) Uremic amaurosis, when the ophthalmoscope reveals no gross lesions in the retina. This condition occurs most frequently in those cases of Bright's disease in which cerebral symptoms predominate. It may exist alone, but is most frequently accompanied with headache and vomiting, and an attack is often preceded by a convulsive seizure. It may be said that it is due to blood-poisoning brought about by waste products that ought to have been eliminated from the system in the urine. The resulting blindness is usually bilateral and complete, and though, as a rule, it passes entirely off after some hours, yet, in exceptional cases it may last for days; (2) retinitis albuminurica, when marked retinal changes are present. This is a late manifestation and, as a rule, is associated with the phenomena that are attendant upon high arterial tension, and its onset may be determined by general toxemia, by vascular degeneration or by these conditions combined. [T. M. T.]

3.—Buchanan mentions 3 headings under various affections of the eye: (1) Errors of refraction; (2) opacities in the media; (3) affections of the receptive and conducting organs. The author believes that there are many cases in which the viscual acuity is an important guide in the making of a diagnosis, especially in diseases of the optic nerve when there are only minute changes to be observed and which may be readily overlooked. [T. M. T.]

Original Articles.

WHAT CAN BE DONE TO LESSEN THE MORTALITY OF CARCINOMA UTERI?*

By E. E. MONTGOMERY, M. D.,
of Philadelphia.
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The researches of the last two decades have greatly advanced our ability, as medical men, to cope with and resist the ravages of disease. The recognition of the causes of epidemics has afforded us means by which their invasion can be avoided. The investigations of Reed, Gorgas and others have made apparent the responsibility of the mosquito for the communication of yellow fever. The same insect is, undoubtedly justly, blamed for the transmission of malaria. "To be forwarned is to be forearmed," and the ravages of such conditions are accordingly restricted and, indeed, arrested. The recognition of the method of transplantation of tuberculosis has permitted the institution of plans for the limitation of its spread and has afforded a basis upon which a successful plan can be organized for its prevention and cure. The progress made in the study of these conditions, which have, in the past, proved themselves capable of producing such sad ravages, generates the hope that the time is not far distant when every source of disease shall be more fully understood and provisions secured for its limitation, if not extermination.

With all our boasted progress in the cultivation of methods of precision, in the determination of the etiology of disease and the establishment of methods for its successful resistance, we must stand humbly with bowed heads before one form of disease and often see its victim wrested from our helpless hands. The title of my paper would lead you to infer that I refer to carcinoma, which is particularly insidious in its invasion of the uterus. This disease so closely resembles, in its origin and manner of development, many of the infectious diseases as to justify the hope that a microbic origin will be discovered. Indeed, the causative germ has frequently been heralded as discovered or upon the advent of being recognized, but careful investigation has demonstrated that the enthusiasm of the investigator has been unfounded. Meanwhile our clinical studies have assured us that our greatest hope is in the field of prevention.

The great majority of cases of carcinoma uteri occurring in the cervix in women who have given birth to one or more children, justifies the assertion, made years ago by Emmet, that neglected lesions of parturition were a prolific source or cause for the development of that disease. It is true that carcinoma occurs in the nulliparous and even unmarried woman, but the cases are rare and it is then more frequently found in the body of the uterus.

The cases of cancer of the uterus in the nulliparous and unmarried bears so small a proportion to the entire number of cases of this disease as almost to prove the rule that carcinoma is the result of previous traumatism. Not every case of injury necessarily develops carcinoma, any more than that every case of exposure results in the development of tuberculosis. The development in the one case and the nondevelopment in the other is only a difference in vulnerability. The exciting force which kindles the flame when the fuel is already provided is as yet unknown to us.

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*Read before the Delaware County Medical Society, December, 11, 1902.

The lacerated cervix, which Nature endeavors to repair by the proliferation of epithelial tissues, easily takes on abnormal proliferation, breaks down, and malignant infiltration follows. In the provision for prevention, then, we should endeavor to institute measures for the restoration of the lesions of parturition. The parturient woman should be examined upon the termination of her convalescence from the puerperium, and note taken of any lesions of the cervix and pelvic floor. When lesions of any extent exist, the early repair of the parts, before cicatricial changes occur, should be urged. Slight lesions may be trusted to nature, but the patient should be examined once or twice a year, particularly when near the period of the climacteric, to determine what changes are resulting. If the condition is followed by endometritis, swelling and eversion of the cervical mucous membrane, occlusion and enlargement of the glands of Naboth, the uterus should be dilated and curetted, and the cervix either repaired or an excision of the diseased tissue in the form of an amputation of the cervix be done. In some cases it is preferable that such operations be preceded by hot vaginal douches of strong salt-solution, twice daily, local blood-letting by the scarification of the hypertrophied membrane, or puncture of the occluded glands of Naboth, applications of tincture of iodine, Churchill's tincture, iodine and carbolic acid or iodine and creosote, and the support of the uterus by medicated tampons. The tampon, raising the organ to a higher level, improves the circulation, and, when medicated with one of the glycerine preparations, depletes the blood-vessels by depriving them of the watery constituents of the blood, thus promoting the absorption of exudation.

The tampons may be inserted twice a week and should be worn 24 hours, while the douche can be employed during the intervals.

Next to prevention, the most important answer to our question is secured in the early recognition of the disease. In no condition is it more important that the physician should be upon the alert for the danger-signals, for upon its early recognition will depend in the utmost degree the issues of life, the assurance of success or failure. Unfortunately, there are no characteristic signs of cancer of the uterus, nor is it a disease limited to any particular period. In the great majority of cases it occurs between the fortieth and sixtieth years. The tripod of symptoms upon which the diagnosis is based are pain, hemorrhage and discharge. These symptoms are found in other conditions and are not regular in their occurrence in carcinoma. Pain is by no means a constant symptom. Frequently patients are seen in whom there has been extensive destruction of the cervix and extension to the surrounding structures, and in whom the pain has been slight or entirely absent.

The pain is usually lancinating, radiating from the uterus in different directions, and is felt in one or the other hip or in the sacral region. In many patients there is no pain during the day, but when the patient lies down a burning, teasing pain occurs, which is just enough to prevent her from sleeping. In some forms of disease pain is an early symptom, is very severe and causes early resort to the use of anodynes. Hemorrhage should justly be regarded as a danger-signal and should lead to careful examination. The bleeding will frequently be a slight increase in the quantity and length of the flow, an irregular bleeding during the menstrual intervals or following coition, exercise or emotional excitement. Very extensive progress may exist before hemorrhage becomes marked.

Discharge, thin and watery, with a sweetish, fetid odor, is another danger-signal. It is an indication of caries or necrosis of tissue and, consequently, may be secondary to very extensive infiltration.

By the analysis of these symptoms, then, upon which we must depend for the suspicion of the disease, it is seen that it may be considerably advanced before any of them causes alarm, and justify the wisdom of what I have already said as to the observation of patients in whom lesions of parturition are known to have occurred. The importance of such observation is particularly of value in those patients in whom the family history of carcinoma, tuberculosis, syphilis and other inherited tendencies denotes an inherent vulnerability to the onset of malignant conditions.

The physician, conscientious in his desire to do the best for his patient and jealous for his own reputation, should not be content upon the advent of suspicious symptoms to permit the condition to continue without a careful examination to determine the cause. Rarely will a physician to-day ignore the gravity of such symptoms, but frequently, in his desire to shield his patient from mental anxiety, he does not sufficiently dwell upon the possible gravity of the symptoms and the importance of an examination to make certain of its character, to impress his patient with its necessity. Fifteen years ago it was not unusual to have patients consult me who had been treated for months without examination by physicians who attributed the symptoms to the disturbances of function incident to the approaching menopause. I am thankful to say that this practice is now very rare. During the last week, however, I was consulted by three patients, referred to me by other physicians, in whom the disease was so far advanced that I could offer no hope through surgical interference. One of these patients had consulted her physician last May for an offensive watery discharge. He was impressed with its possible gravity and advised an examination, but as she demurred he prescribed for her and directed that she return for examination if not relieved. It was near December before she returned, and the condition is now hopeless.

I cannot, of course, say that an operation, when she first consulted him, would have been successful as a radical measure, but I am confident in the assertion that the physician would have been kinder to the patient and securer in his own reputation had he firmly declined to prescribe for a condition the character of which he was not permitted to determine by examination. Far better will it be for both patient and physician if he can say after an examination that the condition he finds does not confirm the fear awakened in his mind by the symptoms she presented. While it is undesirable, that incurable patients should know the gravity of the disease, so long as it can be concealed, yet, the physician should leave his patient in no doubt of her danger, if it is necessary to make it known in order to secure the proper investigation.

A proper interpretation of the physical signs and the recognition of extension of carcinoma can only be secured after a knowledge of the manner of development of malignant disease.

Malignant disease of the cervix differs entirely in its character, process and prognosis, according to its origin, whether in the squamous epithelium of the vaginal portion of the cervix or in the cylindrical epithelium of the cervical canal.

The former resembles the epithelioma of the skin and is sometimes called cancroid. The proliferation soon breaks down, does not show a marked tendency to infiltration, or there may be extensive proliferation forming the cauliflower condition, which often fills up the vagina with a large, friable, necrotic mass, which causes a profuse discharge of an extremely offensive odor and bleeds upon the slightest touch. The destruction takes place in the vaginal portion of the cervix, with no tendency to invade the cervical canal, and passes out upon the vaginal walls. It is the most amenable form for treatment and should not be considered hopeless, even when the entire cervix seems destroyed and some invasion of the vaginal walls has occurred. Without investigating my records, three patients come to mind on whom I operated with but little hope of successful result, so extensive was the involvement, and these patients, two abdominal and one a vaginal hysterectomy, are still living and in good health at the end of two and a half, five and ten years, respectively. The first of these patients was a single woman, in whom there was a cauliflower growth filling the vagina. She was very anemic, of a sallow color, and had suffered from very severe hemorrhages and a profuse discharge. Her physician was very much inclined to demur to my advice for removal. Her course, at first, almost justified his view, for the wound failed throughout to heal, but was resutured two weeks after the operation and united throughout. I saw the patient within the last 3 months and made a vaginal examination. She looked the picture of health and exhibited no sign of any return of the disease.

The disease originating in the cervical canal in its proliferation rapidly extends through the cervical wall and invades the parametrial tissue. It takes this course in preference to breaking out upon the vaginal portion of the cervix. It is very insidious in its development. A sudden hemorrhage or an offensive discharge may be the first symptom, and the disease is already beyond hope for successful removal.

The following history is an excellent example:

November 16, 1897, Mrs. H., 52 years old, in whom the climacteric occurred four years since, was seen in consultation with Dr. J. C. Wilson, two days before suffering with a slight uterine hemorrhage. For the last two years she had been under his care for lithemia, and was quite enfeebled. She had no symptoms to indicate any uterine disease until the hemorrhage. Upon examination the contour of the vaginal cervix was unbroken, the neck seemed thickened and was quite hard, the uterus was retroflexed and small. Hysterectomy was advised and done upon the date above mentioned. The operation was done by the vagina, the latter being separated from the cervix with the thermocautery. The incision of the cervix revealed that the latter was broken through by the infiltrate, and the surfaces were then thoroughly seared by the cautery. The broad ligaments were secured by compression forceps, and the pelvis packed with iodoform gauze. The patient recovered and was much improved in health.

May 21, 1898. A second operation was done for a slight relapse upon the left side. This incision was also made with the thermocautery and the peritoneal cavity again opened. With the exception of a smaller ulcer, as to the character of which I was uncertain and which was, as a matter of prudence, touched with the cautery, she remained in good health until September 26, 1900, when a mass appeared in the posterior wall, involving the bowel or rectovaginal septum. To secure its removal a section of the entire septum was removed and closed by a double row of sutures, one in the bowel and the other in the vagina. She again recovered, and, after several examinations in the interval, a nodule was recognized high up, for which she was again operated upon May 16, 1901. This time an abdominal incision was made, but the result was unfortunate and the battle for our patient finished.

Here was a patient subjected to an operation two days subsequent to the appearance of the first symptoms distinctly pointing to pelvic trouble, and the disease had already invaded the parametrial tissue, so that our patient ultimately succumbed to a recurrence of the disease. So general has been the experience of operators as to the mortality of carcinoma in the cervix, that some are inclined to doubt the wisdom of the procedure, but it seems to me that our experience should only cause us to investigate more carefully the progress of the disease, so that we can better fix rules for our guidance in its recognition and treatment and thus secure relief for our patients while the disease is yet local. Carcinoma of the body of the uterus is more favorable for operative interference.

The symptoms of the disease are manifest before it has broken out of the uterine wall. Lymphatic invasion is much slower in its occurrence than carcinoma in other parts of the body.

In making the diagnosis of carcinoma it should be remembered that the symptoms from which its presence may be suspected are produced by other conditions, carious or partially necrotic fibroids within the uterus or vagina; retained putrid masses following abortion or miscarriage and interstitial or senile endometritis may be mistaken for malignant disease.

As the disease, in the majority of cases, is sufficient to determine the diagnosis, occasionally it may be necessary to dilate and explore the uterine cavity, and the most reliable exploring instrument is the finger. In the majority of cases the cervix will have to be dilated to admit the finger. The dilatation is best accomplished by the use of laminaria tents. The vagina should be cleansed, the tents removed from equal parts of carbolic acid and alcohol and inserted into the cervix.

Necrotic fibroids are frequently mistaken for carcinoma. A few years ago I was called to see a woman, a widow, about 45 years of age, who had been having severe hemorrhages, from which she was very anemic and sallow, the odor emanating from her vagina was extremely offensive and noticeable as soon as one entered the room. A homeopathic physician had been in attendance and assured them that it was cancer and beyond hope of relief. Upon passing my finger into the vagina I found it filled with a round, hard mass which hung by a pedicle from the cervix. I could with difficulty pass my finger over the tumor to the cervix, which I found to encircle the pedicle, but presented no sign of any infiltrate. I had some difficulty in convincing the patient and her sister of my good faith when I promised her that she would recover. The removal of the tumor, the surface of which was necrotic, resulted in her complete restoration to health.

In interstitial endometritis the regular enlargement of the uterus, the absence of infiltration or of offensive odor to the discharge and, if necessary, the microscopical examination of the uterine scrapings will render the diagnosis certain.

Senile endometritis may be mistaken because of the excessively foul discharge which frequently accumulates in the uterine cavity. The absence of infiltration or hemorrhage, the evacuation of the uterus and curetting from the uterine cavity are sufficient to insure the diagnosis.

Finally, we can lessen the mortality by early operation in healthy tissue and, with the exercise of precautions, to prevent the re-implantation of the disease. In the majority of cases the abdominal incision is preferable to the vaginal, as it enables us to go farther away from the involved structures.

I shall not describe the technique of the operation, as that is not within the province of my paper.

THE PARASYPHILITIC AFFECTIONS. THE CURABILITY OF TABES AND GENERAL PARALYSIS BY INTENSE MERCURIAL TREATMENT.

By DR. LEREDDE,
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Translated by Maurice Ostheimer, M. D.

After having cured a case of tabes with mercurial treatment, after thorough researches upon the parasyphilitic affections and cases of recovery from tabes and general paralysis, I have become absolutely convinced that, in syphilitic patients, these diseases are not only syphilitic in origin, but can also be cured by mercurial treatment, if the mercury be pushed to very high doses. I am also sure that the mercurial treatment is usually incorrectly administered, because no record is kept of the one essential therapeutic element, the amount of mercury really introduced into the organism.

The published cases of recovery from tabes and general paralysis upon mercurial treatment cannot be doubted after a study of the question. The unsuccessful cases, though numerous, are due to incorrect treatment and to the existence of the irremediable degenerations produced in these conditions, as in all other affections of the nervous system. Upon this fundamental question, as in all questions in medicine, some people only have discovered the truth, but it is important to demonstrate that this is the truth, in order that it may, as soon as possible, enter the domain of accepted facts and practical results.

As I am certain, and I am not mistaken in questions of this sort, the results should be even more important because I shall show how clinicians and anatomopathologists have erred, that the truth could have been found much sooner if they had both drawn all the conclusions which the facts permitted, and if those who studied the question had done so independently, without paying attention to the assertions of one another. In medicine, contrary to the sciences of physics and chemistry, we are almost always obliged to trust to the affirmations of the master. History, however, shows that the master can make mistakes, and I believe that the history of medicine is, and will in the future be, that of an incessantly revived struggle against the spirit of authority in scientific matters.

When I discussed the question of the parasyphilitic affections before the Paris Society of Medicine, I was surprised to meet objections which, in my opinion, could have been raised at the time of Professor Fournier's first work on tabes, which now, however, appear to have no shadow of reason. To give the discussion a solid foundation, in order to eliminate a series of arguments of simply historical value, I shall at once declare that I consider it an accepted fact that tabes and general paralysis, in the great majority of cases, occur in syphilitic subjects, and I shall add that there is, in syphilitics, between the syphilitic infection and these anatomoclinical symptoms, the relation of cause to effect.

I recall the facts that for Fournier 93 out of 100 tabetics are syphilitic; for Erb, 89%; for Gowers, 70%; for Strumpell, 90%; for Dejérine, 97%; for Raynaud, 90%, and for Quinquaud, 100%. The absence of syphilis is explained by the ignorance of the patients, by the existence of conceptional syphilis in women and by the existence of hereditary syphilis. The latter is regularly present in cases of tabes. As syphilographer I agree with Fournier that, in patients with tertiary syphilis, it is impossible to bring out the existence of previous syphilis as often as in those with tabes. We have not the right to declare that tabes, an anatomoclinical condition varying in definition according to different writers, is a disease dependent upon a single cause, but, taking the word in a broader sense, we might include affections with the symptoms and localized lesions of syphilitic tabes, due, however, to some other cause.

For general paralysis the question may be stated in exactly similar terms. Syphilis is found in from 80% to 90% of cases of general paralysis. Among patients with early paralysis syphilis is normal. The experience of Krafft-Ebing has a truly historical value, and carries conviction as far as anything can in medicine. In 9 subjects with general paralysis, in whom neither examination nor history revealed any trace of previous syphilis, 15 to 20 inoculations of products from mucous patches and hard chancres were made. All the patients but one were observed for 180 days, and not one of them developed syphilis. Like tabes, general paralysis may also be considered not a disease with a single etiology, but an anatomoclinical condition, a question of definition which varies among the writers of different countries. The fact, however, that tabes or general paralysis developing in a syphilitic patient is not only syphilitic in origin, but is also syphilitic in nature, is important.

The theory that these diseases were syphilitic in origin, but not syphilitic in nature, called the "theory of the parasyphilitic affections," was expounded by Fournier in 1894. In Germany, Moebius and others term the parasyphilitic affections metasyphilitic affections, simply a question of words. Fournier's parasyphilitic affections include, under acquired syphilis, acute secondary hysteroneurasthenia, later neurasthenic manifestations, hysterosyphilis, tabes, general paralysis, a special form of apoplexy and a special form of muscular atrophy; under hereditary syphilis, general or partial dystrophic disturbances, organic malformations (dental, especially), arrested or delayed development, both physical and intellectual, infantilism, cachexia, rachitis, hydrocephalus, some cases of simple meningitis in infancy (?), perhaps some cases of true epilepsy, and surely all cases of juvenile tabes and juvenile general paralysis. Fournier adds that this list is probably destined to receive numerous acquisitions.

After enumerating these conditions, Fournier insists upon the characteristics which separate them from true syphilitic affections. First, a mucous patch or gumma cannot exist without previous syphilis, while tabes, general paralysis, hysteria, rachitis, etc., on the contrary, may develop without antecedent syphilis. Secondly, the parasyphilitic affections are not influenced by mercury and potassium iodide, while the true syphilitic affections are. Fournier does not say that mercury and potassium iodide are absolutely without influence upon the parasyphilitic affections; he simply states, a very different assertion, that they do not exert upon these conditions an action at all comparable to their usual effect in true syphilis. Sometimes these specific agents have no effect on the parasyphilitic affections; at other times they act but very slowly, always incompletely and insufficiently. He makes no comparison between the therapeutic influence of these remedies, and sometimes of these remedies alone, in tabes, and their usual effect on a papule or gumma; there is a vast distance between the one and the other.

Without stopping there, Fournier mentions an hypothesis by which the parasyphilitic accidents could be attributed to a syphilitic toxin, and he studies, in their relations to syphilis, the different affections already noted in the above lists. He declares that tabes is certainly related to syphilis like a fact to its cause, but adds: "What is the nature of this connection? It is impossible to compare tabes with a syphilitic accident, a syphilide or a gumma. Clinical instinct rebels against such a union. And why, if you please? Is tabes not a syphilitic accident like the others? While the others are cured by mercury and potassium iodide, mercury and iodides are useless in tabes. Good clinical sense has drawn the conclusion that, if tabes was surely a derivative of syphilis, it would not constitute a symptom comparable to the usual symptoms of the disease. Tabes is a syphilitic manifestation, but assuredly not a manifestation of a syphilitic nature."

Fournier recalls the fact that the syphilitic origin of general paralysis has now been demonstrated. He declares that he overlooked this for a time, and, having created a true morbid type, "general syphilitic pseudoparalysis," he made the mistake of admitting to it cases, no less authentic, of true general paralysis; but true general paralysis is not an affection of a syphilitic nature, since the fact cannot be denied that specific treatment fails in all forms and at all ages. Therefore, Fournier considers it a parasyphilitic affection and groups it with tabes. Fournier's book ends with very interesting general conclusions, for they show the object he sought in writing. He tries to convince his pupils of the gravity of the parasyphilitic affections because of the failure of the treatment. He knows no other safeguard except the prophylaxis of syphilis. The revelation and vulgarization of this truth appeared to him of double interest: Scientific, in showing what syphilis really was, and practical, in giving a more exact and true knowledge of the disease.

In rereading Fournier's book now, one indication becomes most clear. Fournier wanted to attract attention to the results of syphilis, little known to the medical public at that time; and to one who follows his teaching and knows his manner of exposition it is evident that his classification of the parasyphilitic affections tended to vulgarize practical ideas, and to have a striking effect upon an audience little prepared for all the consequences of syphilis. Grouping so many affections under one common heading would have had no drawbacks if it had not become the basis of scientific theories and if in a spirit of simplification which may be deemed superficial, Fournier had not gradually been led to utter categorical assertions upon the nonsyphilitic nature and the incurability of the parasyphilitic affections, assertions which absolutely contradicted other assertions, no less precise, which he had already made. Following Fournier, depending on his authority, the authors of classical books admired his theory, and physicians renounced treating with mercury patients whom they had not yet treated energetically enough.

I was led to studying the question of the parasyphilitic affections because I could never understand it. I admitted the syphilitic origin of tabes and general paralysis, but I did not understand by what mechanism syphilis could determine them indirectly; I had always thought that they might be true syphilitic diseases when I met a patient with acutely developing tabes whom I presented at the Société de Dermatologie, Paris. Grave symptoms developed in this patient in a few months, ocular and visceral disturbances, muscular atrophy, tachycardia, etc. I made the diagnosis of tabes of exceptionally rapid course, from the multiplicity of the symptoms, and I attempted energetic treatment by giving injections of 1 cgm. of mercuric cyanide, followed by weekly injections of 10 cgm. of calomel. Symptoms gradually disappeared, complete recovery resulted and has lasted almost two years now. But I shall not repeat this case-history; it can be found in the *Bulletin de la Société de Dermatologie*, Paris, March, 1902. Some neurologists might contest the exactness of the diagnosis; not the exact diagnosis, but the results of it, rather, are of value here. I decided at that time to study the question of the parasyphilitic affections closely, and I studied Fournier's book. I was struck by the complete absence of homogeneity in the group, and was surprised to see that Fournier grouped side by side affections, like hysteria and neurasthenia, which are exceptionally of syphilitic origin, and affections, like tabes and general paralysis, which are almost always of syphilitic origin; in fact, so much so that Fournier and others have asked whether tabes and general paralysis were not always syphilitic. I was shocked by this heterogeneous grouping, and I found in Fournier's book, besides, arguments which were sufficient, taken together and developed, to show that the theory of the parasyphilitic affections had no basis.

I repeat that, for Fournier, the parasyphilitic affections are characterized by (1) the fact that they are not constantly of syphilitic origin; (2) that their lesions are not those of syphilis, and (3) that they are not cured by mercurial treatment. I have already stated that tabes and general paralysis may always be of syphilitic origin, or that they are, perhaps, anatomoclinical conditions which, in the great majority of cases, are of syphilitic origin. The second and third points need more detailed discussion.

I shall not enter upon the histological details concerning the lesions of tabes and general paralysis, for the following reason: At present, and I speak as a syphilographer who has studied the question, microscopical examination may decide that a certain lesion is syphilitic in nature, but it is absolutely impossible to declare that a lesion, the nature of which is unknown, is not of syphilitic nature. Reflection upon this subject suffices for the perception that the anatomopathologists passed the limit of permissible induction when they declared that, outside of a table which they had established, there could be no syphilitic lesions. How was this table constructed? The syphilographers asked the clinicians for specimens for study; the clinicians sent them bits of gummata, papules, tubercles, etc.; and the histologists, having studied these lesions, diagnosed syphilitic by the clinicians, declared that all syphilitic lesions must resemble a description founded upon the examination of the lesions which had been sent to them. But, at the time when the clinicians sent the anatomopathologists the syphilitic lesions for examination, they were wholly ignorant that tabes and general paralysis could be of syphilitic origin.

For comparison only, let me take the example of acute affections in which microbes may cause many different lesions. There is no lesional specificity, corresponding to the microbic specificity. The day, and this is not far distant, when the syphilitic nature of tabes and general paralysis will be admitted as a demonstrated truth, the histologists will simply have to describe the lesions of syphilis in a broader manner. It is to be hoped, however, that they will not create a new table, larger, perhaps, than formerly but outside of which they will reject as not syphilitic all affections which do not conform to this model.

That this question may be treated from another point of view will soon be seen. I have discussed it with Professor Renaut, of Lyons, the well-known histologist, whose article on the subject will follow.

REMARKS ON THE TREATMENT OF THE VISCERAL PTOSES.

By J. MADISON TAYLOR, M. D.,

of Philadelphia.

My excuse for invading the domain of the specialist on diseases of the digestive organs is due to the fact that I have had much practical experience in the treatment of displacements of the abdominal viscera. It has been my privilege to meet with a great many instances of enteroptosis, especially among neurasthenic folk and sufferers from nervous diseases, both organic and functional. Among these people are commonly found various forms and degrees of relaxed abdominal walls, accompanied with a letting down of the abdominal viscera. As the condition of the abdominal parietes is improved and a better degree of muscular tone acquired by the entire torso, a large proportion of the visceral ptoses disappear or fail to be sources of discomfort, and it seems to me worth while to offer my experience and to relate such methods as have been useful in my hands.

My attention was drawn to the subject of movable kidney over twenty years ago among some cases under the care of Dr. S. Weir Mitchell, and in whom, when this state was remedied, the residue of the conditions offered little of difficulty. Since then it has been a matter of constant interest for me to explore the state of the abdominal viscera in persons suffering from neurasthenia, and I have found that visceral ptoses proved many times to be the pivotal point for treatment.

I am inclined to assume, wherever there is a very pronounced degree of loss of nervous tone, that the interrelationship of the abdominal organs is likely to suffer much disturbance, the greatest part of which is temporary and remediable. Many of the vague pains and sensory disturbances referred to the back, abdomen and even the base of the brain have their origin in similar defects.

Absolute rest in a systematized course of rest treatment, along with the various adjuvants usually employed to improve nutrition, almost always make for a great improvement in this regard; although it is most necessary that special attention should be directed to the condition of one or the other of the organs which have suffered displacement.

As to the etiology of these conditions, there need little be said, since that matter is fully considered in recent literature by writers on this now popular subject. The only point which seems to me insufficiently discussed is the possibility of repair and the methods by which this may be attained without surgical interference. It has been my custom to make considerable use of the various standard methods of relief to the stomach by means of the stomach pump, both for diagnostic and cleansing purposes and for the application of remedies. It seems to me that, by a judicious application of stomach washing, especially the alternate use of hot and cold fluids and intragastric faradicism, the motor activities of the stomach are greatly benefited. And since it is also made plain by recent writers that by far the largest proportion of fermentative dyspepsias, both gastric and intestinal, are dependent upon disorders of motility, marked benefits follow the careful use of the stomach pump in skilful and cautious hands.

One point which I do not see referred to, but which strikes me as of great importance in acting as a cause or a collateral cause, is defective musculature of the diaphragm and the intercostal muscles. Among women it is easily seen that this might occur. The use of the corset or tight belt exerting more or less constant pressure upon the short ribs, produces a gradually deteriorating influence upon lateral expansion of the lower part of the thorax, and the diaphragm must inevitably suffer. Another cause, and allied to this, is defective respiratory activity, the result of a sedentary life, either from choice or accident, but much more often in the neurasthenic states due to inability to take such exercises as are essential to keep the thoracic viscera in proper shape. All this is often dependent upon disturbed vasomotor innervation.

A marked characteristic in those who are found to suffer from enteroptosis is a relaxed abdominal wall and pendulous belly, the "Hängebauch" of the Germans. After such rational measures as alluded to and involved in the rest treatment or in some of its various modifications are employed, it is obvious that mechanical support is needed. Also in a very considerable proportion of the walking cases, presenting in the main no evidences of grave exhaustion or of gastro-intestinal diseases, but in whom the evidences of early senility are shown, these relaxed abdominal walls are often conspicuous.

The first effect which I endeavor to secure is an improved attitude in standing. If the pelvis is taught to maintain a fairly level position, the abdominal viscera will remain within it and exhibit a diminished tendency to pour over the pelvic brim in front. If along with this the patient can acquire the habit of consciously holding in the contents of the abdomen by a voluntary effort of the abdominal muscles, these last can be greatly strengthened.

The use of a belt to hold up the contents of the abdomen is only warranted so long as the abdominal muscles are incapable of normally accomplishing this object. The abdominal parietes should be strong enough, not only to retain the viscera in their normal positions, but to exert an increased amount of pressure, if this is necessary, to hold up the relaxed abdominal organs when overfilled with fluid or when distended with gas.

Of the various belts recommended by different physicians, few strike me as rational, and most of them are not competent to serve the purpose for which they are intended. All perineal bands are an offense and not to be tolerated except temporarily. Such devices as a straight-front corset, extolled by some medical men, can have but one permanent effect, if long worn, and that is so to weaken the abdominal muscles that the last state of the individual is worse than the first. Undoubtedly many belts in themselves, not calculated to aid in repair, may be most comfortable in application, but only for a time. It must be held steadily in view that all artificial support is solely for the purpose of affording temporary aid and comfort until such time as the tissues regain their normal tone and power. In most instances this is perfectly possible unless the individual be far gone in degenerative changes. The patient should always be taught this fact and trained to exercise the structures about the waist in the manner to be pointed out hereafter, so that she may sooner or later be able to do without any belt. It is revolting to my conscience to admit the necessity of the constant use of any artificial support. Again, resort to surgical means is only warranted when the rational measures are not properly directed and pursued. I have time and again seen elderly women, who had been dependent for years upon abdominal supporters, become in time thoroughly emancipated. However, it must be admitted that it is largely an individual matter, and some persons cannot learn, or perhaps it is more correct to say will not learn, to do without such artificial support.

The one belt which has served me best is an exceedingly simple, but clever, device of Morris Longstreth, of Philadelphia, which fulfils all the requirements as I see them. By the aid of this I have been able to give immense comfort to a number of people who had become almost helpless by reason of enteroptoses and the passive congestions which commonly follow these in the pelvic viscera. This belt has seldom been described, so far as I know. It consists of a broad band of stout webbing which, as a rule, is attached to the lower edge of the corset and is carefully fitted to the individual, coming down well over the external trochanters. Posteriorly it is cut vertically and joined by four straps with buckles, which are adjusted to fit the needs of the case. In front it is caught by a series of broad hooks, which are joined or detached as the corset is put on or off.

The great merit of this belt lies in the fact that the material is firm and relatively inelastic, giving such firm support as is needed. It is pulled snugly down until the abdomen is held or supported from below, the pressure being directed upward and backward from a line below a point midway between the symphysis pubis and the umbilicus.

The danger of this belt is a very distinct one. Fat, flabby persons, whose lower abdominal areas are turgid and edematous from lymphatic and venous stases, are made so much more comfortable and, above all, so much more symmetrical in appearance by this artificial support that they straightway determine to be never without one, and they almost always at once start out to proselyte and compel all their acquaintances to wear one likewise. This is just about as rational as for a person having injured the back or having had lumbago to wear an aluminium cuirass for the rest of his days.

However, the belt is a very good one; in fact, much the best that I have ever encountered to secure support for almost any or all of the visceral ptoses. All tight belts are particularly hurtful if there is latent appendicitis, exerting counterpressure over the psoas muscle.

The really curative agency which I wish to enlarge upon and emphasize is a series of exercises to bring back the tone, not only to the external abdominal walls, but to those muscles which are probably most involved, viz., the diaphragm, the intercostal and abdominal muscles.

Certain facts have been made plain in reducing the flesh of obese individuals which are common in all conditions of relaxed abdominal walls. The first of these is that movements which make for elasticity are of the greatest importance, therefore I employ cautiously and increasingly stretching movements, such as reaching forcefully upward with the arms extended, also forward and to each side and inducing a rotary action of the torso. These are taken standing erect and also stepping forward with the body at an angle of 45 degrees to the legs. Again, it is of great importance that the tissues about the hips and thighs should be made normally elastic. This is done by long stretching movements of the legs in the standing position and also by lying face down upon the floor or upon all fours, the hands being placed vertically under the bent-forward body and the legs alternately, one extended posteriorly, the body resting upon this and the two hands, and the other leg in a position in which the foot is extended up to or beyond the line of the hands. In this position a few swaying motions are made which render elastic the ligaments of the hip joints. Then the position of the legs is reversed and again the swaying motion is repeated. Then a sitting position is assumed upon the floor, the back being held straight and the toes seized by the hands, then each knee is raised and lowered until the posterior tendons of the knee and the lower ligaments of the hips and back are put upon the stretch and gradually acquire tolerance and elasticity. Then a position is taken lying on the back on the floor, the body fully extended, the arms folded over the chest, the head held suspended a few inches from the floor, and movements are then gradually made with the neck, which is forcibly flexed upon the chest and returned to a position just above the floor. In this way the abdominal muscles are exercised. A variety of other movements are then taken, too numerous to describe in detail, but perfectly familiar to any one accustomed to regulated movements, for the purpose of bringing into play the vertical and lateral abdominal muscles. Gradually other movements are undertaken, particularly those now to be described.

Still lying upon the floor or a flat, hard bed or couch, a pillow is placed under the hips, raising them several inches, or, whilst resting on the back of the neck and the heels, voluntary movements are made outward and inward by the abdominal muscles in an anteroposterior direction. Thus gravity aids the muscular action, and the viscera are pushed upward. It requires some time to gain control of these muscles, and when this is accomplished I make a great point of teaching the patient so to indraw the abdominal wall that the viscera are pulled upward and forcibly toward the diaphragm. The movements are repeated slowly and forcefully, not more than six to the minute, and it is interesting to note how large a degree of replacement of the abdominal contents can thus be accomplished in a few weeks. As the training progresses, the hips are raised higher until the body is almost in the Trendelenburg position, gravity thus assisting in the replacement. The gradually increasing force of the movements adds to the power of the muscles, and the tissues are literally pulled back into place, but so slowly and gradually that no harm can be done to their structures, and, indeed, much benefit results to their functional capacity.

It would be an easy matter to dilate more at length upon the character of the different motions which are rationally adapted to accomplish these objects, but perhaps enough has been said to make clear the line of procedure recommended.

This plan has served me so well that I have little hesitation in promising relief to those who fall into my hands, and in whom the visceral ptoses can be recognized.

As has been said, my experience has lain chiefly among neurasthenic patients and persons troubled with obesity or excessive abominal enlargements. Of these I have treated a large number. Many of them are people far from young, and some of advanced age. I am struck with one fact very forcibly, viz., that regulated exercises are not only entirely suitable for people well on in years, but among these I find the largest degree of relief to many vague disorders and painful states which had otherwise escaped relief. When these can be recognized as due to disturbance of circulation of the abdominal organs, not only are the viscera replaced, if out of their normal positions, but their functional activities, if impaired, are conspicuously restored. One group of cases which has given me very gratifying and surprising results are such as exhibited evidences of sclerosis. In these, whatever causes improvement in the elasticity of the gross structures and fuller interchange of the circulatory activities, this also produces marked functional improvement.

ON THE PRACTICAL RESULTS OF ACTINOTHERAPY.*

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Actinic or chemical light has been employed as a remedial agent for a number of years by various investigators and with results that, upon the whole and in suitable cases, have been eminently satisfactory. That there are differences of opinion as regards methods and discrepancies as regards attainments is not surprising and is rather hopeful than otherwise for the future of the therapeutic method. The excessive enthusiasm that greets a marvelous cure-all is but too liable to be followed by a depression that leads to the neglect of valuable therapeutic agents. Actinotherapy has been in the evolutionary stage, and it has only lately become possible to say much that is authoritative concerning the value of its remedial action, the indications for and limitations of its use and the best methods of its application.

The literature of the subject is now, indeed, fairly extensive; but, unfortunately, it is of such a character as to be hardly available for general employment. Leaving out of consideration a number of publications upon technique, instrumentation, &c., and confining our attention to those dealing with the therapeutics of the method, we find that there are a few general publications such as those of Dittrich[1] and Strebel[2] [3] in German and that of Regnier[4] in French; together with Finsen's[5] own reports, of which only a few stray articles have been translated into English by Sequiera[6]. Over and above this, these "Mitteilungen" are exactly what their name implies, disconnected reports and essays upon various phases of the light-treatment and subjects conected therewith. My own publications, and those made with Dr. Franklin[7], [8], [9], have necessarily been of a similar nature. The rest of the material is scattered about in European and, to a small extent, in American, medical journals, and is not readily accessible to students.

The numerous inquiries that I have received regarding the literature of actinotherapy leads me to believe that a brief résumé of the subject will be found useful. As stated above, I shall omit all considerations as to the nature and effect of the ultraviolet light rays and the means of employing them, confining myself entirely to publications dealing with therapeutic indications and results.

The employment of the electric arc for therapeutic purposes was first proposed by Friedländer, in 1896; but Niels R. Finsen, of Copenhagen, was the originator of the method and the constructor of the first practical apparatus for the purpose. On the basis of the very marked bactericidal action of the violet and ultraviolet spectral rays upon pathogenic organisms on the one hand, and their stimulating and tissue-metamorphosis favoring effects upon the other, he began their employment upon tubercular affections of the general integument and, more especially, on cases of lupus vulgaris. This is a very common malady upon the Continent of Europe, and is of the greatest importance from the facts that its most frequent site is on the face, that it is extremely chronic and reluctant to treatment, and that it often leads to most terrible deformity and disability. So great was Finsen's success that he soon enlisted the assistance of other workers, amongst whom Bie, Bang, Forchhammer, Larsen and the well-known dermatologist, Haslund, may be mentioned. The attention of the Danish government was drawn to it, and, finally, most efficient help rendered him by the latter. Government subvention and private aid gradually enabled Finsen to extend the field of his operations; and, at the present moment, he is at the head of a very large and elaborate light-treatment institute in Copenhagen, in which hundreds of patients from all parts of the world are treated, and which has served as the prototype and model for the various other establishments that have sprung up.

The method soon attracted the attention of dermatologists in other countries, amongst whom Strebel, von Ziemssen, Schmidt, Minin, Lindemann, Schuler, Ernst Hellmer, Ullmann, Sjögren, Jersild, Lesser, Gerson and Max Helm in Germany; Gaston, Baudoin, Chatin, Leredde, Pautrier and Du Castel in France; Blacker, Sequiera and Malcom Morris in England; Veljaminoff and Gelbowsky in Russia, Ginni in Italy; and Ravogli and Stellwagon in this country, have published the results of their investigations. It has gradually been widened in application, being applied first to the other forms of cutaneous tuberculosis, tuberculosis cutis verrucosa, tubercular ulcer, and post mortem tubercle; next to lupus erythematosus, held by many to be of similar origin to the former affections; then to ulcers of septic, specific and traumatic origins; to the parasitic skin diseases, ringworm, favus, pityriasis versicolor, sycosis and impetigo contagiosa, to inflammations, eczema, acne vulgaris, rosacea; to tumors of unknown origin, carcinoma and epithelioma, and also to alopecia areata, psoriasis, keloid and nevus.

By almost all of these investigators the employment of the method has been limited to cutaneous and subcutaneous affections; yet, it has occurred to more than one of them that it might be found useful in deeper seated troubles. That the tissues and organs are pervious to the chemical rays when of sufficient intensity is proved by transillumination, and also by the experiments which, in conjunction with Dr. Franklin, I published in the *Medical Record* of April 19, 1902. Little or nothing in the way of practical work has yet been done in that direction, with the exception of the experiments of Hopkins. It seems probable that there is a field for it in the treatment of tubercular and cancerous infections, and chronic inflammations of the intestinal organs.

It will be convenient to consider in order the various affections in which actinotherapy has been employed.

1. *Lupus vulgaris and tuberculosis cutis in its various forms.* Finsen, himself, is, of course, the great authority on the treatment in this class of affections, the number of cases treated in his insti-

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*Read before the Tri-State Medical Society, Birmingham, Alabama. October 9, 1902.

tute being many times greater than at any other place. But evidence similar to his comes from all parts of the world, demonstrating beyond peradventure that actinotherapy, properly applied, is the best conservative treatment for this entire class of affections. It is not so radical as the excision advocated by Lang and his pupils, nor so rapid as the various cauterant methods so long in vogue; but it has so many distinct advantages that it is the method of election in all cases in which it can be applied. In the first place, it is sure; all the cutaneous tuberculoses can be cured by its means, and so convinced are some authorities of its certainty in this respect that they regard its failure as an evidence of a mistake in diagnosis. It is absolutely painless and safe; thousands of cases have now been treated without the occurrence of a single accident; there is no alopecia, no dermatitis, no ulceration. Finally, it is eminently conservative; and this is a point of no small importance when we consider that the face is the portion of the body usually involved, and that young individuals are most commonly affected. The very slightest amount of tissue absorption compatible with the disappearance of the new growth is effected; the cicatricial tissue is often hardly apparent; and all the cosmetic horrors incident to destruction of the skin of the face and to flap or Thiersch transplantations in that locality are avoided.

The last available report of the Finsen Institute dates from 1901; and it is evident from notices that have appeared from time to time in the medical press that its work has greatly increased, perhaps doubled, during the year that has elapsed since then. The total number of lupus vulgaris patients treated (from 1896 to 1901) was 454. In 26 of these treatment was discontinued for various reasons: 10 died, (7 from tuberculosis of the lungs, one from cancer, one from heart disease and one after a laparotomy), 5 stopped on account of advanced tuberculosis of the lungs, and 11 for various private reasons. Of the 428 remaining 307 have been cured and 121 were still under treatment at the time the report was made.

Seven patients with cutaneous tuberculosis other than lupus were treated; 3 of these were afflicted with tuberculosis cutis verrucosa, of which 2 were cured and one stopped treatment. One with tuberculous ulceration was still under treatment; and 3 with "scrofulous gummata" were apparently unaffected by the applications.

Gaston, Baudoin and Chatin[10] reported to the French Dermatological Society on 121 patients with cutaneous tuberculosis treated at the Hospital Saint Louis by actinotherapy; 78 of these were tubercular lupus and 18 were tuberculosis cutis and lupus vorax. As is usually the case in dispensary practice, a certain number of these patients disappeared after short periods of treatment, so that only 30 lupus and 6 tuberculosis cutis patients completed the course. Of the lupus patients 11 were completely, and 12 partially, cured; in 7 there was no result. Of the 6 tuberculosis cutis patients one only was cured.

Leredde and Pautrier[11] report on 43 severe cases of lupus vulgaris, 8 of which have been completely, and 7 almost, cured, whilst the rest were still under treatment at the time of writing. These were all old cases, in which the most varied remedies had been ineffectually tried in the past.

Ravogloi[12] reports a case of lupus vulgaris of the ear and eyelid cured in six applications, and a tuberculous ulceration of the back of three years' standing cured by a longer course of the same treatment.

Blacker and Sequiera[13] at the British Medical Association meeting at Cheltenham report similar good results in this class of dermatoses, and Morris and other speakers agreed with the reporters.

It would lead us too far to recount all the various articles, hence a brief mention of the writers must suffice. Results in these affections, entirely similar to the above, have been recorded by Gelbowsky[14], Ullmann[15], Forchhammer[16], Max Helm[17], Veljaminoff[18], von Ziemssen[19], Du Castel[20],, Schmidt[21], Petersen[22] and many others. The patients cured now number many hundreds, and the method has entirely passed the experimental stage in this class of diseases.

2. *Lupus erythematosus.*—This is regarded as a tubercular disease in many quarters, and, though I do not believe that this has been at all proven, the results of actinotherapy have been very encouraging in this obstinate and disappointing malady. Finsen reports 31 cases treated, with 11 recoveries; 10 were still under treatment. Leredde and Pautrier[11] treated 23 patients; in 3 there was complete failure; 3 others were improved; in 6, isolated patches were cured, and 11 were entirely cured. These authors give some particulars concerning the previous treatment that these patients had been subjected to, which gives us a good idea of their recalcitrancy and enables us to estimate the actinotherapeutic results at their true value. They had had 802 galvanocaustic seances, 382 scarifications and 462 high-frequency current sessions, without the cure of a single patch.

Ravogli[12] has successfully treated a case in a patient of nine years' standing, in which the nose and both cheeks were involved. Gaston, Baudoin and Chatin[10] report 10 cases, with three complete and seven partial cures. Similar experiences are recorded by Helm[17], Veljaminoff[18], Leredde[23] and Sjögren[24]. About one-third of the cases of lupus of this variety are curable by the method. This is by no means unsatisfactory in a malady that is but too frequently entirely intractable.

3. *Alopecia areata.*—Whatever our ideas as to the etiology of this affection, it cannot be denied that, whilst, in some cases, the baldness remains localized in one or two spots that do not increase beyond a moderate size, in very many others there is a constant tendency to increase in growth of the old, and the appearance of new hairless areas. In the beginning it is quite impossible to determine which class a given case will belong to. There is a sufficient basis for the theory of the parasitic origin of some of the cases, at all events, and antiparasitic and stimulating remedies have long been the mainstay of the local treatment. Actinotherapy would, therefore, seem well suited to it, and the results obtained by the few observers who have

employed it demonstrate the correctness of this view. Finsen[5] reports on 29 cases, with 22 cures; one was still under treatment, and in the remaining 6 treatment had been stopped for various reasons, mostly after but a very few seances.

Bang[25] and Helm[17] report similar good results. I have had occasion to treat only one patient by this method, in which I found that its action in limiting the peripheral spread of the affection and stimulating the hair follicles to a renewed and vigorous hairgrowth was very satisfactory, indeed. Jersild[26], however, has reported the best results. He had 6 patients; in some of them the new growth of hair appeared in ten days, and cure was complete in two months. Others took a longer time, up to 8 months; but there were no relapses. To those who are in the habit of dealing with this affection, these will seem very satisfactory results.

4. *Carcinoma, epithelioma and rodent ulcer.*—The data available under this heading is not abundant. Finsen[5] reports on 17 cases, with 8 good and 2 fair results; 7 patients stopped treatment for various reasons. With characteristic caution he records the 8 as "apparent" cures. In a later report by Bie[27], apparently concerning the same patients, 9 are recorded as apparently cured, and some of them had remained so after 2¼ years. Leredde[23] reports a patient with epithelioma, with 8 or 9 separate foci, cured in two months. Sjögren[24] had 10 patients with rodent ulcer and cancroid, 5 of which were cured; the other 5 were still under treatment at the time that the report was made. Blacker and Sequiera[13] reported good results in cancer at the British Medical Association meeting at Cheltenham, August, 1901, and similar testimony is borne by von Ziemssen[19], Petersen[22] and Helm[17]. I have had occasion to use it in one case only of rodent ulcer of the nose; improvement was progressing splendidly, when the patient, who lived in a distant town up the state, fell into the hands of a local advertising specialist and disappeared from observation.

5. *Acne and rosacea.*—The Finsen reports deal with 15 patients, of whom 4 were cured, 5 greatly improved and one is still under treatment; the remaining 5 discontinued treatment early. Many of the investigators mentioned above include acne and rosacea among the affections satisfactorily treated by actinotherapeusis, but none give any details, save Leredde[23], who cured 3 cases of rosacea that had resisted all other methods of treatment. I have employed it in the suppurative and indurated forms of acne on several patients; but, as they were all in young women, in whom it was of importance to clear off the face as rapidly as possible, I did not feel justified in neglecting general treatment, massage, currettage, etc., and hence, though the general results were good, I cannot ascribe them wholly to the light. Acne vulgaris, however, would seem to be especially suited to its action.

6. *Vegetable-parasitic diseases, ringworm, favus, pityriasis versicolor and sycosis.*—Finsen's two cases of favus gave negative results, and of 6 ringworms of the scalp in children only 2 recent ones were cured. On the other hand, Leredde[23] cured a case of chronic sycosis with the light, and Gerson[28] and von Ziemssen[19] noted good results in ringworm, favus, sycosis and pityriasis versicolor. The field would seem to be a promising one, though but little has yet been done in it.

7. *Nevus.*—Leredde[23] claims to have had good success in various forms of this affection, as has also Bang[25] and Veljaminoff[18]. Of Finsen's 10 patients only one was cured, 7 were under treatment at the time that the report was made, and 2 had discontinued.

8. *Eczema.*—Hellmer[29] reports an extensive pustulocrustaceous case of two months' standing cured in 7 sessions, and Minin[30] obtained good results in chronic eczema of the face. Gerson[28] is also satisfied with the method in eczema. On the other hand, Finsen's 5 cases of eczema of the face are all reported as negative.

9. *Keloid.*—Malcolm Morris[31] has tried actinotherapy on a patient with acne keloid of the breast and back, but does not report on results. Finsen used it in one case, with negative results. The prospects of its usefulness in this affection are not bright, but the general hopelessness of other remedial measures would render further trial advisable.

10. *Ulcers.*—Peterson[22] has reported good results in atrophic ulceration, and Gerson[28] in some of septic and varicose origin. The inflammation and suppuration diminished rapidly; by the eighth session the edges had subsided, the fundus had usually cleared, granulation filled the cavity, and cicatrization had begun. I have found it a powerful aid to treatment of sluggish ulceration of syphilitic and other origin, though, of course, not suited to the more actively inflamed varieties of the affection.

In addition to this, the method has been employed in isolated cases of other affections, psoriasis, mycosis fungoides, etc., but not with results sufficiently definite and numerous to permit of reporting.

As stated in the beginning, it has hardly been used at all yet in the treatment of deeper-seated disease. The only report that I know of is that of Hopkins[32] on its employment in pulmonary tuberculosis. That the good effects of the open-air and sunlight treatment in this affection are due to these rays, in part at least, seems probable; and, in that case, there may be a field for actinic light which is well worthy of cultivation.

1. Dittrich, G.: "Lichtheilverfahren und seine Anwendung", Berlin, Steinitz, 1901.
2. Strebel, H.: "Die Verwendung des Lichtes in der Therapie", Seitz & Schrauer Munich, 1902.
3. Strebel, H.: "Die bisherigen Leistungen der Lichttherapie"; reprinted from "Berliner Klinik", February, 1902, Fischer, Berlin.
4. Regnier, L. R.: "Radiothérapie et Photothérapie", J. B. Balliere et fils, Paris, 1902.
5. Finsen, Niels R.: "Mitteilungen aus Finsen's Lysinstitut in Kopenhagen", translated by Valdemar Bie; F. C. W. Vogel, Leipzig, 1899, 1900, 1901.
6. Sequiera: Phototherapy; Edw. Arnold London, 1901.
7. Gottheil, W. S.: "Actinotherapy in Cutaneous Medicine; a Preliminary Communication": The Medical News, July 6, 1901.
8. Gottheil and Franklin: "On the Penetration of the Human Body by Actinic Light", Medical Record April, 1902.
9. Gottheil and Franklin: "Some Considerations on Actinotherapy"; The American Therapist, June, 1902.
10. Gaston Boudoin, & Chatin: Annales de Dermatologie et de Syphilographie, April 1902.
11. Leredde & Pautrier; Annales de Dermatologie et de Syphilographie, April, 1902.
12. Ravogli: Cincinnati Lancet-Clinic, November 9, 1901.
13. Blacker & Sequiera: Annales de Dermatologie et de Syphilographie, July-August, 1901.
14. Gelbowsky: Monatshefte für praktische Dermatologie, Oct. 15, 1901.
15. Ullmann, C.: Wiener medicinische Presse, Nos. 20 and 21, 1900.
16. Forchhammer; Dermatologisches Centralblatt, February, 1902.

17. Helm, Max: Deutsche Medicinal-Zeitung, No. 100, 1900.
18. Veljaminoff; Russky Vratch, January and February, 1902.
19. Von Ziemssen; Festschrift zur Feier des 50-jährigen Bestehens des ärztlichen Vereins Nürnbergs: Monatshefte für praktische Dermatologie, June 15 1902.
20. Du Castel: Annales deDermatologie et de Syphilographie, Apr., 1902.
21. Schmidt: Archiv für Dermatologie und Syphilis, March, 1902.
22. Petersen: Monatshefte für praktische Dermatologie, April 15, 1902.
23. Leredde: Presse Médicale, September 7, 1901.
24. Sjögren: Monatshefte für praktische Dermatologic, Nov. 15, 1901.
25. Bang Berliner klinische Wochenschrift, No. 49, 1901.
26. Jersild: Mitteilungen aus Finsen's Lysinstitut, 1900.
27. Bie: Dermatologische Zeitschrift, Vol. 7, No. 3.
28. Gerson; Archiv für Lichttherapie, Vol. 1, No. 3, 1899.
29. Hellmer, Ernst: Blätter für klinische Hydrotherapie, No. 7, 1901.
30. Mini , A. B.: Medicinische Woche, No. 12, 1901.
31. Morris, Malcom: British Journal of Dermatology, August, 1900.
82. Hopkins, Philadelphia Medical Journal, September 21, 1901.

TREATMENT OF MALIGNANT GROWTHS WITH THE X-RAYS.

By WILLIAM S. NEWCOMET, M. D.,
of Philadelphia.

The results from the X-ray treatment of malignant growths give us a hope that in the future we will have a method to relieve these sufferers and perhaps cure a certain number of them. In certain classes of malignant growths, such as lupus and surface epithenomata, the results have been uniformly good in early and uncomplicated cases, and even in those in which the disease has passed an operative measure. But when the disease has advanced so far that the patient suffers from exhaustion, little hope can be entertained for that person's recovery, yet temporary improvement sometimes occurs.

Some authors believe that the rays have a selective tendency for certain cells and that, in this instance, the cancer cell is the one that has the least resistance and, therefore, dies. This theory, however, is possibly not altogether satisfactory, and it is entirely too early to theorize until we understand the X-rays both in quality and quantity. No doubt, in the future, when the quality and quantity of the X-rays are better understood, the results in the treatment of these cases will be even better than they are now, and that their application will become useful in other forms of malignancy.

In cases of secondary recurrence of carcinoma of the breast, in which the degeneration of tissue is usually very rapid and further operation impossible, the X-rays were used in three cases, in two of which the results were favorable, while in the third the result was thought to be a failure until one of the patient's attendants said that, when this form of treatment was not used, the disease advanced with more rapidity. This statement has, therefore, modified the original conclusions.

K. G., was admitted to the hospital on the 19th. of January, discharged on the 16th. of February. The tumor in her breast was diagnosed as carcinoma, it was about the size of a walnut On the 20th. the breast was amputated and the axillary glands were removed. The wound healed without complications: during her convalescence, however, she suffered from an attack of pleuropneumonia, and when she was able to get out of bed she found walking difficult: this has continued and lately has been getting worse. Dr. Chas. Potts believes it is due to a peripheral neuritis. In the early part of June the lower end of the scar began to pain, this gradually became worse until the whole area which was formerly occupied by the breast, pained her. In the early part of July this area started to ulcerate, and Fig. 1 shows the condition on the 28th. of July. The area formerly occupied by the breast was red and covered with wart-like granulations which bled easily: the induration of the skin (pig skin) extended almost to the posterior axillary line, the left arm was also swollen. Under the use of the X-rays this condition rapidly improved, the pain was noticeably less after the first treatment, the ulcerations healed in about three weeks, the edema of the arm disappeared, while the skin over the chest became less swollen, but it was still red and tender in places, it felt as if there were numerous pebbles under the surface which differed in size from a small pea to a hazelnut.

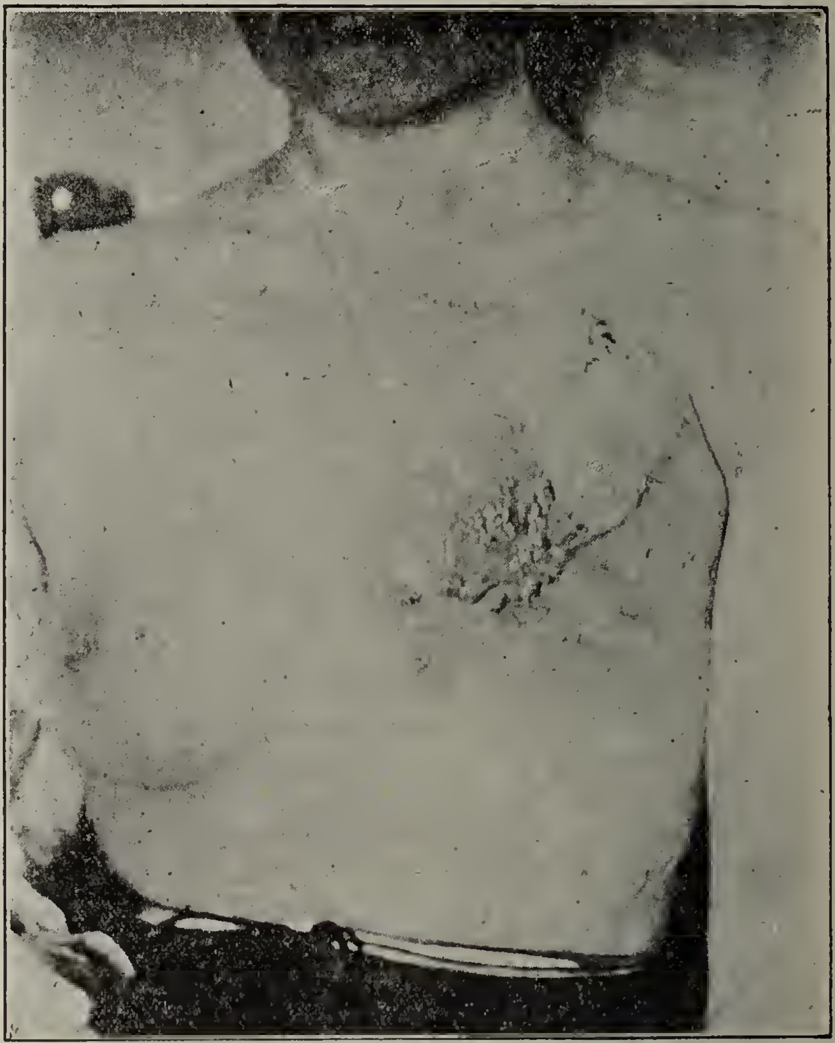

FIG. I.

Mrs. E. Carcinoma of the breast. In the early part of 1899 the patient noticed that there was a small nodule in her right breast, but little attention was given to it until the early part of 1901, when several enlarged glands were noticed in the right axilla. At this time the tumor in her breast had developed to the size of a walnut. In February (1901) Dr. Wharton removed the breast and cleared the axilla of the involved glands. The wound healed without complication and remained healthy until the early part of this year, when it became red and somewhat painful, as it did before the operation: a few months later, however, another small tumor developed in the axillary fold, and a small ulcer made its appearance on the line of the incision, the arm also began to swell. In the middle of June (1902) this ulcer was about the size of a dollar. It was then exposed to the X-rays, and by the first week of August it was healed, all but a small spot about the size of a pea: it then received no treatment for three weeks, during which time it again broke down to the size of a five cent piece. The X-rays were again employed, and at present it is almost entirely healed. The lump under her arm is somewhat smaller. The interesting feature in this case is that it was apparently cured, in so far as the ulceration was concerned, and that the drawing pain, of which these patients usually complain, disappearerd when the X-rays were used. (See Fig. 2).

The third patient, a woman, with carcinoma of the breast and involvement of the mediastinum. The X-rays were used for their effect upon these deep-seated glands: owing to surroundings regular treatment could not be given, and, hence, treatment in this case was unsatisfactory from both standpoints.

This illustrates a severe case:

Miss X, 79 years of age, epithelioma of the lower eyelid of several years' standing, it had received only ordinary treatment, as she would not permit any operative interference. The ulceration was about ½-inch wide, 1½ inches

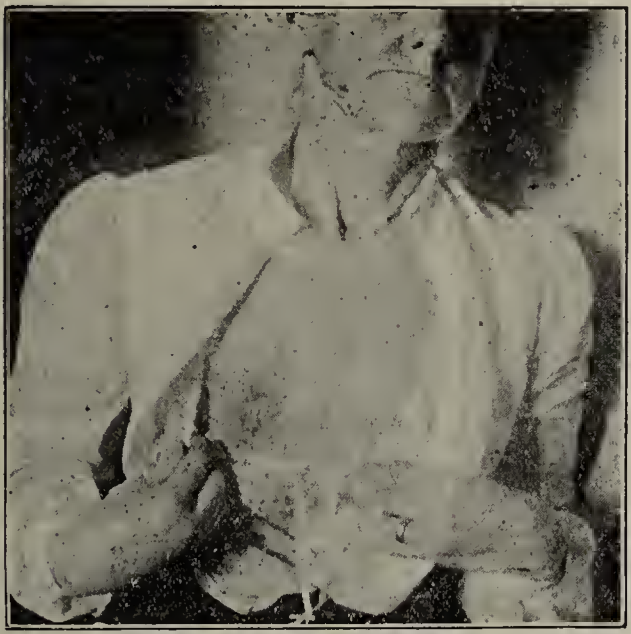

FIG. II.

long and about ⅜ of an inch deep. Ectropion was marked, the upper lid scarcely meeting the lower. After it had been exposed to the X-rays for about 3 weeks it was almost completely healed, except for a small area in the outer corner. In 6 weeks it was entirely well.

Mrs. W. Epithelioma of the right orbit. About 22 years ago a small wart appeared on the lower eyelid, at times it became very red, it gradually became larger and began to pain. She then tried several pastes, but, despite this fact the disease continued to progress. On several occasions she visited the different hospitals where they curretted the ulcer. This procedure afforded temporary relief only. The disease extended throughout the whole orbit; and about 2 years ago she noticed that the sight in the involved eye was lost. The pain had become very intense. In February, 1902, Dr. Wharton removed the remaining diseased eye and curetted the ulcer. She was then put under X-ray treatment. After a few applications of the X-rays the pain in the orbit was decidedly less, and under this treatment the wound gradually healed. From time to time, however, it showed some tendency to ulcerate, but this has yielded to light-treatment with the rays.

The general practitioner knows more than the rest of our professional brethren of the distress that is occasioned by the recurrences of carcinoma of the breast and also of the uterus. Although, as yet, the results are not as pleasing as they might be, but temporary relief is afforded these patients, and in cases that are past operation, even if the rays do not benefit or heal the ulceration, the relief from pain that they afford would recommend their application.

Another point that has been brought out by some operators is how these malignant ulcerations will heal with comparatively little loss of tissue and, therefore, little scarring. Simple ulcers of the same size would produce three or four times the amount of puckering or pitting as do malignant processes healed by the X-rays. This is well illustrated in the case of Miss X.

Unfortunately, the photographs of several other patients that were intended for this paper were mislaid. They were of:

A man, about 50 years of age, with an epithelioma of the face, involving the entire right side. No result was obtained from treatment as the patient was then suffering from exhaustion.

Mrs. K. McK. Epithelioma of the forehead, 2x3 inches; had undergone a previous operation. Resulted in complete healing.

Mrs. J. Small epithelioma of the forehead. Treatment was irregular and no result was obtained.

Malignant disease of the female breast. Result good.

URINE SEGREGATION, ITS IMPORTANCE AND METHODS.*

A NEW SEGREGATOR.

By ANDREW J. DOWNES, A. M., M. D.,
of Philadelphia.
Gynecologist to St. Mary's Hospital.

Renal surgery after accurate diagnostic data is of recent date, and nephrectomy is comparatively less common, although still more often performed than necessary. A pyonephritic kidney, calculous or not, no matter how advanced the stage, has few macroscopical indications for its removal. The functional co-efficient of the opposite kidney must be known. Tubercular kidney indicates nephrectomy, but the question of when is very important. Surely not when the opposite kidney is in the state of congestion and secreting very little urine or when its urea co-efficient is much too low. The recent surgical knowledge of Bright's disease will prove of little use until the anti- and post-operative individual kidney action is easily and safely obtained. The examination of each kidney through a separate loin incision gives a poor idea of functional capacity. Indicative judgment based on such inspection is fallacious. The relative increased functional activity of the mobile, irritable kidney over its mate, as evidenced by the individual kidney flow, and the secondary changes in the affected side, as found from the chemical and microscopical examinations of the segregated urines, should be known before operation.

The above are a few from the many known facts proving the very great importance of a practical and safe method for obtaining the urines separately.

Two methods only are worthy of discussion: Ureteral catheterization and urine segregation. Catheterization of the ureters is not as practical as it should be, and, besides, it is not free from danger. A catheter when not made of metal is difficult of sterilization. There is generally slight traumatism of the ureter from the introduction of the catheter, and, in a small percentage of cases, a few bloodcells escape. If the ureteral catheter is small, there may be an escape of urine from the ureter alongside of it. If, as is very often done, but one ureter is catheterized and the urine collected from the bladder is taken as the product of the other kidney, our findings may be incorrect. In tubercular disease of one kidney with, as is usual, tubercular lesions of the bladder, the introduction of catheters into the healthy side should be avoided, if possible. To catheterize the ureters requires more than common expertness, as many noted genito-urinary surgeons admit. In ward patients it is very expensive, hence catheters cannot be used often. I admit the many indications for its use, and the great expertness of some surgeons with the ureteral catheter, but believe that the very frequent necessity of study of the individual kidney urines and its frequent repetition in the same case calls for a simpler and more commonly useful means, which is found in the urine segregator. The chief object of this paper is to call attention to the practicability of urine segregation; the value of the data obtained thereby, the development of the instruments, and to introduce a newer and more perfect model of my urine siphon-segregator. Brief reference to the development of segregators is in order. In April, 1879, Dr. A. Neumann, of Berlin, published an article in the *Deutsche medicinische Wochenschrift,* describing a method by which he segregated the urines of a woman with cancer of one kidney. His instrument, called "Harnscheide," consisted of a tube with a central partition through it, with outlets for each side at the extravesical end. The bladder end had perforations on each side as points of entrance for the separate urines. The instrument was inserted within the bladder to rest on the middle line (anteroposterior) above the middle of the upper wall of the vagina. The index finger was inserted into the vagina to press the floor of the bladder against the contained double-cavity tube. There was thus obtained a way for the urine from the separated ureters to be collected without admixture. Later a metal partition rod in the vagina replaced the use of the finger. The instrument could not be used in the male and was not practical in the female, yet its development required nearly all the necessary ideas involved in the construction of a segregator. Closely following Neumann's "Harnscheide" came the Harris segregator. This instrument has separated revolving beaks at the bladder endings of the double-barreled shaft. The terminals of this instrument are connected with a suction apparatus. The exhaust is necessary in this instrument, as Dr. Harris has fully proven, but this makes it cumbersome and less practical. The third instrument for collecting the separate urines was my own, first exhibited in February, 1900, and called the "Separate Urines Siphon." It was an improvement on the Harris instrument, was simpler in construction, required no suction apparatus and introduced a new feature—siphonage alone for obtaining the urine from the divided bladder. Subsequently the beak ends were surrounded by an outer perforated shell, the perforations in the shell having no connection with the one ingress opening in the extreme end of each beak. In the new beaks with the outer perforated shell the urine at all levels found perforations which conducted it to the bottom of the prepared sulcus, from which it was siphoned out. In this model the beaks rotated within the bladder, each nearly a half-circle. Lately I have constructed a new-shaped beak that obviates the necessity of rotation within the bladder. The separate beaks turn each a maximum of 21½ degrees from the lower, anteroposterior line of the bladder. The curve of the lower wall of the bladder from the internal orifice of the urethra is closely followed by the united beaks and by them when separated. The perforations in the beaks have no connection with the one egress opening, their function being to allow the passage of urine to the bottom of the prepared sulcus, from which the egress opening collects it by siphonage. A pertinent question is: How can the separation of the bladder by this instrument into two pouches, each with a separate ureter emptying into it, from which urine is siphoned out unmixed, be proved? I have two patients, each with one kidney only. With my instrument in the bladder urine comes from the kidney side only. It has been tested by placing a catheter in one ureter and obtaining, with the instrument in position, urine from the one side, while the catheter conducted it from the other. Withdrawing the catheter, with the instrument still in position, identical urine, and at the same rate of flow, came from this side of the bladder. With my latest instrument, especially made for the purpose and with larger caliber tubing, I have proved it as follows:

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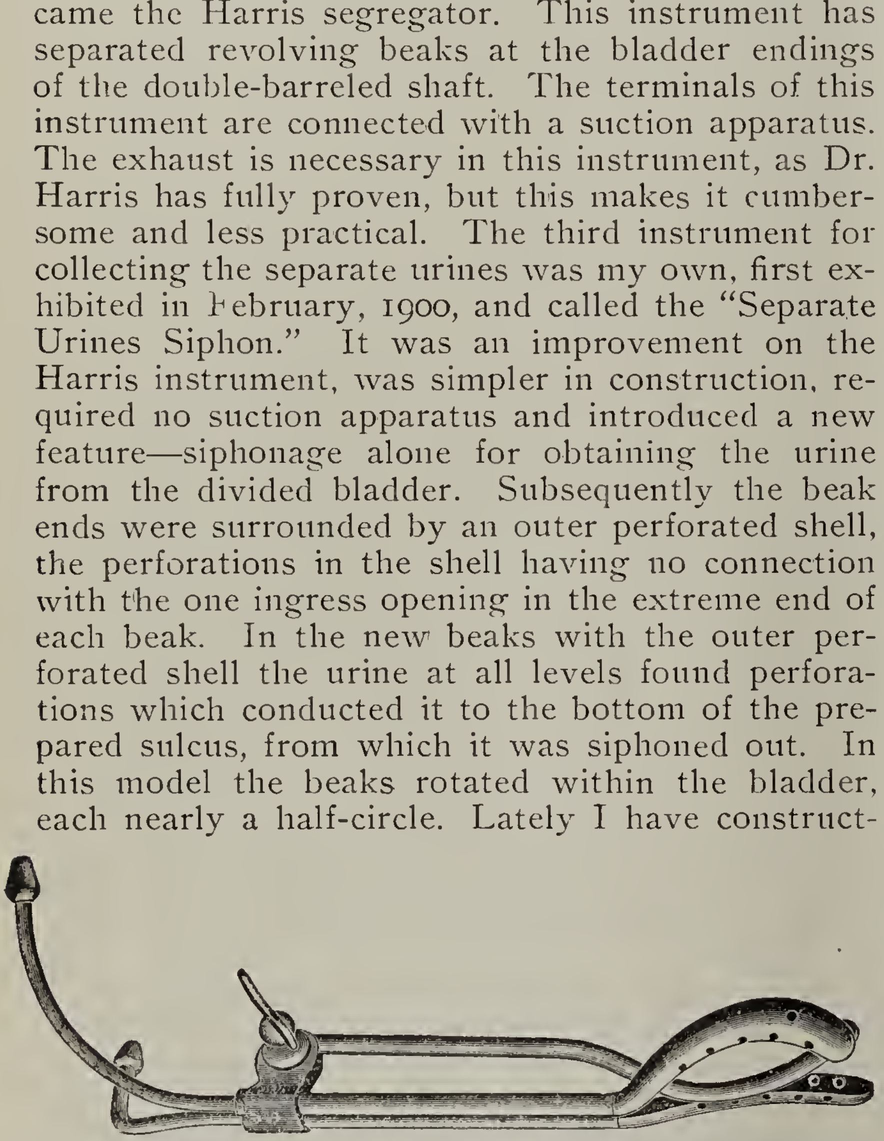
*Read at the meeting of the American Urological Association, Saratoga, June 13, '02.



A very fine ureteral catheter was inserted through one half of the segregator so that its tip reached the egress opening in the bladder end. The catheter was of such narrow caliber that fluid could escape alongside of it from the tube through which it passed. Through the catheter a little methylene blue was inserted into one side of the bladder, thereafter blue-tinged fluid flowed for some time from the side of the segregator through which the catheter passed. In this experiment but a very few drops at a time of the blue solution should be deposited in the side of the bladder to be tested. The great objection to urine segregation and in favor of ureteral catheterization is that by the former we have bladder contamination and that we cannot make a bacteriological examination of the urine as it comes from the kidney. The specific gravity of the separate kidney urines, the reaction, the urea co efficient, the ureteral and kidney cells, the casts, crystals, salts and sugar are not altered by the brief contact with the bladder-wall. The cystoscopical examination, which should always precede segregation, warns us if blood is coming from the bladder-wall or from one or both ureters. With proper technique segregation in a nonbleeding bladder will not cause blood. The amount of albumin in the urine, as it emerges from the ureter, is so slightly increased, even in a purulent bladder, and so brief is the contact, that it may be neglected as a factor if a thorough segregation is being performed.

Addenda.- At the time of reading this paper I was under the impression that my latest model might prove as efficient for use on the male as the female. I had, however, developed it after use on the female. Since June I have become convinced that it is not as useful in the male bladder. The instrument has, therefore, been shortened for use in the female bladder alone. Its lessened length and lightness of the partition rod makes it possible for the patient to be in bed while her urines are being segregated, with little or no distress to her. For use in the male I advocate my original model, so made that the beak-ends are surrounded by a perforated shell.

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DISEASES OF THE BLOODVESSELS.

By T. L. COLEY. A. B., M. D.

of Philadelphia.

C. O. Hawthorne (1), presents the history of a girl suffering from **chlorosis** who developed a **double optic neuritis** and **diplopia**, the right external rectus being paralyzed. After a few weeks treatment complete recovery followed. The simultaneous development and disappearance of these two conditions would seem to indicate a common origin, and on account of their transient duration Hawthorne believes that the condition was due to an intracranial thrombosis. Welch has collected 82 instances of thrombosis occurring during the course of chlorosis, 78 of which were venous, 32 involving the cerebral sinuses. Southan (2), reports a case of **fat embolism after fracture** of the right tibia. Fat was present in the sputum and urine. On the day following injury the patient was unusually drowsy and developed delirium. His temperature rose to 100.4° F. Two days later he could be aroused only with the greatest difficulty. The base of the right lung showed evidence of consolidation. Gradually the mental symptoms disappeared and a good recovery followed. R. Sievers (3), reports a case of **embolism of the superior mesenteric artery** in a woman of 56. For 6 years she had suffered from disturbance of circulation, but the heart sounds are stated to have been clear though irregular. Suddenly, while at stool, she felt severe abdominal pains and was seized with nausea and vomiting. The clinical symptoms suggested intestinal obstruction. She died in 29 hours, and the autopsy revealed an **aneurysm of the descending aorta and an embolus, 6 cm. long, in the superior mesenteric artery.** A. P. Gould (4) points out that the **blood changes** which may bring about **thrombosis** are as follows: (1) A change in the corpuscles leading to their disintegration; (2) an increase in the viscosity of the platelets; (3) an increase in the fibrin ferment; and (4) an increased liberation of the fibrin ferment. The local conditions tending to produce thrombosis may be due to changes in the condition of the vessel walls and changes in the regular equable flow of the blood. R. E. Garrett (5) reports a case of **gangrene following thrombosis of the abdominal aorta** and its branches which occurred in an insane female patient of 34 years. She was suddenly seized with pain in the leg and was unable to stand or walk. The temperature rose to 100° F. Her pulse-rate ranged for several hours between 140 and 160 and the patient was semicomatose. Dry gangrene set in in the left foot. There was obliteration of the pulse on both sides from slightly above the bifurcation of the aorta to the popliteal artery. A hard nonpulsating cord was felt in the position of the femorals. Amputation was performed through the right thigh. The patient recovered. The amputated part revealed **thrombosis of the femoral and popliteal arteries.** J. Voight (6) reports a case of **lung embolism complicating placenta previa.** Version was performed and the child delivered alive. Three-quarters of an hour later intense dyspnea developed and finally collapse. There was every evidence of pulmonary embolism. The patient recovered from this seizure but suffered from a second and third similar attack. Ultimate recovery followed. Voight believes that the most important point in the treatment of pulmonary embolism is stimulation of the heart. A case of **embolism of the mesenteric artery** is reported by Alexander Lambert and W. B. Coley (7). B. R. Schenck (8) has analyzed 48 cases of **postoperative crural thrombosis** which he believes is more common after pelvic operations than is generally recognized. It occurs more frequently in those patients who have been operated upon for large tumors springing from the pelvic organs, and it **rarely** follows extrapelvic operation. It is not frequent after infected cases. The anemia and cachexia of patients seem to be factors in its etiology as well as traumatism at the time of operation. The pulse-curve of Singer **does not always** occur. Jules Comby (9) reports a case of **sinus thrombosis** in an infant of 13 months who had been suffering from diarrhea, vomiting and bronchitis. General contractures followed with deviation of the eyes and death with hyperpyrexia. Autopsy revealed **thrombosis of the meningeal, cerebral and ventricular veins with hemorrhagic thrombosis of the right renal vein and of all the sinuses of the dura.** Comby states that there may have been a primary thrombophlebitis, or the condition may have followed the small areas of bronchopneumonia present. A. P. Gould (10), in his first Lettsomian lecture, discusses certain points relating to **varicose veins.** In the study of 50 cases of this condition in the lower limb he found that in 41 it had developed before the age of 25. The majority of patients suffering from varix are robust. In a very great number of cases no evidence of venous obstruction in the part affected can be demonstrated at the onset of the disease, and Gould states that it is an error to accept enlargement of superficial veins as an indication of obstruction in the vein channels. The venous obstruction is to be sought in the affected part. Pregnancy has an influence upon the production of varices. Gould mentions that, if he had included in his series of cases all of the cases of varicocele, the sex-incidence would show much greater preponderance in men. In some cases there is conclusive evidence that a growth of the veins is present. To support this vein Gould details the report of several cases as demonstrating the occasional development in an adult of what may be considered venous angiomata. There are cases in which we have a combination of undoubted **venous nevus and varix** and other cases in which the condition may almost equally well be designated by either of these terms. In his second lecture Gould (11) discusses **obliterative arteritis**, a condition which has been practically neglected in our clinical studies. He does not regard the condition as rare as is generally supposed. The chief features of obliterative arteritis, which he considers scarcely a specific disease but rather a pathological effect of many causes, are: (1) The disease originates in the subendothelial layers of the tunica intima of the smaller arteries. In its early stages it is marked by a small cell infiltration, which later organizes into a loose and vascular connective tissue. (2) This growth narrows the lumen of the vessel and may entirely obliterate it; more often, however, thrombosis occurs and the organization of the clot completes the permanent occlusion of the artery. (3) The disease beginning in the smaller arteries tends to spread in a centripetal direction and may reach even the largest arteries. The thrombosis it excites also often extends rapidly and far toward the heart, much faster and further than the changes in the vessel wall, and the clot may thus spread as far as the aorta. (4) The earliest effect of tnis diseased artery is pain, then follow other evidences of local ischemia, and these may pass on to gangrene. These effects vary with the extent of the vascular obstruction and the efficiency of nature's means of compensation. (5) The disease may be very chronic, slowly progressing for years, or it may run a much more rapid course. Having reached a certain point, arrest may occur and the symptoms may gradually pass away, as the unaffected vessels become more and more efficient substitutes for those that have been occluded. (6) The disease arrested for a time may afterward recur in the vessels of the same limb or elsewhere, and it may attack more than one vascular area simultaneously. (7) The vascular changes are not always limited to the arteries and endophlebitis may precede or accompany the endarteritis, and the venous obstruction then modifies the effect produced on the tissues. C. L. Allen (12) discusses the **effect of arteriosclerosis on the nervous system**, from the point of view of the symptoms produced. While all the arteries of the body may be affected by the sclerotic process, next to the aorta and the renal arteries in liability to attack are to be placed the cerebral vessels. The process affecting the media interferes with the action of the vasomotor nerves on the caliber of the vessels and consequently with regulation of the bloodflow to different organs. The narrowing of the lumen through changes in the intima causes a functional insufficiency of bloodsupply. This has been termed **meiopragia**, by Huchard, which plays an important role in the subject of **arterial sclerosis**. In no organ is an intact bloodsupply more essential than in the nervous system, and Allen discusses these symptoms as evidences of a **meiopragia affecting the nervous system.** I. Adler (13) believes that **diet** plays an important role as a **prophylactic measure** and a possible means of arresting the progress of **arteriosclerosis**. The sclerotic process may begin in the smallest vessels, and it is without exception associated with indurative processes of the tissues and organs. It may begin as a purely local process in the heart, kidney and brain and gradully become generalized. It is by no means always a disease of advanced age, but it may make its appearance at any period of life, even in infancy and childhood. It is possible that chemical change may be an important factor in its etiology, and we recognize at present, beside the senile forms of the disease, arteriosclerotic conditions produced by various toxic influences. James M. Anders (14) reports 2 cases of **sudden death in aortic stenosis.** At the necropsies it was found that one was complicated with an **aneurysm-like dilatation of the aorta at its root and marked stenosis of this vessel beyond the dilatation.** Anders gives Burke's anatomical and clinical arrangement of diminution in the caliber of the aorta: (1) Anatomical changes (a) in the heart, a left-sided hypertrophy, to which may subsequently be added dilatation of the left ventricle and auricle, signs of chronic pulmonary congestion, hypertrophy and, perhaps, dilatation of the right ventricle; (b) in the arteries, an arteriosclerosis in young subjects as an expression of long-continued elevation of bloodpressure; (2) clinical appearance, paleness of the face, a feeling of oppression in the chest, cough with catarrhal expectoration, signs of dilatation, hypertrophy and insufficiency, expansion of the boundries of the lungs, chronic bronchitis, increased weakness of the right ventricle, enlargement of the liver, albuminuria, general edema. In women this condition leads to a primary or even a pernicious anemia. In men we have a picture of actual cardiac disease. Joseph Krzyszkowski (15) has collected the histories of 10 cases of aneurysm of the pulmonary artery published with anatomical description, and he reports an additional case of a girl of 17, who died suddenly with hemoptysis. The autopsy showed an aneurysm of 2½ cm. from the origin of the pulmonary artery, changes in the wall of the artery, with a defect of the intima and media. There were many small aneurysms of the pulmonary capillaries, with infarcts, most marked in the left lung, and a persistent ductus Botalli. This persistent ductus Botalli, Krzyszkowski considers the cause of the aneurysm formation, from the increase in the local bloodpressure which it occasioned. The smaller aneurysms were probably due to sclerosis. Huchard and Bergouignan (16) report a case of **vegetative endocarditis with ulcerative aortitis and a small aneurysm of the abdominal aorta** close to its bifurcation. Huchard states that the infectious diseases can produce **circumscribed arteritis and emboli, with the formation of an acute aneurysm**; that the aneurysm may occur rapidly from chronic aortitis during an infectious disease; that infectious diseases may cause subacute or chronic aneurysm formations years afterward; and that circumscribed or pre-aneurysmal ulcerative arteritis may be due to emboli or to the invasion of the arterial coats by different micro-organisms. W. L. Dickinson (17) directs attention to **hypoplasia of the aorta as a cause of aneurysm.** He reports 4 cases in which hypoplasia of the aorta and aneurysm were associated conditions. He states that, out of 2,500 post mortem examinations performed at the St. George's Hospital, only 3 or 4 cases of hypoplasia have been noticed by himself or succeeding pathologists. James D. Morgan (18), discussing the **frequency of aortic aneurysm,** states that the condition occurs most often on the ascending aorta, next on the arch of the aorta, innominate and subclavian arteries, descending aorta and, last, on the abdominal aorta. The ascending aorta and arch are affected twice as frequently as the descending aorta and 3 times as frequently as the abdominal aorta. Women are rarely affected, and the condition is never observed in old age. Physical signs may be altogether absent. Therefore the condition is often not recognized. Cecil. Wall and Walker (19) have offered **an explanation of the cause of inequality of the pupils in cases of thoracic aneurysm.** Upon clinical observations and experimental evidence they believe that inequality of pupils associated with thoracic aneurysm **is usually due to inequality of the bloodpressure in the ophthalmic artery,** resulting from an abnormal vascular condition. They give a number of reasons for the conclusion that the anisocoria is not due to interference with the sympathetic. Frederick Treves (20) states that the introduction of the small caliber bullet into warfare has once more made **arteriovenous aneurysms** as familiar as they were in the past when bleeding was so indiscriminately practised. Spontaneous cure does not occur. The prognosis is more favorable in the **varicose aneurysm** than in the **aneurysmal varix.** The mortality from arteriovenous aneurysm is not so high as from aneurysm in which the artery alone is implicated. Prompt surgical intervention is strongly recommended. H. W. Page (21) has reported an interesting case of **ruptured gluteal aneurysm** which was incised, the clot evacuated, and the vessel of supply with difficulty controlled while the abdomen was opened and the internal iliac artery ligated. The patient died of pneumonia several days after the operation. The abdominal wound had healed primarily, but the gluteal wound suppurated. Reinhold (22) has reported 2 interesting cases of **rupture of an aneurysm of the ascending aorta into the superior vena cava.** In the first case a woman who had for years suffered from palpitation of the heart suddenly developed weakness and vertigo, then swelling of the neck, face and arms, cyanosis and edema of these parts, but the lower portion of the body remained pale and shrunken. There was a loud systolic murmur over the heart, very powerful pulsation of the abdominal aorta and distinct pulsation to the right of the sternum in the third interspace. The diagnosis was confirmed at autopsy. In the second case, that of a man of 66 years, who had had dyspnea for 3 months, the patient suddenly became much worse and developed edema of the upper half of the body and greatly enlarged veins on the thorax. The heart was greatly enlarged, but there was no pulsation to the right of the sternum. A loud systolic murmur was heard at this point; there was no venous pulse in the neck. This patient lived nearly a month after rupture of an aneurysm of the ascending aorta into the descending vena cava. The first patient lived but two days after rupture. Cecil Birt (23), discussing the **treatment of traumatic aneurysm,** states that the usual rule of tying both ends of the arteries meets with certain difficulties in cases of diffuse traumatic aneurysm in the axilla, especially in gunshot injuries. He reports 6 cases which show that the ligature or the proximal portion of the arteries alone is sufficient to bring about recovery in each case. T. Tuffier (24) states that owing to the difficulties encountered by the surgeon in the effort to reach an aneurysm of the descending arch of the aorta such cases are not operable. Neither can an aneurysm be isolated when it is very large and adherent to all the organs of the mediastinum, and it would be impossible to extirpate it in case of total ectasia of the artery or if too large an extent of wall is involved. After a full consideration of the subject he concludes that **sac-shaped aneurysms are the only ones** in which surgical treatment is indicated, and only those in which the moderate size encourages the hope of complete obliteration by the procedure. But few papers have appeared bearing upon the treatment of diseases of the bloodvessels other than surgical treatment. Lauder Brunton (25) in cases of **chronic arterial hypertension** has had good results from a combination of nitrites and nitrates. Jodlbauer (26) has made a study of the **action of iodine preparations in arteriosclerosis** and believes that the efficiency of such drugs depends upon their ability to reduce the bloodpressure. H. Foeder (27) is the author of an interesting account of the **histogenesis of bloodvessels**. He concludes that the junction of bloodvessels at acute angles is physiologically necessary according to statical and mechanical rules, as formulated by Roux and Thoma: that this angle is always about 33 degrees in the newborn infant; that the formation of a valve-like lamella is functionally needed; that the same rules explain the structure of the arterial vessels, especially their rich elastic and muscular elements; that the structure of Botallo's duct explains its function, and, finally, that from Roeder's investigations the coincidence of the greatest amount of executive ability with the smallest amount of tissue material in the anatomical structure of the arterial system can be understood.

REFERENCES.

1. British Medical Journal, February 8, 1902.
2. Lancet, May 3, 1902.
3. Berliner klinische Wochenschrift, March 3, 1902.
4. Lancet June 7, 1902.
5. Journal of the American Medical Association, June 2, 1902.
6. Münchener med. Wochenschrift, May 6, 1902.
7. Medical News, September 6, 1902.
8. New York Medical Journal, September 6, 1902.
9. Archives de Médecine des Enfants, May, 1902.
10. Lancet, March 1, 1902.
11. Lancet, March 15, 1902.
12. Philadelphia Medical Journal, March 29, 1902.
13. Medical Record, May 10, 1902.
14. Medical News, May 10, 1902.
15. Wiener klinische Wochenschrift, January 23, 1902.
16. Journal des Praticiens, January 4, 1902.
17. Lancet, August 9, 1902.
18. New York Medical Journal, August 16, 1902.
19. Lancet, July 12 1902.
20. British Medical Journal, May 20, 1902.
21. Lancet, August 13, 1902.
22. Deutsches Archiv für klinische Medicin, Band 71, Heft 6, 1902.
23. British Medical Journal, March 15, 1902.
24. Presse Médicale, March 15 and 19, 1902.
25. Deutsche medicin. Wochenschrift, April 17, 1902.
26. Münchener medicin. Wochenschrift, April 22, 1902.
27. Archiv für Kinderheilkunde, Volume XXXII. Nos. 1 and 2, 1902.

RECENT LITERATURE ON DISEASES OF THE LIVER.

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of Philadelphia.

Gouget (1) from his own experiments and those of others, concludes that the retention of urinary poisons in the organism, "renal impermeability," may cause changes in the liver varying from a slight degeneration to beginning cirrhosis. His injection experiments seem to show that an important, if not exclusive, role belongs to urea in the production of these results He admits, however, that the effect of renal insufficiency on the liver is not so well established as its converse—the influence of hepatic disturbances on the kidneys—a subject recently discussed by Gilbert and Lereboullet (2) under the title of the **renal form of simple acholuric jaundice**. The symptoms are intermittent or continued albuminuria and hemoglobinuria with little or no jaundice. The blood contains bile pigment, however, though none is found in the urine. The albuminuria, they consider, is due to toxins produced by a mild chronic angiocholitis, while the cholemia, with its resulting hemoglobinuria is attributed to functional disturbances of the liver. In these cases there are no evidences of Bright's disease aside from the albuminuria. The same authors (3) in their investigations of **family cholemia**, of which the above is a form, have frequently noted the presence of pigmented lesions of the skin and mucous membranes, corresponding to various common types, which they consider as very suggestive of functional disturbances of the liver. They classify them into spontaneous or physiological and induced pigmentations, including, under the former pigmented moles, chloasma, especially the peri-ocular form, pigmentations of pregnancy, etc., and under the latter those due to skin affections, parasites, drugs and certain diseases (e. g. Addison's disease). After a study of the histology and pathogenesis they think it probable that cholemia not only stimulates the pigmentary function, but brings the material for the formation of melanin. In connection with these refinements in the supposed pathology of jaundice, a reference to Hay's reaction for bile salts, as described by Beddard and Pembray (4), may be of interest. The test is very delicate, responding to one part in 120,000 parts of water, and at the same time reliable as far as the urine is concerned, though of little value in the vomitus and the feces, since numerous substances, which these contain, give the same reaction. The reaction depends on the fact that powdered sulphur, when sprinkled on a fluid containing bile, sinks more or less rapidly, the rapidity depending on the amount of bile present.

Pick (5) and Boas (6) have accepted the new teaching which indicates inflammatory change rather than incarceration as the cause of gall-stone colic. The latter attributes the great advance made in the knowledge of gall-stone disease during the last ten years almost entirely to animal experimentation and to the increased opportunities for observation at operations. The question as to what induces the inflammation is not so clear, as both obstruction and infection seem to be necessary factors. Boas points out that the normal gall-bladder, even though it may contain stones, is sterile, while the bladder, which has been altered by inflammation and contains concretions, is in the vast majority of cases occupied by bacteria, especially the bacillus coli communis. Still more important is the fact that, while the normally functionating gall-bladder rids itself without difficulty even of the most virulent bacteria, the situation is immediately changed as soon as a mechanical impediment to the outflow is furnished by foreign bodies or adhesions. Ehret and Stoltz (7), in a series of experiments upon dogs, introduced foreign bodies into the gall-bladder or ducts and in some cases found that cholecystitis or cholangitis developed long afterward when it could not have been due to infection at the time of operation. In the cultures taken, bacteria of the colon group predominated. They believe that there was an auto-infection from the bowel and thus, on the ground of proximity, explain the fact that inflammation occurs more readily and oftener in the bile-ducts than the gall-bladder.

In regard to the route of infection in bacteriemia the following is of interest, (Sailer, 8): "The fact that in typhoid fever we nearly always have a mixed infection of the duodenum and frequently find a pure infection of the bile is evidence, in itself, that the usual route is along the bloodvessels, for it seems certain that if infection occurred along the common duct it would be mixed." Sailer considers that typhoid infection is an important etiological factor in the production of gall-stones, though recent investigators have apparently been able to show that the mere presence of the bacilli in the interior of stones is not decisive, as they may have penetrated secondarily.

The diagnosis of diseases of the gall-bladder and the bile-ducts has not proportionately advanced so that any signs that promise to be of value in atypical cases are of interest. Boas (loc. cit.) lays stress on the importance of the following regions of tenderness, some of which he has previously described: (a) The border of the liver and the neighborhood of the gall-bladder, especially the gall-bladder itself. In acute cases of cholelithiasis the whole lower border is tender, while after the attack, and in the intervals, tenderness is usually confined to the gall-bladder region. (b) The subcostal part of the liver may show a diffuse tenderness extending over the whole area of dulness or only over its lower part. This symptom has not been hitherto described. The most important area, where tenderness may persist long after it has disappeared elsewhere, or where it may exist independently of jaundice or sensitiveness anteriorly, extends vertically from the two lower dorsal vertebræ to the first lumbar vertebra and from 2 cm. to the right of the spinal column to the posterior axillary line. He attributes this symptom to perihepatitis and says it may be elicited by palpation, or in late stages by the faradic current, though care must be used to exclude bilateral tenderness as well as that of subjective origin. In connection with the diagnosis of hepatic disease, reference should be made to the investigations of Straus (9), whose paper was carefully abstracted in this journal for February 8, 1902. He, basing his experiments on the alleged fact that levulose is not assimilated after the removal of the liver, administered this substance in 100-gm. doses and then examined the urine during the following 4 hours. "In 29 patients with liver disease he found in 26 an alimentary levulosuria; in 58 persons, who, apparently, had no disease of the liver he found it in 6 instances." He was able to make a diagnosis in 3 cases of doubtful ascites by this means, subsequent examination after tapping confirming the results. Habershon (10) attributes many hepatic disorders to movable kidney, such as general biliousness, pain simulating biliary colic, and jaundice, with or without colic. He thinks we should suspect movable kidney when hepatic symptoms fail to yield to ordinary remedies and especially when vigorous exercise induces rather than relieves the symptoms. He attributes the symptoms partly to reflex influences through the duodenum impeding the flow of bile. Neither he nor Hutchinson (11) can find any evidence of a hepatorenal band of peritoneum (Weisker), though the latter had opportunity to investigate this subject both at operation and in careful dissections. He describes in detail the close relation which the right kidney bears to the second part of the duodenum and to the common bile-duct and attributes symptoms to following factors: Downward displacement of the third part of the duodenum with stretching of the common bile-duct; displacement of the gall-bladder and sharp kinking of the cystic duct; torsion of the vertical part of the duodenum and perhaps even of the bile-duct. He reports 2 cases of hepatic colic with obstructive jaundice, which were cured by nephropexy.

Eden (12) and Osler (13) call attention to the another condition which may simulate hepatic disease, that is, to the occurrence of ascites with solid ovarian tumors, and emphasize the importance of examining for this cause in doubtful cases. Osler states that ascites was present in 6 out of 10 cases of solid ovarian tumors operated on by Kelly.

Becker (14) reports a case of obliterative pericarditis with hepatic enlargement and ascites. He gives a summary of Pick's original cases and of those since reported and concludes that pseudocirrhosis of the liver, due to the pericardial adhesions, is a distinct entity. Autopsies have shown in all the recorded cases that the ascites is due to passive congestion of the liver, causing a connective tissue formation, with subsequent contraction and obstruction of the portal circulation, the result of obliterative pericarditis. Cases of enlarged liver with ascites, and without edema or enlarged spleen, suggest this diagnosis, which is confirmed by the discovery of the signs of chronic pericarditis. Levaschoff (15) believes that there is a distinct cirrhosis of the liver, dependent on cardiac disease, and has observed such cases especially in mitral affections in which the disturbance of compensation was limited to the lesser circulation for a sufficiently long period to permit the formation of connective tissue about the bloodvessels before dangerous general symptoms developed. A point of value in the diagnosis of these cases is the fact that edema of the lower extremities follows, instead of preceding, the ascites. Walls (16), in discussing the etiology of cirrhosis in childhood, says that Hutinel's cardiotubercular type is the most frequent form in children, the primitive lesion being a tubercular pericarditis of the adhesive type. Of the remaining cases 20% are due to alcohol, half as many may be attributed to congenital syphilis, while others may be assigned to acute infections, chronic sepsis, heart disease and congenital obliteration of the bile-ducts. Beck (17), in reporting a case of alcoholic cirrhosis in a little girl, collected 303 cases occurring in childhood, 48 of which were directly traceable to alcohol. Martha Wonstein (18), on a study of 370 consecutive autopsies on children under 4 years, found cirrhosis twice, one case following obstruction of the bile-ducts, the other being hypertrophic in character. In 214 of the above cases the liver was decidedly fatty, 45 being also tubercular. There were in addition 22 other cases which showed tubercles without fatty changes. Flexner (19), investigating quite a different subject, has also reviewed a large series of post mortem records (Philadelphia Hospital). In 5,088 autopsies he found that syphilis of the liver had been detected in some form or other in 88 cases. The description of the various lesions present may be found in the original paper.

In regard to the treatment of diseases of the liver very little of interest has appeared if we exclude surgical measures, such as those for the relief of ascites and the treatment of affections of the gall-bladder and bile-ducts. Chauffard (24) describes the charts which he keeps in cases of ascites, showing the daily increase or decrease in weight and the amount of urine. By means of a graphic record of this sort he can note the accumulation of fluid and estimate closely the effect of his remedies. He says that diuretics are usually most effective but gives the history of a case in which the substitution of purgatives suceceded in removing an effusion permanently, after repeated tappings.

Richardson (21) says that bile is the only cholagogue we possess, but as its effect is due entirely to the bile salts contained, it is best to give these in a pure form, free from pigment, cholesterin, etc. He therefore used sodium glycocholate in 5-grain doses as a hepatic stimulant in the hepatic insufficiency of the insane, marked by pigmentations of the skin or bile-stained urine, and met with very good success. He believes it will be found of value in similar cases of insufficiency. Bainbridge (22) has recently carried on a series of experiments in which he injected glycocholate of soda intravenously. He was able to show that the flow of lymph in the thoracic duct was doubled or trebled and further that this increase was derived entirely from the liver. The flow of bile was also simularly increased.

REFERENCES.

1. Gouget. La Presse Medicale, Jan. 11, 1902.
2. Gilbert et Lereboullet. Bull. et Mem. de la Soc. Med. d. Hop. d. Paris, No. 22, 1901.
3. The same, No. 15, 1902.
4. Beddard and Pembrey, British Med. Jour., March 22, 1902.
5. Pick, Prager med. Woch., 24, 25, 27, 28, 1901.
6. Boas, Muenchener med. Woch., No. 15, 1902.
7. Ehret and Stoltz, Berl. klin. Woch., Nov., 1902.
8. Sailer, Medicine. May, 1902.
9. Strauss. Deutsche med. Woch., Oct. 31, 1901.
10. Habershon, Edinburgh Med. Jour., May. 1902.
11. Hutchinson, Practitioner, Feb., 1902.
12. Eden, Lancet, Feb. 8, 1902.
13. Osler, Phila. Med. Jour., May 24, 1902
14. Becker. Phila. Med. Jour., March 15. 1902.
15. Levaschoff, Russki Vratch, No. 1, 1902.
16. Walls, Pediatrics, March, 1902.
17. Beck, Jahrb. f. Kinderheilk., Feb., 1902.
18. Wollstein, Amer. Jour. Med. Sc., May, 1902.
19. Flexner, N. Y. Med. Jour., No. 3, 1902.
20. Chauffard, Semaine Med., No. 22, 1902.
21. Richardson, Phila. Med. Jour., March 15, 1902.
22. Bainbridge, British Med. Jour., June 14,1902.

THERAPEUTISCHE MONATSHEFTE.

November, 1902. (16 Jahrgang, No. 11.)

1. The Diagnosis and Surgical Treatment of Intestinal Perforation and Perforative Peritonitis in Typhoid Fever. MICLESCU.
2. Purified Sublimed Sulphur in the Treatment of Typhoid Fever. J. WOROSCHILSKY.
3. Geosote in the Treatment of Phthisis. A. KUEHN.
4. Linear Eczema of the Arm Following Injury. ORLIPSKI.

5. The Practical Use of the Hand. G. W. SCHIELE.
6. Iron Therapy. JUNG.

1.—Will be abstracted when concluded.

2.—Because of the good results from the use of **sublimed sulphur in dysentery**, Woroschilsky tried it **in typhoid fever.** He reports in full the case-histories of 3 patients who were given purified sublimed sulphur up to 165 grains daily. It caused the disappearance of diarrhea, even constipation, when continued long enough. The clinical symptoms observed were milder in all cases, and the temperature gradually fell to normal. These good effects seem to be due to the direct influence of the sulphur on the affected intestinal mucous membrane. Luke-warm baths were also given daily, and good hygiene was observed. The sulphur is given continuously until there is no longer any fever. It is locally both antiphlogistic and antiseptic. It does not affect digestion, 90% being passed unabsorbed in the feces. [M. O.]

3.—**Geosote, guiacol valerianate,** may be given in capsule or as drops in tincture of gentian. On account of its unpleasant taste it is best given in capsule. In one case of **phthisis,** when given for 18 months, together with intravenous injections of hetol by the Landerer method, there was a marked gain in weight with improvement in the general condition, yet albuminuria persisted. But the cough and expectoration diminished until tubercle bacilli were no longer found. In advanced cases of phthisis it has but little effect. Its use as a tonic in phthisis, chronic bronchitis, etc., is advised by Kühn. [M. O.]

4.—Orlipski reports a rare case of **linear vesiculopapular eczema** in a woman of 26, **in the region supplied by the external cutaneous nerve** of the right arm, a branch of the musculocutaneous where it leaves the humerus, the eruption appearing with pain after a prick with a needle. The eruption exactly followed the course of the nerve, from the thumb up to the middle third of the humerus. It was easily cured in 3 weeks. There was probably some neuritis also. The literature is quoted. [M. O.]

5.—Schiele describes in detail **the examination of an arm and hand after recovery from an injury,** in order to find in what condition the hand is for performing practical work. He mentions 9 separate tests, which will **show the usefulness of the injured hand.** The physician should decide to what extent the hand is useful, the relation to the injury and the best method of further treatment: In most cases this will be the return to one's usual work. [M. O.]

6.—Jung discusses the value of **iron** when given **as liquor ferromangani peptonati and liquor feromangani,** both of which are organic compounds. One dram was given 3 times daily in 34 cases of nervous diseases, and the blood was counted at regular intervals. The case-histories of 8 of these patient follow in detail. The hemoglobin increased from 2% to 18%; the erythrocytes from 2% to 8%. Gastric digestion was increased markedly, the general condition improved, and the patients gained in weight. Psychoses with sexual and digestive symptoms always improved. Jung concludes that these preparatons are of use in anemia, chlorosis, amenorrhea, dysmenorrhea, scurvy, hysteria and neurasthenia. [M. O.]

December, 1902. (16 Jahrgang, No. 12.)

1. The Treatment of Myopia. RICHARD LIEBREICH.
2. The Frequency of Tabes Among Syphilitic Patients. J. A. GLAESER.
3. The Acid Treatment of Pruritus. H. LEO.
4. The Open Air Cure for Phthisis. VOLLAND.
5. The Prophylaxis and Treatment of Tuberculosis. ERNST FULD.
6. The Enzymes of Invertebrate Animals. WERNER FISCHER.
7. Intra-uterine Pessaries. EDMUND FALK.
8. The Diagnosis and Surgical Treatment of Perforation and Perforative Peritonitis in Typhoid Fever. MICLESCU.
9. Hygiama as an Infant Food. EDWARD KRAUS.

1.—In **treating myopia** the relations between convergence and accommodation must be regulated. Therefore, either **prisms or concave glasses** will be needed. In the prodromal stages Liebreich orders weak prisms. This is the one positive means of preventing the myopia from advancing. Besides, stress should be laid upon good light and position when reading, and the book should be held at the correct distance from the eyes. In later stages concave glasses become necessary. Without prisms he considers total correction only rarely best. The treatment of several cases follows in detail. [M. O.]

2.—From the examination of over 750 women, from whose histories it was known just when the **syphilis** had been contracted, **tabetic symptoms** were found in none in less than 2 years after infection. In others tabes only appeared after 30 years. In 419 cases isolated symptoms, precursors of possible tabes later, were noted in less than a year after infection. Yet **typical locomotor ataxia** was only found **in 3 out of 340 women examined.** The condition is 4½ times more frequent in men with syphilis. The case-histories of 9 women with tabetic symptoms follow, all in prostitutes. Seven others showed marked syphilitic symptoms. In cases showing syphilitic origin, Gläser advises specific treatment. [M. O.]

3.—Leo reports a case of **pruritus** in a man of 25, whose urine was cloudy and alkaline, containing large quantities of earthy phosphates. The pruritus disappeared rapidly when **hydrochloric acid and, later, sulphuric acid were given internally.** It seems, therefore, that pruritus was due to increased alkalinity of the blood. Several similar cases, with pruritus and alkalinuria, were also cured on treatment with sulphuric acid internally. Salicylic acid and carbolic acid have a similar effect in some cases. [M. O.]

4.—**Volland inveighs against the open-air treatment of phthisis.** He does not object to fresh air, but he believes living in the open air or living in sanatoria with everything open is bad. The good results of the dispensary treatment of phthisis, far better than those of sanatoria, are due to the fact that the patients do not go out in all sorts of weather, getting fresh air only when it is clear, not too cold, or wet. He thinks entirely too much stress is laid on fresh air in the treatment of tuberculosis. [M. O.]

5.—**Fuld suggests that a serum made from tuberculin from cattle be tried upon human beings** as a preventive against true tuberculosis, in order to find whether the two diseases, in man and cattle, are due to the same bacilli. Experiments might be made upon monkeys first. Such tuberculin must be much less dangerous than Koch's tuberculin when inoculated into human beings. [M. O.]

6.—Fischer has examined **ferments obtained from** a number of living **invertebrate animals.** He found glycogen and fibrin ferments, emulsin probably, but no olive oil or salol splitting ferments. Extracts prepared from dead invertebrates gave approximately the same results. [M.O.]

7.—**Falk protests most energetically against the common use of intra-uterine pessaries.** They may cause infection; they do not always prevent conception; they may certainly cause abortion, and an operation may become necessary for the removal of such a pessary which has disappeared within the uterus. These dangers are of especial importance in dispensary practice. [M. O.]

8.—In an extensive article, in which the entire literature **of perforation and perforative peritonitis in typhoid fever** is well reviewed, Miclescu states that the diagnosis of these conditions is not difficult to skilled clinicians. Yet, in some cases symptoms may seem doubtful. Then the history of the case, its duration and course are important. Spontaneous recovery occurs rarely. Operation is indicated as soon as the diagnosis of perforation is made, nor is it necessary to wait for all the typical symptoms to appear before operating. But operation should never be attempted in old, decrepit or moribund individuals. The main symptoms of perforation in typhoid fever are sudden pain to the right of the right iliac fossa, tense abdominal muscles, with a decided change for the worse in the patient's general condition and a small, rapid pulse. Later there may be disappearance of the spleen and liver dulness, dysuria, constipation, etc. The incision should be large enough to permit suturing the perforation. Reaction is not advised as a rule. Drainage is necessary in every case. Details in the technique are given. [M. O.]

9.—Kraus recommends the employment of **hygiama,** a substance containing 9% fat, 22% proteids, and 49% carbohydrates, for children needing a concentrated food. It is prepared by adding cows' milk, and tastes like cocoa. He has used it in rachitis, anemia, the infectious diseases, chronic gastro-enteritis and chlorosis, generally during convalescence, in children ranging from 1½ to 14 years of age. It was of value in each case, as his results show. [M. O.]

DIE THERAPIE DER GEGENWART.

December, 1902.

1. The Treatment of Renal Calculi. G. KLEMPERER.
2. The Treatment of Pneumothorax. G. ZUELZER.
3. Practical Experience With Mesotan (Salicylic-acid-methyl-oxy-methyl-ester). G. REICHMANN.
4. Experiments With Arhéol. CARLO RAVASINI.
5. Helmitol, a New Urinary Antiseptic. PAUL ROSENTHAL.

1.—Will be abstracted when concluded.

2.—**Pneumothorax** is generally secondary, in 90% of cases, to phthisis. The prognosis is, therefore, unfavorable. Zuelzer reports the case-history of a young man of 18, who developed sudden complete right-sided pneumothorax. A puncture was made in the eighth intercostal space, and 10 large air-bubbles were noted in the fluid obtained. As he complained of pain and a feeling of pressure, **aspiration** was tried, and again, later, withdrawing some air-bubbles each time. In 48 hours he felt all right, but aspiration was still continued at intervals. In 36 hours more he had completely recovered, all signs of pneumothorax having disappeared. The cause of the pneumothorax was most probably a tubercle in the periphery of the lung, which had ruptured into the pleura. When the pressure was equalized, no more air escaped into the pleural cavity, and thus recovery could follow. This treatment markedly lessens the duration of pneumothorax. [M. O.]

3.—**Mesotan,** salicylic acid-methyl-oxy-methyl-ester, can be found in the urine a half hour after ingestion of the drug. **Painted upon the skin of inflammatory rheumatic surfaces,** the pain decreased much more rapidly than when salicylates were given internally. When applied locally in some cases, patients complained of a feeling of burning. The preparation for local application should have about 10% of olive oil added to prevent irritation of the skin. When olive oil is added, however, the odor of the preparation is very disagreeable. With castor oil, 20% or 30%, this is not noticeable. As ordinary dose, Reichmann applied 6 cm. to 8 cm. every one or 2 days, increasing gradually up to 14 cm. He has not yet experimented with this externally at the same time that other salicylates are given internally. [M. O.]

4.—Ravasini has used a preparation of oil of sandalwood called **arhéol in treating gonorrhea,** giving capsules containing 3 grains each. In old and young individuals, as his case-histories show, the effect of the capsules, from 6 to 12 daily, was excellent. Secretion disappeared, pain and frequent urination gradually decreased, and the urine soon became clear again. Some cases recovered when urethral injections of potassium permanganate were added to the treatment, especially those complicated with cystitis. Ravasini considers arhéol of great therapeutic value in gonorrhea with or without complications. [M. O.]

5.—Helmitol, anhydromethylencitric-acid hexamethylentetramin, when ingested, causes the excretion of formaldehyde in the urine, acting as an ordinary antiseptic and diuretic. As much as 15 or 25 grains at a dose, or one dram in a day, may be given, with successful results, in chronic gonorrheal posterior urethritis, as is shown by his 20 cases. [M. O.]

DISEASES OF THE EYE, EAR, NOSE AND THROAT.

Foreign Bodies in the Ear.—The many warnings given to the profession at large concerning the proper method of dealing with foreign bodies in the ear (*The Practitioner*, November, 1902) appear to fall upon very barren soil, judging from the records of cases in which great and permanent damage has been done to the ear as an organ of hearing by misguided efforts to extract them. It cannot be too often emphasized that, if a foreign body is present, the first thing to do is to try to remove it by syringing. Judicious syringing will, in a great majority of cases, dislodge the foreign body and cause its ejection. Extraction by means of instruments should only be undertaken by those who are versed in the technicalities of aural surgery.

Injuries of the Membrana Tympani.—Many ruptures of the membrana tympani (*The Practitioner*, November, 1902) are due to the pernicious habit, still too frequently in vogue, of boxing the ears. Unskilful efforts to extract foreign bodies, fractures of the base of the skull, etc., are also causes of laceration of the membrane. In such cases, provided suitable treatment is undertaken, and provided the labyrinth is intact, the prognosis is good, the membrane usually healing rapidly, and the power of hearing becoming quite restored. After having rendered the meatus as aseptic as possible, such powders as iodoform, iodol, boracic acid, aristol, etc., should be insufflated into the ear, an antiseptic dressing applied and the parts then left undisturbed.

Massage of the Ossicula Auditus.—In the treatment of certain cases of chronic dry catarrh of the tympanic mucosa (*The Practitioner*, November, 1902), massage of the ossicles has, from time to time, been recommended. Such probes as Lucae's pressure probe are used for the purpose, the membrane having been previously soaked in cocaine solution. The method is, however, distinctly painful and few patients will tolerate it. Koenig recommends dipping the cup-shaped end of a Lucae's probe in paraffin and then applying it to the processus brevis of the malleus. He claims that the soft pad of paraffin lessens the effect of the pressure, and, hence, the pain. In discussing the value of pneumatic massage in aural practice, Pynchon (*Laryngoscope*, May, 1902) remarks that slow vibrations (30 v. to 90 v.) are best adapted to the treatment of middle ear troubles, that more rapid vibrations (300 v. and over) have a more pronounced effect upon the labyrinth, and that improvement of middle ear conditions will have a favorable effect on the labyrinth in those cases in which trouble in the middle and internal ear is present. Schwabach (*Archiv. of Otolog.*, Vol. 30, No. 4) has found little benefit from vibratory massage in sclerosis of the middle ears, although, at times, the tinnitus has been improved. Improved hearing and diminished tinnitus were, however, obtained in cases of simple chronic middle ear catarrh, subacute middle ear catarrh and postsuppurative otitis media. The apparatus used by the author is Breitung's, and the durations of the sittings usually lasted from 2 to 3 minutes.

Treatment of Atrophic Rhinitis.—James H. Kyle, of Indianapolis (*Indiana Medical Journal*, XXI, No. 4), after describing the pathology, etiology and symptomatology of atrophic rhinitis, passes on to the treatment of this affection. He says our treatment should be directed toward the prevention of accumulations in the nose, and the restoration of the cellular activity of the nasal mucosa. When there is not a complete atrophy, often the removal of the hypertrophied membrane or of adenoids will result in a cure. If the accessory cavities are found to be involved (which, if the teachings of Grunwald are correct, must be looked for as the exciting cause) they must be opened and treated. For the removal of the secretion the author recommends Dobell's solution in spray or post-nasal douche. Very often a cotton-tipped probe will be necessary to dislodge small particles of secretion. Then, after mild cocainization, he plugs the nasal cavity high up in the attic with gauze dipped in a 50 per cent. solution of ichthyol or 5 per cent. solution of ichthargan. "Ichthyol and ichthargan possess antiseptic and mucus-lessening properties inferior to no other drugs now at our disposal. In addition, they act as a stimulant and tonic to the mucosa." The general health must be improved by iron and strychnine. If the patient can be transported to high altitudes, greater probability of early recovery is in store. Unfavorable hygienic surroundings make it very difficult to combat the disease.

Cocaine and Menthol for Coryza.—The headache and sense of obstruction within the nose which usually accompany coryza during the acute stage, are the 2 symptoms with which the physician is concerned in order to afford immediate relief to the patient. It is often enough that sprays and douches are resorted to which embody a warm solution of cocaine, but the danger of the cocaine-habit in using this drug alone makes the physician hesitate to give it promiscuous employment. For this reason A. Pugat, of Vienna, (*Medical News*, LXXXI, No. 11, 1902) has been using with great satisfaction, so far as the results on the symptoms and the danger of drug habit are concerned, a mixture of 5 parts each of cocaine hydrochloride and menthol to 100 parts of liquid vaseline. The effect is relief of congestion to a marked degree, and is best when the spray is repeated every 3 hours. He finds that this effect is more marked than when the cocaine alone is used.

Basol as a solvent and vehicle for topical applications in the nose and throat may prove as useful as in genito-urinary diseases in which connection it was mentioned in the *Therapeutic Monthly* for June, 1902. It consists of the active principles of natural hydrocarbons and perfectly dissolves the following much used remedies in the proportion of one ounce of basol to: Aristol 20 grs. creosote 90 grs., cocaine 10 grs., europhen 20 grs., iodine 45 grs., iodoform 13 grs., ichthyol 45 grs.; menthol 15 grs., camphor 10 grs., orthoform 15 grs., etc. It is claimed that, when enriched by oxygen, basol acquires two additional remarkable properties: (1) It forms emulsions with water and with the secretions of the skin, of wounds, etc. (2) It is rapidly and absolutely absorbed by the skin and mucous membrane.

C. P. Grayson, in *Diseases of the Nose, Throat and Ear*, page 283, speaks of basol as the best vehicle he has found for sprays and applications in the local treatment of the painful ulcerative stage of laryngeal tuberculosis. One ounce holds iodoform 10 grs. and orthoform 15 grs. in perfect solution. He finds that this combination makes a satisfactory substitute for the more elaborate and less stable Freudenthal's emulsion.

Postoperative Management of Intranasal Surgery.—M. A. Goldstein, in *The Laryngoscope* for October, 1902, discusses this phase of nasal surgery about which little is usually said. He thinks that the mucous membrane of the nose should be cleansed and made as aseptic as possible before all operations and advises the use of warm alkaline solutions for this purpose. After operation small tampons of cotton soaked in benzoinol or similar oil and smeared with vaseline should be inserted. When firmer pressure is desired, he uses Simpson's modified cotton nasal splint, this not only controls bleeding, but helps to mould the new tissue and prevents excessive granulations from forming. In certain cases gutta-percha tissue may be used over the tampon. Nasal dressings should never be allowed to remain longer than 48 hours without change. He joins many other rhinologists in condemning the "Beloca's cannula;" instead he uses a soft rubber catheter in plugging the posterior nares. Other ways of achieving this object are: (*a*) Selveged gauze, one inch wide, is carried up behind the palate with a forceps curved on the flat, the left forefinger being used as a palate retractor. In this way it is packed about the bleeding area. (*b*) A narrow strip of gauze is carried through the nostril and packed against the left index finger in the nasopharynx.

In controlling epistaxis, the exact location of the bleeding point must be determined and the applications then made to it.

Paraffin and Vaseline Injections in Atrophic Rhinitis.—The use of paraffin injections into the submucous tissue of the turbinates in cases of atrophic rhinitis with the idea of bolstering up the shrunken membrane and filling in the too open nostril has been suggested and tried. A case of this kind reported by Richard Lake is mentioned in Charles H. Knight's paper on "Recent Advances in Laryngology," which appeared in the *Therapeutic Monthly*, June, 1902. Brindel, in *La Presse Médicale*, June 7, 1902, reports 10 cases of ozena treated by interstitial injections of valesine into the lower turbinates. He used vaseline fusible at 60° C. and injected 3 or 4 cc. at a time. This caused an immediate cessation of the odor and the atrophic condition apparently became hypertrophic.

Keratosis of the Pharynx.—C. W. Richardson, in a recent number of the *American Journal of Medical Sciences*, states that his investigations tend to confirm the conclusions reached by many other writers on this subject: Heryng, Siebenmann, Kyle, Kelly, Tuttle, Friedland, etc., and sums up the present status of the pathology of leptothrix of the pharynx in the following sentence: "There seems to be no doubt that there is a condition in the pharynx, occurring in the very young and aged, attended with the presence of the leptothrix—a true mycosis; there is also no doubt that there is a condition occurring in middle life which is not dependent upon the presence of leptothrix—a true keratosis."

Chronic Pharyngitis.—Shurly's somewhat pessimistic statement (*Diseases of the Nose and Throat*, page 393) that local treatment of chronic pharyngitis in the majority of instances is very disappointing, is not entirely borne out by other writers on the subject. All agree that constitutional conditions must be looked after first, after which defects of the nasal passages should be remedied. Locally alkaline washes or sprays (*e. g.*, Dobell's solution) for cleansing purposes are recommended, to be followed by some appropriate application. The list of medicines used by different men is a long one. Shurly justly says (loc. cit.) that "it is very difficult to lay down rules for the selection of particular preparations, inasmuch as the adoption of the proper treatment for a given case is really more a matter of art or experience than of science." In this, as in treatment of other parts of the body, a more or less arbitrary selection of remedies is made in the beginning and being long used and thoroughly known they finally are applied with absolute confidence and believed to be the very best and only drugs suitable for the purpose. There are several types of applications used, of which the following are examples:

(*a*) Menthol 5 grs., camphor 3 grs., liq. abolene 1 oz.
(*b*) Protargol 4%; argentic nitrate 6% to 12%.
(*c*) Glycerite of tannic acid.
(*d*) Alum 2%, zinc sulphate 2% to 4%.
(*e*) Iodine (crys.) 8 grs. to 15 grs., potass. iodide 20 grs. to 40 grs., glycerine 1 oz.

They are arranged in the order in which they would most likely be used in the treatment of the more acute to that of the most chronic and atrophic forms of pharyngitis. Repeated change from one type of medicament to another often brings favorable results.

Argyrol (silver vitellin), a new silver salt, used successfully by H. M. Christian (*Medical Record*, Vol. LVII., 1902) in the treatment of gonorrhea, seems to offer great possibilities in the treatment of pharyngitis. This salt is said to contain 30% of silver, 3 times the amount found in protargol, and its solution does not coagulate albumin nor precipate chlorides. If it has the intense penetrating action and antiseptic properties that are claimed for it, it ought, in 4% solution, to make an ideal application for certain forms of subacute and chronic inflammations of the pharynx and larynx.

The Treatment of Thrombosis of the Lateral Sinus Following Middle Ear Suppuration.—In an important paper, Dench (*American Journal of Medical Sciences*, May, 1902) has given a very clear and interesting account of his method of dealing with these cases. In the hands of skilful operators true conservatism demands the thorough removal of all infecting foci, necessitating the apparently formidable operative procedures given below. The percentage of cures following this course is larger than when less thorough means are used. "Prompt interference of the most radical kind is the only plan which promises safety to the patient." He speaks of 22 cases of thrombosis of the lateral sinus from middle ear disease operated upon by him in the last few years, of which number 2 died—one from septic pneumonia without evidence of involvement of the internal jugular vein, the second from an acute nephritis due to the ether. The 4 patients in whom he found it necessary to ligate the internal jugular, all recovered.

Technique.—In every mastoid operation he removes all carious bone, following for this purpose all softened areas to the dura. If the lateral sinus is exposed and is not normal on palpation or not white, glistening and of normal size, he incises the sinus wall for exploratory purposes. Before incising, every purulent focus must be removed from the mastoid process the antrum cleaned and "packed off" with iodoform gauze, and the field cleansed. Instruments are resterilized. The surgeon must be prepared to remove at least three-quarters of an inch of the bony covering of the sigmoid groove. Pressure is applied to the sinus above, and the wall is incised close to the knee by a sharp, straight bistoury, this will be at about the middle of the part of the sinus exposed. If a clot is present, bleeding will be slight. A curette is introduced into the lumen of the sinus to establish bleeding from below. After this is secured pressure is removed from above and reapplied over and below the incision; the curette is used in the sinus toward the torcular until hemorrhage occurs. The above course is pursued unless it is evident that the clot has been a long time in place, is firm and has become organized; if this is the case, it is needless to disturb it, for no infection can result from it. As soon as blood comes freely from both ends or even if the upper end is stopped and the lower end free, nothing more is attempted. Iodoform gauze is packed firmly in the wound and not disturbed for 4 to 6 days unless the temperature rises to 103° or 104°. Usually good results may be expected. If in one to three days the temperature shows septic infection, the "procedure of election"—excision of the internal jugular from low in the neck to a point just below its entrance into the skull, all tributaries being tied—must be employed. The object is to cut off infection from the general circulation. Incision is made from the sternal attachment of the sternomastoid muscle to the mastoid process. The internal jugular is dissected from its sheath near the clavicle, it is ligated in 2 places and divided between the ligatures. The end is clamped with an artery forceps, and the vessel is rapidly dissected upward. Two ligatures are placed about the common trunk of the temporal and facial veins, and it is cut through between them; the thyroid veins may have to be dealt with in the same way. The internal jugular is thus traced up as high as possible and cut between two ligatures at the highest point. The remaining part of the vein, the jugular "bulb," is left *in situ*, for it can be cleared from infectious material by irrigation through the sinus. When infection has existed some time, or the course of the disease has been rapid, a complete dissection of the internal jugular may be impossible. In judging of the necessity for the operation the temperature chart will be a sure and certain guide.

Review of Surgery, With Special Reference to Operation for Lateral Sinus Phlebothrombosis.—Another interesting paper, by B. Alexander Randall (*University Medical Magazine*, October, 1900), antedating Dench's paper by a year and a half, is well worth quoting in connection with it. The author states that the classical symptoms of the three stages of thrombus formation may be absent in some instances or complicated by others masking their import; the diagnosis of the infective nature of the process must be made from the sharp, fluctuations in the temperature as observed by the thermometer. Phlebitis without obstructive or septic thrombus or thrombosis of marasmic origin may be comparatively trivial affections. Invariable fatality may be expected in virulently infective cases if not operated upon. Delays in operating are to be avoided. Jugular ligation is clearly demanded as one of the first steps in some cases, but it is not always needful, usually it may be done as an after-operation several days later, and yet be in time to check the advancing process. It is at times extremely difficult by reason of inflammatory adhesions: it must often be done at the lowest possible point, as well as high up and with ligation of the facial and other branches; and, in addition to the double ligation, the vessel should generally be slit open and evacuated, if not exsected. The sinus is to be curetted and its lumen occluded by packing over it. He believes that the success after jugular ligation, has been better than when it was not done. The acuteness of the aural condition is an important factor; in chronic cases the "knee" of the sigmoid sinus is the usual starting-point of the thrombosis, whereas in the acute affections the jugular bulb is more often first occluded, and organization here usually causes prompt and safe obliteration of the vessel.

Technique.—Shock is to be combated in every way. If the rational symptoms of phlebothrombosis are present, pain, tenderness over the mastoid emissary region, edema of the posterior cervical triangle and possibly tenderness and induration along the jugular vein, or if the sinus shows discoloration or other serious involvement, it should be incised. The work of cleaning away mastoid caries, evacuating extradural pus, baring well the sinus, and getting the tract as surgically aseptic as possible, should be first completed. Metastases already formed, even in the lungs, are not necessarily contra-indications to the operation. Brain abscess, especially in the cerebellum, is to be watched for and may yield to prompt evacuation. Meningitis alone seems to preclude recovery. "The surgeon seeking a "record" may carefully select his cases, but the conscientious man, endeavoring to do his all for a patient, will by this operation, as by that for brain abscess, snatch from the jaws of death many valuable lives even when success seems impossible.

Aurist and Surgeon.—Otology is a branch of surgery, and every day it is becoming more evident that the ear specialist must himself be able to operate when grave conditions arise in the regions peculiarly his own. He cannot well turn the work over to the general surgeon, for the latter can hardly be expected to have the intimate knowledge of the ear that is essential, nor the experience that many cases bring, he being seldom called upon to treat such conditions. As a proof of these facts we cannot do better than refer to a recent work on regional anatomy in which the author, a past-master in surgery, states that a gimlet is a very suitable instrument for opening up the tympanic antrum!

Trachoma and Its Treatment.—William Cowen (*American Therapist*, July, 1902) writes as follows: Of all the forms of lid disease **trachoma** is perhaps the most interesting, because of the prevalence of the trouble and the dangers to the eye-ball. The great bulk of lid disease is made up statistically of catarrhal inflammations and of granular lids, and among poorly housed working classes trachoma is widespread. The worst form of trachoma is brought to this country by the hordes of immigrants from Russia and Italy. The herding together of these people in crowded tenements offers an insurmountable obstacle to the stamping out of the infection. The nature and treatment of trachoma become, therefore, grave questions from the social point of view. The laudable attempts of the Board of Health in trying to eradicate trachoma from the public schools by daily inspections have demonstrated to what a large extent school children are the victims, and how the disease may run its course without causing any marked symptoms. While the curability of trachoma is universally admitted, it must also be admitted that the mucous membrane of a lid once the seat of a trachoma infection is always susceptible to catarrhal changes. Here, as in other diseases, prevention of the disease is the object in view. The varieties of trachoma can be generally classified as acute or follicular, and as a diffusedly infiltrated form in which no follicles can be seen; there is also a variety of trachoma in which the tendency to atrophy of the mucous membrane is so great that it becomes converted into a thin cicatricial tissue devoid of glands; it is in this form of trachoma that we find deformities of the tarsal cartilage, resulting in the eye-lashes sweeping over the corneal surface, producing corneal abrasions, ulcerations and pannus. This clinical picture is found in advanced stages of trachoma and must represent a natural termination of the disease. We find it especially among the immigrant class, who have had no opportunities for eye treatment in their native places. These patients do not really suffer from trachoma, but from its corneal complications. The diagnosis of trachoma presents no difficulty; its treatment presents a great deal. In the acute or follicular form the surgical methods have a great sway at present, the method consisting in the mechanical crushing of the follicles which carry the contagion; in the diffusedly infiltrated form of trachoma in which the mucous membrane has become converted into a thick velvety membrane, the scarification method has been used. The disadvantages of both methods consist in the damage done to the mucous membrane of the lids and, while an immediate improvement is noticeable, the final cicatrizations leave the lid in worse shape than if no surgical treatment had been employed. The nonsurgical treatment consists in the application of the copper stick, bichloride of mercury solution, alum stick, and solutions of iodine in benzol. The copper stick has always been a very effective method of treatment, but it is so very painful that patients dread it, and, as many of the patients are children, a less painful method of treatment must be employed. During the last year Cowen has treated a large number of trachoma cases, of all varieties and in all stages, with the glycerite of tannin in its official strength, and it appears that it accomplishes more than any other drug. In the first place, the applications are not painful; 5 or 10 minutes after an application patients use their eyes without any difficulty. The relative painlessness of the treatment is important, because the young subject will simply refuse to submit to a painful treatment, often to be repeated, as it must be in granular lids. In the diffusedly infiltrated form and in the dry cicatricial variety the glycerite of tannin is equally serviceable; in this dry variety of the disease the treatment is particularly grateful, because the dry membrane is covered with the oily solution produced by the glycerine. The method of applying the solution is to soak a cotton swab with it and rub it in very briskly into the membrane. Applications should be made as frequently as possible, once a day if feasible. As with the other methods, so here the treatment must last a considerable time. The presence of corneal complications of trachoma in abrasions, ulcerations and pannus of the cornea, are no contra-indication to the employment of the glycerite of tannin. The use of this preparation for the purpose indicated above is, as yet, not wholly enough known, but Cowen strongly recommends its employment.

On the Action of Hetol on the Conjunctiva.—Letzenius (*St. Petersburg Dissertation*, May, 1902) experimented with a one per cent. solution of c. p. synthetical hetol in various affections of the eye and found that it possesses marked analgetic and curative properties. He found it, however, to be harmful in suppurative processes. He concludes that hetol is a valuable adjunct to the treatment of diseases of the eye.

DISEASES OF THE LIVER.

Medical Treatment of Gall-Stones.—S. Taylor (*Therap. Gazette*, October, 1902) states his views as to the medicinal treatment of cholelithiasis as follows: Movements and violent exercise are to be forbidden. Even prolonged manipulation by the medical attendant is to be deprecated. The writer has known, in a goodly number of cases, biliary colic to occur the night after digital examination of the region of the gall-bladder. Kneading of the belly wall over the gall-bladder, with a view to dislodging the calculi, is permissible only if the dimensions and contour of the calculi and the amount of chronic distension existing in the duct passages are known with reasonable certainty; an angular or pointed stone may be easily forced through an ulcerated membrane into the peritoneal cavity. When called to a patient suffering from biliary colic the first point is to relieve the pain. Give morphine, preferably subcutaneously. Next we must facilitate the passage of the calculi or, if possible, assist in their dissolution. Olive oil has been recommended, but it is often disappointing. Half-ounce doses may be given hourly per os; and it may be administered per rectum, using a pint at a time and warmed to about 105° F. The writer has found simple enemata of warm water, or the enema of turpentine, just as efficacious. Ichthyol has been highly recommended, chiefly on the ground that the large amount of sulphur it contains acts as a solvent of the stones. It should be given in long-continued and increasing doses. Sodium salicylate is praised by some physicians, chiefly owing to its cholagogue properties. The author has seen more benefit follow the administration of glycerine. One-half- to one-ounce doses may be given during the period when the colic is the most pronounced symptom, that is, when the calculus is trying to force its way into the duodenum. The glycerine may be continued with advantage in smaller doses (1 dr.) between the attacks of colic; the author believes it has great value as a prophylactic.

DISEASES OF THE RESPIRATORY TRACT.

Arsenic Iodide in Bronchitis of Children.—Saint Philippe (*Jour. des Praticiens*, XVI, No. 16) considers arsenic iodide the best remedy to employ in that form of infectious bronchitis which occurs in scrofulous children after grippe, measles or whooping cough. When taken with food it is said to be well-nigh tasteless, easily digested and well borne. The following formula is used:

Arsenic iodide	5 gr.,
Distilled water	1 fl. oz.

Dissolve without the aid of heat.

Five drops of this solution are given in a glassful of milk with each meal, the dose being increased by one drop morning and evening until 15 or even 20 drops are being taken as a dose. The maximum dose is given for about a month, then gradually reduced to 5 drops, and this quantity is continued for a week and then again increased as before.

Treatment of Pneumonia.—Thomas (*Southern California Practitioner*, November, 1902) states that the principal points in the treatment of pneumonia are: The reduction of bloodpressure and fever during the first 48 hours, if possible. In the second stage, in which danger begins, he would use external applications, so far as possible, in preference to morphine, etc., for the pain, expectorants if indicated, conserving the patient's strength with good nutritious diet and the best hygienic surroundings, and especially look for and guard against heart failure. The larger part of his article is an argument for heart stimulation by strychnine, nitroglycerine, etc.

GYNECOLOGY AND OBSTETRICS.

Methylene Blue in Metritis.—In the treatment of chronic metritis the opinions of gynecologists differ widely. Dr. Charles Sueur (*Bull. gén. de Thérap.*, CXLIV, No. 12), in his graduation thesis, reviews all the methods in vogue and gives the preference to **methylene blue**, medicinally pure. The latter has marked bactericidal and analgetic properties, besides, it acts as a vasoconstrictor and reliever of congestion. Its use permits the patients to follow their usual occupations. For intra-uterine applications the author rolls some absorbent cotton around a Playfair sound, dips it in a bottle holding vaseline oil, then impregnates it with methylene blue (medicinal) powder, and introduces it into the uterus in the manner of a swab. Sometimes pain is produced, not by the drug, but by the swabbing; it soon ceases, however. In treating the cervix the same procedure is employed. A few minutes after the application the excess of methylene blue should be removed by a cotton tampon. Finally, a few tufts of plain gauze or iodoform gauze are packed into the vagina. According to Sueur's experience, methylene blue is less efficacious in metrites of gonococcic origin than in ordinary metrites; and lesions of the adnexa are decidedly improved.

Methods of Using Chloral in Eclampsia.—The use of chloral is very genrally regarded as the basis of the medicinal treatment of eclampsia; but the drug should always be administered in a rational manner and in sufficient doses. Now, according to the experience of Comandeur, (*Semaine Médicale*, XXII, No. 40), accoucheur to the hospitals of Lyons, the rectal way is defective; it does not insure the absorption of the chloral. In fact, many patients cannot retain the enema sufficiently long; and in other patients the rectum often becomes intolerant, so that it is difficult to give more than 5 or 6 injections. He prefers administering chloral by the mouth. First washing out the stomach, in order to subdue the gastric irritability, then dissolving the drug in water (about 4 ounces for every 15 gr.) Thus given, the chloral is said to be well borne and completely absorbed, even when large doses are employed. The author has thus given as much as 14 gm. (3 1/3 dr.) in 14 hours, without the least accident. In 4 patients treated with these heroic doses from the onset, the pregnancy took its normal course, which is very exceptional in eclampsia.

The Treatment of Abortion With Fluid Extract of Viburnum Prunifolium.—Reimer (*Praktitchesky Vratch*, Vol. 1, No. 23) obtained very good results from the use of fluid extract of viburnum prunifolium in the treatment of threatened abortion. In a number of cases, several of which he reports, he observed that the administration of 25 drops of the drug, 4 times a day, stopped the hemorrhage and pain, the women going on to term. So uniformly favorable were the results of this treatment that the author is inclined to look upon viburnum prunifolium as a specific. He also obtained beneficial effects from 10 to 12 drops of the fluid extract, 3 times a day, in a case of constant pains resulting from chronic metritis associated with pregnancy.

On the Question of Treating Abortion with Viburnum Prunifolium.—Schapiro (*Praktitchesky Vratch*, Vol. 1, No. 37) reports a case of habitual abortion in a woman, 30 years old, successfully treated with extract of **virburnum prunifolium**, in doses of 0.12 gm. 4 times daily. The patient has had 5 miscarriages, and the sixth was prevented, the author believes, by the use of this drug. The case is reported as corroborating the statement made by Reimer, that virburnum prunifolium is a specific against abortion.

On the Application of Thiol in the Treatment of Some Diseases of the Female Sexual Organs.—Kozlenko (*Praktitchesky Vratch*, Vol. 1, Nos. 45 and 46) discusses the therapeutic applications of **thiol** in gynecological practice. He employs this drug, either in the form of tampons saturated with a 20% to 50% watery or glycerine solution, introduced daily or every other day, or in the form of rectal suppositories made of powdered thiol, 0.3 gm. in each. In acute and subacute inflammations of the perimetrium he employs pure thiol, either in the form of direct application or tampons. In endometritis and endocervicitis he uses pure thiol in the form of intra-uterine applications or external inunctions of the abdominal walls. Three cases are reported illustrating the beneficial effect of the drug and the conclusion is reached that thiol acts as an analgetic and absorbefacient and, being free from the objectionable features of ichthyol, will in the near future entirely replace the latter.

DERMATOLOGY.

An Eruption from the Ingestion of Salicylate of Soda.—Morrow (*Brit. Jour. Derm.*, Nov., 1901, page 434) records a case of dermatitis from salicylate of soda occurring in a woman, aged 25, who was suffering from acute articular rheumatism. The patient was taking 6 to 8 gm. a day. when at the end of 48 hours an eruption, consisting first of erythematous plaques later surmounted with vesicles, appeared on the forehead, gradually spreading over the entire face. The eruption persisted until the tenth day. The salicylate was discontinued and the eruption disappeared 4 days later. Some days later the administration of salicylate of soda was resumed, and 2 days after this the eruption reappeared, fading again upon the cessation of the drug.

Treatment of Burns.—Biddle (*Penn. Med. Jour.*, V. No. 11, abstracted in *Merck's Archives*, Oct., 1902) discusses the subject of burns and their treatment. It is quite remarkable that there is no established treatment of these injuries; the number of remedies advised is legion. Carron oil and sodium bicarbonate are common household remedies and have a certain measure of efficiency. A saturated solution of picric acid has many advocates. It is said to prevent ulcerations, to bring prompt relief and effect a rapid cure. Leistikow favors the use of ichthyol and claims that it at once relieves pain. The author has no faith in these empirical remedies. He has seen a fatal case of lead poisoning, due to the use of a lead ointment on a child, and cautions against the prolonged use of such salves. The author employs a mixture of lead carbonate, sodium carbonate, powdered acacia and linseed oil, made of such consistency as to permit spreading on cotton flannel. (The proportions are not stated). Acacia is added to obviate the absorption of the lead. This dressing is continued for ten days or two weeks. Should symptoms of lead poisoning appear, magnesium sulphate is administered.

The author finds the above ointment superior to other methods. He alleges that scarring is prevented. Where much cutaneous tissue is destroyed, skin grafting is indicated.

Oil of Turpentine in the Treatment of Ringworm and Tinea Versicolor.—Leven (*Jour. des Mal. Cut. et Syph.*, April, 1901) advocates the use of turpentine in vegetable parasitic diseases, particularly ringworm and tinea versicolor. In the former it is applied to the patches on pieces of linen, night and morning, while in the latter disease it is rubbed in daily for five minutes. At about the end of 6 days a certain amount of dermatitis ensues, which is followed by epidermal exfoliation. The skin is then treated with some simple emollient application.

Quinine Erythema.—Robey (A Case of Dermatitis Medicamentosa.—*Bost. Med. and Surg. Jour.*, April 3, p. 362) reports a patient suffering from intermittent fever who experienced an outbreak of an erythema each time quinine was taken. Three hours after the ingestion of this drug a little redness appeared on the face and hands; at the end of 5 or 6 hours the erythema became generalized and was accompanied with intense itching. On the following day the redness faded and on the fourth day a desquamation in large flakes began.

Balneotherapy in Skin Diseases.—Weyner (*Balneologische Central Zeit.*, Dec., 1901) recommends baths at the temperature of the body in cases of acute eczema. In chronic eczema good results are claimed for tar baths, which remove the crusts and lessen the infiltration. In psoriasis the scales are first loosened by means of the application of potash soap in a warm bath and followed by the use of an ointment, preferably chrysarobin. Sulphur baths are found to be useful in prurigo and also in furunculosis. In ichthyosis the skin may be kept in excellent condition by frequent warm baths and the subsequent inunction of an oil. The continuous bath, such as employed by Hebra, is valuable in conditions in which there is great denudation of the epidermis, such as severe burns and pemphigus; the pain is allayed and there is no adhesion of dressings and bed linen.

Viola Tricolor in Obstinate Cases of Acne Vulgaris.—Behrmann (*Dermat. Centralbl.*, 1902, Nos. 9 and 10) records favorable results in acne from the internal administration of the infusion of viola tricolor. The efficacy of the remedy is attributed to the combined action of the salicylic acid and magnesium tartrate which are contained in the flower.

Lupus Erythematosus Cured with the X-Rays.—Woods (*Amer. Jour. Med. Sci.*, Dec., 1901), reports cure of a patient suffering from erythematosus which involved the right cheek covering an area the size of a silver half-dollar. After the second exposure a decided improvement was noted, and it was not found necessary to continue the treatment after 6 sittings. The exposures lasted 10 minutes, were given twice a week, at a distance of 18 centimeters.

Treatment of Epithelioma with Arsenic Paste.—Arsenic is perhaps the best of all caustics for the destruction of cancer of the skin. It has the advantage of exerting a selective action on morbid tissue, the cancerous cells breaking down long before the healthy tissue is compromised. It is advisable to use arsenic in concentrated strength in order that it may not be absorbed and give rise to poisonous symptoms. In concentrated form it seems so to devitalize the cells with which it comes in contact, so that they become incapable of absorption. As a matter of precaution it is generally advised not to employ the arsenic paste over a larger area than one inch square. Griffith, (*Medical World*, July, 1902), advocates the following formula:

Acidi Arsenosi	1 dram
Pulv. Acaciae	1 oz.
Cannabis Indicæ	1 dram

Remove any crust that may be present, add sufficient water to convert the above powder into a thick paste, spread on muslin and apply to the affected area. At the end of 18 to 24 hours the paste is washed off and a bland ointment applied. It is often found advisable to give a little morphine internally in order to assuage the rather severe pain that accompanies the action of the arsenic.

Arsenic is often used in much greater strength than that above advised; it is frequently employed in 50 or 66% strength with powdered acacia.

SURGERY.

A New Method of Medullary Narcosis.—Koslowski (*Centralblatt für Chirurgie*, November 8, 1902) describes his method of inducing anesthesia by lumbar puncture. After introducing the needle into the spinal theca he allows the cerebrospinal fluid to flow into a sterile graduated receptacle which contains tropacocaine. The tropacocaine (Merck's) is not sterilized. The cerebrospinal fluid is a good solvent for the drug, and, when one has placed 5 cg. of the powder into the receptacle, 5 gm. of the fluid will make a 1% solution. The cerebrospinal solution of tropacocaine is now drawn into the syringe and injected through the needle into the spinal theca. The method is effective and no untoward after-effects occur.

A New Method of Performing Pyloroplasty.—Finney (*Bull. Johns Hopkins Hosp.*, July, 1902) describes the following operation for benign stricture of the pylorus. After freeing the pylorus and the first portion of the duodenum, one suture is placed in the upper wall of the pylorus, one in the anterior wall of the stomach and a third in the anterior wall of the duodenum, the 2 latter being equidistant. The pyloric suture is pulled upward and the other 2 sutures drawn downward. The peritoneal surfaces of the stomach and the duodenum are sutured by a continuous stitch as far posteriorly as possible. A row of mattress sutures is placed anteriorly; these sutures are left long and untied until an incision is made connecting the stomach, pylorus and duodenum, as much scar tissue as possible being excised. A continuous catgut suture is then taken through all the intestinal coats posteriorly, and the anterior sutures tied. The advantages claimed are a minimal exposure to infection, all the sutures being placed before the pylorus is incised; an applicability to cases complicated with extensive adhesions; better apposition and less liability to recurrence, the outlet of the stomach being at the most dependent portion.

Treatment of a Hernial Anus.—Pauchet (*Revue de Gynecologie*, October, 1902) plugs the anus with a tampon and then incises around it to mobilize a collar of skin surrounding the anus. The circle of skin is drawn up over the anus and pinched firmly with forceps like a cover over it. The entire loop of the intestine is then drawn out and the 2 parts are united by lateral anastomosis, after the portion containing the anus has been cut off and the stumps thermocauterized and closed with a purse-string suture. The patient ingests nothing by the mouth for 48 hours, after which he commences on fluid foods, but no milk is given for a week. He describes 4 cases, and illustrates the technique.

Intrapelvic Drainage in Males.—Taylor (*Richmond Journal of Practice*, September, 1902) had made dissections to determine whether the peritoneal pouch in the male pelvis can be drained to advantage similarly to that of the female. He finds the rectum loosely attached behind, but more closely so in front by the prostatic peritoneal aponeurosis connecting with the rectovesical fascia. It, however, allows separation of the rectum from the prostate and bladder. The anterior wall of the rectum can be separated by blunt dissection and reflected toward the sacrum. Recalling the fact that the rectovesical pouch is the most dependent point of the peritoneal sac, he reports a case in which, through an unfortunate error in dressing, the patient was lost, though the operation was a success. A perineal incision was made and the rectum separated by simply pushing the finger in the perineal wound up to the rectovesical pouch, a blunt dissection with the finger. He thinks this plan, however, in spite of the misfortune in this case, has a decided advantage over any other plan when dependent pelvic and abdominal drainage is required. With the peritoneal cavity opened and assisted by one hand in the pelvis above, this procedure is as easy as opening the Douglas cul-de-sac through the vagina. He thinks drainage can often be effected without opening the abdomen above, and in some cases may tide the patient over a crisis, just as is done by intravaginal drainage. If, however, the rectovesical pouch is not distended, he doubts whether it would be an easy matter to puncture it as it would easily be pushed inward by the finger or the scissors. If protection to the urethra is thought essential, it can be secured by passing a sound into the bladder. A more probable accident, he thinks, would be to puncture the rectal wall, but this would be very improbable because of the loose attachment and the added safeguard of a finger as a guide in the rectum.

MALIGNANT DISEASE.

Mercuric Cataphoresis in Cancer.—Massey (*International Medical Magazine*, November, 1902) describes his method consisting in injection of mercury, in the form of ordinary quicksilver, into the growth or held within it in union with a solid electrode of zinc, and being made the anode of the current, is attacked by the electrolytic process and the resulting nascent compound, a soluble oxychloride of mercury and zinc, is diffused throughout the growth rapidly, the patient being under a local or general anesthetic. The result is that the radiating chemicals unite with the protoplasm of the cells and other elements of the growth, producing a rapidly enlarging area of necrosis, which is most effective in the degenerating tissues. The opposite pole being on a distant part of the body, the lines of diffusion will tend to follow the so-called roots of the cancer to their extremities. He finds a current strength of from 500 milliamperes to 800 milliamperes, more or less, applied for 60 minutes, most effective, and considers that the method has decided advantages over the knife. Its disadvantages are the cost of the paraphernalia and the necessity of a knowledge of medical electrophysics by the operator. It also has advantages compared with the X-rays in requiring anesthesia and in producing a wound at the site of the growth; but this is readily curable, differing in this respect from the X-ray wounds. The knife is still preferable in operative growths of internal organs capable of removal, and highly malignant sarcomas of the extremities in which it is possible to amputate the limb far above the site of the disease, but the employment of cataphoresis is better when it is inadvisable to remove extensive contiguous tracts, which can also be sterilized by this method. The X-rays should be used in external growths too extensive for quick eradication by mercuric cataphoresis, in inoperable growths within the chest or abdomen and in general carcinomatosis when other methods fail. He has employed the method in 60 unselected cases, in which it was begun, generally, as a forlorn hope, and has had 18 cures, 7 of them having passed the 3-year limit.

The Treatment of Carcinoma With Cancroin.—Nothnagel (*Berliner klin. Woch.*, July 14, 1902) refers to the recent articles upon the successful treatment of cancer with cancroin, and states that the patient suffering from gastric carcinoma reported by Adamkiewicz as having been cured by means of this treatment still suffers from carcinoma ventriculi. Von Eiselsberg (*ibid*) affirms that in another case, reported by Adamkiewicz,cancerous stricture of the esophagus, he found no signs of improvement. Poten (*ibid*) employed cancroin in 2 cases, one of cancer of the breast and in one of cancer of the uterus; both patients succumbed, notwithstanding the treatment. Schultz-Schultzenstein (*ibid*) reports a case of cancer of the uterus in which he used cancroin without effect.

MALARIA.

Fowler's Solution and Antipyrine Hypodermically in Malaria.—After employing intrasplenic injections of 6 to 10 drops of Fowler's solution, diluted with 1 oz. of sterilized water, and noting the severe pains they produced, Dr. Convy (*Semaine Médicale*, XXII, No. 41) conceived the idea of replacing them by simple hypodermic injections, substituting a solution of antipyrine for the sterilized water. This method has yielded excellent results and, as a rule, a single injection suffices to bring about a sudden and lasting defervescence. One cc. (16 min.) of a 10 per cent. solution of antipyrine is boiled for a moment with 6 drops of Fowler's solution in a test-tube; then, after rendering the site of injection (preferably the abdominal wall) aseptic, the liquid is drawn up with a syringe and injected while still warm. The patient feels nothing but a very slight pain for about 5 minutes, and this may be diminished by massaging the part a little after the injection. Defervescence supervenes in 5 to 6 hours without the least disturbance. In conclusion, the author states that the syringe, test-tube and dropper must be carefully sterilized; and that the dose of the Fowler's solution should be increased one drop at each injection.

Iron in Latent Malaria.—Riva-Rocci, in 1901, discovered that injections of the salts of iron induced typical malarial manifestations in those in whom the malarial infection seemed to be eradicated, and he advanced the theory that malarial germs might persist in the latent style in the parenchyma of the spleen and liver, from which the hyperemia brought about through administration of iron caused them to be again carried into the general circulation, where their presence should give rise to the reappearance of malarial symptoms. Cova and Boni (*Medical News*, 81, No. 11) describe the cases which give some support to this theory. Two of the patients had a history of malaria cured by quinine some months before. Injections of iron arsenate, used to combat chlorosis, caused in both a reappearance of chills and fever. In the third patient, an anemic baby, of whom no satisfactory history could be obtained, injections of iron were used, not only as a curative measure, but also in order to ascertain whether latent malaria was responsible for the child's condition. The occurrence of a typical malarial seizure after 2 weeks' treatment with daily iron injections led the writers to the belief that the value of iron in malarial cases may lie, not only in its power to combat the anemia which so commonly follows, but also in its serving to diagnose latent malaria, and, through its effect upon the spleen and liver, to dislodge the parasites from those organs and possibly from the medulla of the bones, thus driving them into the general circulation, where they may be destroyed by the administration of quinine. The question of secondary infection in these cases is met with fairly convincing arguments for the exclusion of this possibility.

CONSTITUTIONAL DISEASES.

Treatment of Diabetes.—H. Eichhorst, (*Therap. Monatshefte*, XVI, No. 9) of Zurich, contributes an able essay on this subject. He considers proper dieting of the greatest importance and has little faith in drugs. The diet should consist of fat and proteid. Saccharine is an excellent substitute for sugar and may be given with impunity for years, while dulcin (sucrol)) is more liable to have disagreeable after-effects. The author has not, as yet, found a perfect substitute for bread; those which have been tried either become repulsive to the taste in time, or they are too rich in carbohydrate. He prefers Graham bread, if the conditions permit of bread at all. The patients should take copious meals to make up for the loss in flesh that goes with the disease. Forbidden articles of diet should be withdrawn gradually, not suddenly. If the urine remains free from sugar for several weeks, a little bread—say about 1 oz.—may be premitted, and the amount increased by about ¼ oz. until 3 oz. are reached which is ordinarily enough to get along with. However, as soon as sugar reappears in the urine the intake of bread must be diminished or wholly withdrawn again. Aside from the diabetic regime, attention should be paid to clothing, cleanliness and exercise. It is known that diabetics are very sensitive to changes in temperature and the weather, so that it is important to advise wearing suitable underwear, even in summer. Finally, all mental excitement should be avoided.

PEDIATRICS.

The Treatment of Whooping Cough With Serum.—C. Leuriaux (*Semaine Médicale*, July 16, 1902) has prepared a serum from the blood of horses that have been treated with increasing doses of filtered cultures of an organism which he believes is the cause of the disease. With this serum he claims to be able to obtain a cure in about 8 days, if the treatment is begun early. At whatever stage in the disease the serum treatment is begun it proves beneficial. Out of 66 cases treated by Leuriaux in this manner there was no immediate improvement in 5 only.

On the Treatment of Scarlatina.—Julius Grosz (*Archives für Kinderheilkunde*, Vol. 34, Nos. 1 and 2) carries out isolation and hygiene strictly in cases of scarlet fever. The children are kept in bed for 3 weeks, and warm baths are given every other day during desquamation. Quinine and antipyrine are given for hyperpyrexia. In the treatment of scarlatinal nephritis he employs digitalis, potassium acetate, diuretin and warm baths. Sometimes he also uses ergotine or tincture of the chloride of iron. Out of 168 cases of scarlet fever, he had a mortality of 15%.

On the Use of O'Dwyer's Intubation Instruments.—Nicoll (*Archives of Pediatrics*, June, 1902) advises the use of O'Dwyer's intubation instruments in cases of laryngeal obstruction accompanying diphtheria

On Intubation.—Perez Avendano (*Archives de Méd. des Enfants*, June, 1902) has found that an intubation tube may slip into the trachea on account of its small size or because some force is applied to it while attempting to remove it. In order to obviate this accident he advises the use of intubation tubes with bevelled edges and with handles.

On the Use of Tracheotomy and Intubation in Diphtheria.—F. Siegert (*Archives für Kinderheilkunde*, Vol. 33, Nos. 3-6) presents a statistical study on the use of tracheotomy and intubation. He concludes that in hospitals tracheotomy and intubation give approximately the same results, and that intubation makes tracheotomy superfluous in 2/3 of all cases.

On the Use of Intubation in Tracheotomy and Diphtheria.—Ganghofner (*Jahrbuch für Kinderheilkunde*, May, 1902) has found that the mortality from diphtheria in Prague during the past 6 years, in children under 3 years of age, was 30% or over. The mortality in cases in which intubation was done was somewhat less than this. The author prefers intubation to tracheotomy. Primary tracheotomy is rarely necessary. On the other hand, secondary tracheotomy may be indicated and is often done immediately after intubation.

The Treatment of Diphtheria With Antitoxin.—M. Howard Fussell (*Proc. Phila. Co. Med. Soc.*, October, 1902) suggests the following rules for the use of antitoxin in diphtheria: (1) When called to see a case of sore throat which is doubtful in character, give antitoxin at once and make the diagnosis by culture afterward; (2) when a case of undoubted diphtheria is seen administer 2,000 units at once; if there is no improvement in 6 hours, administer 2,000 units again, every 12 hours thereafter administer 2,000 units until improvement begins; (3) always give a large dose; 2,000 to 4,000 units, but in desperate cases much larger doses may be used. He believes that, given a case of diphtheria in an early stage, it is only a matter of the administration of enough antitoxin to effect its cure. If one waits, even in apparently mild cases, fatal pathological changes may occur in the organs which will make death or invalidism certain.

The Treatment of Diphtheria of the Conjunctiva With Antitoxin.—M. Emmett Holt (*Archives of Pediatrics*, May, 1902) reports a case of diphtheria of the conjunctiva in a child, aged 6 months. Ice compresses, atropine instillations and the injection of 2,400 units of antitoxin produced prompt recovery.

The Treatment of Summer Diarrhea.—W. Cecil Bosanquet (*Practitioner*, August, 1902) advises, in the course of an attack of summer diarrhea, the temporary suspension of all food, particularly milk. But milk diet should be returned to as soon as possible. After the offending materials are expelled from the intestinal tract, that tract should be kept, as far as possible, in an aseptic condition, and any remaining irritability of the mucous membrane should be soothed. Fluid lost should be supplied, and when the temperature is excessive it should be reduced. If the extremities are cold and collapse is imminent, heat should be supplied, and if the heart fails, strychnine is indicated.

The Treatment of Summer Diarrhea.—Charles G. Kerley (*Archives of Pediatrics*, June, 1902), in the treatment of summer diarrhea, advises the exhibition of castor oil or calomel as soon as the patient is seen. The diet should be reduced to a carbohydrate basis and, after the characteristic action of the primary cathartic has been noted, large doses of bismuth subnitrate should be given. He also advises the use of irrigation of the colon one or twice in the 24 hours with normal salt solution.

The Treatment of Summer Diarrhea.—Henry Heiman (*Archives of Pediatrics*, June, 1902), in the prophylaxis of summer diarrhea, advises inquiry into dietary indiscretions of the mother or uncleanliness of her nipples or breast, if the child is breast-fed. In bottle-fed children, pure milk is an absolute necessity.

On the Feeding of Infants.—I. K. Strzhelbitski (*Medicinskoie Obosrenie*, 1902, No. 7) believes that the deprivation of infants of their mother's milk is the cause of the high infant mortality during the first year of life in the city of Tul. The most frequent excuse for removing the child from the breast before it is 6 months old is insufficiency of milk secretion. The author believes, however, that this is not the true condition of affairs. If the milk secretion does not seem to be of proper quality, or if it appears late, the child should be applied regularly to the breast, even if no immediate results follow; and even when it is fed on some substitute, it should be applied to the breast before each feeding. The occurrence of dyspepsia while the child continues to gain in weight, should not be a sufficient cause for depriving the child of its mother's milk. The long list of diseases in the mother, which are supposed to contra-indicate nursing, will not stand criticism.

On the Artificial Feeding of Infants.—H. L. Coit (*Archives of Pediatrics*, May, 1902) advises for the progressive feeding of infants artificially: (1) A decimal solution of sugar, which is made by dissolving one ounce of sugar of milk in enough hot water to make 10 ounces. (2) Decimal cream No. 1, which consists of the top 6 ounces from one quart of milk that has been bottled 15 hours, to which 3 ounces of water have been added. This mixture contains 10% of fat. (3) Decimal cream No. 2, which consists of the top 11 ounces from one quart of milk that has been bottled 15 hours. This cream also contains 10% of fat. He then gives 4 formulæ to illustrate the proportions of each ingredient to be used in the artificial feeding of a child.

On the Diet of a Child Between One and Two Years Old.—Thomas S. Southworth (*Archives of Pediatrics*, May, 1902) describes the aricles which should be included in the diet of a child between one and 2 years old. At 7.30 A. M., the child should have its breakfast, which should include a bottle of milk; at 11 A. M., a bottle of milk with a crust of bread or zwieback; at 2 P. M., dinner; at 6 P. M., supper, including a bottle of milk; and at 10 P. M., a bottle of milk. The following articles may be included in the diet: Soft boiled eggs, cereals, crust of bread, zwieback, crackers, oranges, prunes, baked apple, spinnach, fresh green peas, asparagus tips, tender string beans, stewed celery, tender boiled onion, baked potato, beef juice, mutton or chicken broth, scraped meat, roast beef, roast mutton and mutton chop. Tea, coffee and beer should be given under no circumstances.

On the Treatment of a Wet-Nurse.—O. Macé (*Journal des Praticiens*, June 21, 1902) says that alcohol, opium, belladonna, quinine, antipyrine, bismuth, iron, arsenic and the salicylates should not be given to a wet-nurse because they affect her milk, being excreted in that fluid. On the other hand, phosphates, mercury, or iodine may be given to the nurse, in case they are indicated for the child, because in that way the child can be made to take these remedies. The objection to the method is that the quantity of the drug administered is unknown.

On the Treatment of Delirium of Epilepsy by Rest in Bed.—E. Marandon de Montyel (*Revue de Méd.*, May, 1902) has treated 19 cases of delirium in epilepsy by rest in bed. In only one of these cases was benefit obtained. In another case there was some benefit obtained so far as the modification of the attacks of delirium was concerned, but the crises were of longer duration. In another case the first trial of treatment by rest in bed was productive of amelioration of the condition, but on subsequent trials the benefit was not reproduced. In another case important modifications occurred in the crises of delirium which justified the doubts that arose concerning the effect of the treatment, the crises being more severe and lasting a longer time. In 10 cases the result of rest in bed was absolutely negative upon the delirious attacks, and in 4 or 5 cases rest in bed undoubtedly made the attacks worse. These facts led the author to the conclusion that rest in bed is of no value in the treatment of epileptic delirium. But, since in one case benefit was derived from the treatment, whenever he finds a case of the delirium of epilepsy, he determines the duration, the intensity and the symptomatology of the crises and then puts the patient to bed during the next attack. If any unfavorable result is obtained by this method, he gives it up and returns to the well-known therapeutic measures that are much more serviceable to the patient.

On the Treatment of Diabetes Mellitus in Children.—Heinrich Stern (*Archives of Pediatrics*, June, 1902) reports a case of diabetes mellitus in a child, aged 4 years. Improvement was obtained from treatment with antipyrine, codeine, sodium pyrophosphate, and a rigid antidiabetic diet.

INFECTIOUS DISEASES.

The Use of Formaldehyde in Diphtheria.—C. A. Donaldson (*Northwestern Lancet*, December 1, 1902) recommends fumigation of the patient's room by burning either tablets or candles of formaldehyde in the adjoining closets, leaving the door open long enough for the escape of gas into the room; or, in preference to this, when possible, to fumigate a room and transfer the patient to it and then fumigate another room and transfer the patient back, one room to be used during the day and the other at night. He tabulates 7 cases thus treated, 5 of them of the ordinary type and 2 mild, with good results. These are not considered numerous enough for definite conclusions, but are of value as of sufficient importance to report, with the hope for a further investigation of a remedy which always holds an important place in the treatment of this disease. He does not say just how much of the gas was allowed in the room, but, of course, the air must have been respirable.

Typhoid Fever.—Duffield (*Journal of the Michigan State*

Medical Society, November, 1902) advocates **intestinal antisepsis** and finds that guaiacol meets the needs better than any other remedy. He usually gives 5 minims every 3 or 4 hours, in capsules, and has often noticed a special antipyretic effect, though given for its antiseptic properties. Its local application has taken the place of baths with him for many years. He employs it over the ileocecal valve, rubbing in 4 or 5 minutes gently and covering with cotton wadding. The skin seems to absorb the remedy quickly. As regards diet, he objects somewhat to the exclusive milk diet, because milk is not a fluid within the body; but he allows plenty of sterile water, beef broth, beef juice, strained animal broths and certain artificial foods. As the fever abates, the broths may be thickened and a soft diet be substituted gradually.

Bloodserum in Scarlatina.—C. S. Engel (*Semaine Medicale*, XXII, No. 38) has used normal human bloodserum subcutaneously in a boy, 6 years of age, suffering from scarlatina, complicated with diphtheria and albuminuria and with a temperature above 40° C. (104° F.). Despite the injections of antidiphtheritic serum the condition did not improve, and the grave symptoms (dyspnea, cyanosis, feeble pulse, etc.,) pointed to a fatal termination. It was now that the author decided to inject 8cc. (2 fl. dr.) of freshly-drawn serum obtained from a man in good health. This injection was not slow in producing improvement, and the patient eventually recovered completely. In view of his experience, Engel believes that injections of normal bloodserum should be tried in all grave cases of scarlatina or of other infectious disease, and that considerably more can be injected than he used in his small patient without compunction. The serum should be freshly drawn as wanted.

On the Treatment of Rheumatic Affections with Sodium Iodicum.—Poljansky (*Praktitchesky Vratch*, Vol. 1, No. 46) claims, as a result of more than 2 years' experience, that in the treatment of sciatica, lumbago, torticollis, etc., the best results may be obtained from a hypodermic injection of ½ syringeful of a 5% solution of **sodium iodicum.** He cites a number of cases in which this drug had a most salutary effect after the usual remedies failed. The analgetic effect of the drug is immediate and permanent, no relapses having been observed in any of the patients thus treated.

Report of a Grave Case of Tetanus Treated with Veratrum Viride; Subsequent Recovery.—Sweetser (*Northwestern Lancet*, December 1, 1902) mentions the mortality of tetanus under the ordinary treatment, and reports 2 cases. The first was one of short incubation and acute development, treated with antitetanic serum, chloral and morphine, resulting fatally. The second was that of a girl, 14 years of age, who had had an operation for ovarian cyst which had been preceded by a vaginal examination, which he thinks introduced the bacillus into a wound or abrasion. The case was an acute one, but the incubation was rather long, 13 days. The treatment was morphine during the acute stage to control the pain, ¼ gr. doses every 4 hours, antitetanic serum, which seemed to him ineffective, bromides and chloral. On the fifth day veratrum viride was tried in addition to gelsemium, with remarkable effects on the convulsions. The vomiting was severe, and the doses were reduced from 8 minims of Norwood's tincture and of the fluid extract of gelsemium to 6 minims every 4 hours, later every 5 hours. He then returned to chloral and bromide, but the bad condition recurred, so that the veratrum viride and gelsemium were recontinued and increased. The patient made a good recovery. In 10 days about 17 drams each of Norwood's tincture and of fluid extract of gelsemium were given per rectum, with no effect on the cerebrum and no general depressing effect on the system, this being in marked contrast to the chloral. He reviews the different remedies and their effects, and states that the points which he wishes especially to emphasize are the recovery of a severe case under this treatment, the use of remedies which affected the anterior horns of the spinal cord in directly the opposite way from tetanus toxin, and to call attention to the fact that chloral is a dangerous drug, which is more likely to poison the system in this disease than even in health; to record, also, the opinion, based on observation, that some of the deaths ascribed to tetanus poison have really been due to the effects of the remedies used.

PHARMACOLOGY.

Thiosinamine.—The action of thiosamine is, Somers says, (*Merck's Archives*, November, 1902) elective for poorly organized tissue, especially cicatricial and fibrous, and he reports a dozen cases of aural disease thus treated with doses of ½ to 1 grain, 3 times daily in capsules. In a few recent cases he gave 3 grains daily in divided doses for 2 weeks, then increasing to 6 grains daily, but found that it produced nausea. At first he used it to the exclusion of all other remedies, but he found later that it was better adapted for an adjunct than an exclusive treatment. It has certain contra-indications and it should be avoided in case of existing old fibrous tissue which acts as a support to important structures and also in active inflammatory processes, if it aggravates them. In his cases the results seemed to be generally satisfactory.

Some Uses of Hydrogen Peroxide.—Novikoff (*Rev. de Therap.*, LXIX, No. 21, quoted in *Merck's Archives*) reports good results from the use of solutions of **hydrogen peroxide** containing ½ per cent. H_2O_2, in infectious wounds and ulcers; a few dressings sometimes suffice to bring about cicatrization of simple atonic wounds; and he has had success with the peroxide in lichen and other skin diseases. He uses either the 3 per cent. (10-vol.) solution, or an ointment composed of 10 to 15 parts of the latter and 100 parts of anhydrous wool-fat. In stomatitis of any origin, but particularly in mercurial stomatitis, the lesions disappear more rapidly under hydrogen peroxide than under any other treatment ever tried by the author. A gargle is prescribed, consisting of one or two tablespoonfuls of solution of hydrogen peroxide to a glass of water. Internally, the remedy has manifested an equally favorable action in diarrhea, cholera infantum and certain respiratory diseases; here it is given in the following mixture:

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Solut. hydrog. perox.	5 to 7 gm.
Syrup	15 gm.
Distilled water	85 gm.

One or 2 tablespoonfuls or dessertspoonfuls hourly or every 2 hours.

Cuttle-Fish Bone in Intestinal Catarrhs.—George Herschell (*International Medical Magazine*, October, 1902) calls attention to the use of powdered cuttle-fish bone in the treatment of chronic diarrhea in dysentery, especially those (such as kill diarrhea and sprue) which are acquired in tropical climates. With this drug he has often cured, within a short time, intractable cases of chronic diarrhea which had resisted all other means of treatment. He gives ½ to 1 dram 3 times daily, after a preliminary dose (½ oz.) of castor oil. In cases of sprue the author says he has seen several remarkable cures effected by powdered cuttle-fish bone. It appears to act in a mechanical manner upon the intestinal mucosa. During its use castor oil should be given every 2 or 3 days.

TUBERCULOSIS.

Treatment of Tuberculosis with Cinnamic Acid and its Derivatives.—W. J. Robinson (*Merck's Archives*, November and December, 1902) concludes an article on this subject as follows: (1) To regard sodium cinnamate as a specific for tuberculosis is absurd. Neither Landerer nor the most ardent of his disciples, Cantrowitz, claims it to be such, and only those who have not given the subject any study can bestow upon the drug such a title. (2) The drug is probably a useful adjuvant in the treatment of tuberculosis in the first stage. (3) The doses must be small to begin with, and must be increased very gradually. This is a very important point, and one on which Landerer insists with particular emphasis. Cantrowitz ascribes most of the bad results reported by other investigators to the fact that they used too large doses. (4) The drug is contra-indicated in cases inclined to hemorrhages, or soon after hemorrhages. (5) It should not be used when the temperature is above 101° F. (6) Should a rise in temperature follow an injection, it is evident that the dose was too large, and the next dose should be diminished to ¾ or ½. (7) Prof. Landerer is a reliable and trustworthy observer, and there is not the slightest justification for mistrusting his statements and reports. But it must be borne in mind that practically similar results are now obtained in most high-class sanatoria in which sodium cinnamate does not enter into the treatment. (8) The treatment with sodium cinnamate is harmless, provided it is practised strictly according to the rules laid down by Landerer. Too large doses may, by causing an excessive serous exudation—leukocytosis—around the tuberculous foci, carry some tubercle bacilli into the circulation. (9) Given by mouth, the dose of sodium cinnamate may be quite large, 2 or 3 gr. Whether it has any influence on the tuberculous process when thus administered, remains to be shown. Cantrowitz is very skeptical in this respect. He says that, when given per os, it is probably eliminated in the urine, perhaps in the form of hippuric acid. (10) Taken in all, Robinson says that his impression of sodium cinnamate as a curative agent in tuberculosis is a negative one. It is probably useful symptomatically, but, even here, he prefers creosote and its derivatives.

HEADACHE.

Bloodletting in Persistent Headache.—H. Marais (*Semaine Médicale*, XXII, No. 40) advocates blood-letting as a means of relieving the persistent headaches which are sometimes observved in middle-aged persons who are not benefited by the usual remedies. He refers to a case of continual headache that had resisted all the customary treatment, but which was relieved by a copious bleeding. the patient remaining free from pain for 2 years. Then there was a new attack, and the same treatment was again successful. In another case, an acute paroxysm of headache with vomiting and considerable fever, the very violent pains, which had persisted in spite of antipyrine and other sedatives given in large doses, were promptly relieved by the blood-letting; the next day the cephalalgia was almost entirely gone, and 5 days later the patient was completely well.

RADIOTHERAPY.

Röntgen Rays in Cancer.—From clinical experience up to the present time, Leonard (*International Medical Magazine*, November, 1902) considers the following conclusions justified: We have a more potent remedial agent than any other in the Röntgen rays, but they cannot be considered as a cure-all, and should not be employed to supersede operation, but to supplement it. The best interests of the patient will be served by early diagnosis, early radical removal by surgical intervention, and subsequent thorough treatment of the infected area by the Röntgen method. Inoperable cases and superficial growths, not liable to produce death or give rise to metatases, and also recurrences, may reasonably be submitted to Röntgen treatment previous to operation. It should only be employed by practitioners qualified by education and experience to judge of the therapeutic effects and estimate the proper dosage. We need wider clinical experience before we can have an effective application of this remedy in deep-seated, malignant disease.

SERUM-THERAPY.

Thyroid Serum in Basedow's Disease.—Moebius (*Klin.-therap. Woch.*, Vol. IX, No. 40)) has introduced a serum obtained from sheep from which the thyroid gland has been removed. It contains ½ per cent. of carbolic acid as a preservative. He has given 5 gm. (75 min.) of this serum per os every other day, in a tablespoonful of wine, in cases of Basedow's disease (exophthalmic goiter) and soon observed a diminution in the size of the goiter; in 2 instances the thyroid gland became considerably softer. The general condition improved, the frequency of the pulse was lowered and the tremor ceased. Untoward effects were not observed. These favorable results prompted Schultes (*ibid*) to try the treatment, and he claims to have cured a typical case of Basedow's disease with it. The patient had all the characteristic symptoms and serious mental manifestations. He administered at first 0.5 gm. (8 min.) of the serum 3 times daily, each day increasing the dose 0.5 gm. until 4.5 gm. (70 min.) were being taken thrice daily, administered either in sherry wine or raspberry syrup. No other medication was employed. The good effect began to show itself in a week. Forty-nine days after the treatment was commenced, the tremor, cardiac palpitation and other symptoms disappeared, the thyroid softened, the pulse dropped from 142 to 90, and the circumference of the neck diminished 16 inches. On discontinuing the serum, both the pulse rate and the goiter increased again, but receded when treatment was renewed, 30 min. being given twice daily.

MISCELLANEOUS.

Inebriety.—Crothers (*Interstate Medical Journal*, November, 1902) summarizes his views that the periodicity of the drink paroxysm is evidence of cerebral brain disease, and that heredity, nutrition, mental exhaustion and environment are all very common causes or predisposing factors of this condition. Allied diseases, of which epilepsy is very common, are frequently interchangeable or associated. The drink periodicity follows a uniform line of events. These are the most uncertain and dangerous of all drink neurotics and are the least understood. The prognosis is uncertain and full of dangerous possibilities. Very important medicolegal problems are associated with them, and each case requires especial study.

A Medicolegal Question.—In a recent number of the *Jour. de Méd. de Paris*, the editor, Dr. Lutand, discusses the murder of Mrs. Ellen Gore, which has been an occurrence of some international interest. In accordance with the custom in France, the medicolegal aspects of the case have been submitted by the court of preliminary inquiry to an expert, in this instance a Dr. Socquet, whose report has been published in many of the Paris newspapers in the same form, and hence Dr. Lutand believes that the text is official. The report is as follows: "Dr. Socquet, medical jurist, decides that Mrs. Ellen Gore's death was the result of accident. He made a curious observation which seemed to the magistrate so conclusive that he thought it right to set the accused person, Mr. de Rydzewski, at liberty. Mrs. Gore, so Dr. Socquet declares, was struck in the eye by a ball from a revolver. The eyeball was pierced and the brain penetrated. The eyelids were uninjured, the lashes even were not touched. The conclusion, therefore, to which he comes is, that the ball entered the eye when the eyes were wide open. He considers that, since every one is supposed to close the eyes instinctively when threatened with any danger, Mrs. Gore must not have been aware of any peril. If she had been threatened, that is, if de Rydzewski had raised his hand before her, she would have involuntarily closed her eyes. Therefore, as the eyes were wide open, there was no such demonstration. The fall of the revolver, its discharge and the wound it produced were substantially simultaneous, and, as the persons from the neighboring apartments testified to hearing no disturbance in the room, the theory of an accident seems to be well established. When the report of Dr. Socquet is made officially, Professor Brouardel will present to the Academy of Medicine a communication on this interesting subject, and Dr. Socquet himself will bring before the Medicolegal Society some considerations of the question."

After some rather caustic comments on the results of French trials for this class of crimes, the committers of which, Dr. Lutand says, usually escape punishment, he declares that many medicolegal experts, both at home and abroad, will be skeptical as to the soundness of Dr. Socquet's conclusions. He says that it often happens that persons struck down suddenly by a gunshot wound are found with eyes fully open. Moreover, while it may be true that, if de Rydzewski had made a gesture of attack, Mrs. Gore would have winked, yet the bullet might enter the eyes between such movements without wounding the eyelids. The death can be explained as the result of suicide, murder or accident. The prisoner hesitated for some time to indicate his defence, but finally decided to declare that it was an accident. It must be borne in mind that the conditions of such accidents are unusual. A revolver, lying on a table, falls to the ground, is discharged and the ball enters the eye of a person lying on a bed. We ask at once, who put the revolver on the table? Who loaded it? Further. it is surprising that falling on the ground the ball should be directed at the head of the woman. This involves a curious ricochet concerning which the deposition of the gunsmith Gastinne will be interesting.

Formulae.

DERMATOLOGY.

Scabies.—Three well-known formulæ for the treatment of scabies are as follows:

Hydrarg. chlor. corr.		4 gr.
Alcoholis		6 dr.
Ammonii chloridi		½ dr.
Aquæ rosæ	q. s. ad.	6 oz.

M. S.: Lotion for scabies, phthiriasis and tinea versicolor.

Sulph. sublimat.	1 dr.
Balsam Peruv.	½ dr.
Adipis	1 oz.

M. S.: For children.

Sulph. sublimat.		
Olei cadini	āā	2 dr.
Cretæ preparatæ		2½ dr.
Saponis viridis		
Adipis	āā	1 oz.

M. ft. unguentum.

Dusting Powder.—A cheap and effective dusting powder is composed of:

Boric acid, pulv.,
Acetanilid, pulv., in equal quantities

Psoriasis.—Dr. George H. Fox. in his *Photographic Atlas of Diseases of the Skin*, states that he has used the following prescription in **psoriasis** for many years. and has found it very servicable:

Chrysarobin		10 parts
Salicylic acid		10 parts
Ether		15 parts
Collodion	q. s. ad.	100 parts

M. This may be painted over the patches every day or two until the scaling has disappeared and smooth white spots are left. The great advantage of this preparation is that all staining by the chrysarobin is obviated.

Herpes Progenitalis.—Aronstam (*Medical Times*, July, 1902) says that the treatment of this condition consists in the application of a boric acid wash containing a little alcohol, followed by the use of the following ointment:

Acid boric	½ dr.
Zinc oxide	1 dr.
Pulv. amyl.	1 dr.
Vaseline	1 oz.

M. S.: Apply on cotton as directed.

Pityrasis.—Dr. Fox suggests the following for pityriasis of mild type. Some bland preparation calculated to soften the skin and relieve the itching should be used. The internal derangement responsible for the eruption should be remedied. For the roughness of the skin this lotion may be prescribed:

Sodium borate		3 dr.
Glycerine		1½ dr.
Rose water,	q. s. ad.	6 oz.

Infantile Diarrhea With Green Stools.

Dilute lactic acid	4 minims
Tincture lemon	1 minim
Syrup	2 oz.
Water	2 oz.

M. S.: A teaspoonful thrice daily after feeding.

Acne.

Sublimed sulphur	1½ oz.
Spirits of camphor	4 oz.
Distilled water	2 dr.

M. S.: Externally.

Neuralgia.—A pill made by the following formula, given 3 times a day is recommended for neuralgic conditions:

Iron tartrate	2 gr.
Quinine sulphate	2 gr.
Tartaric acid	½ gr.
Ext. nux vomica	½ gr.

RHEUMATISM.

Mixture For Rheumatism.—Dujardin-Beaumetz recommends the following to be used in rheumatism:

Potassii iodidi		2 dr.
Sodii salicylatis		1 dr.
Syrupi simplicis		1 oz.
Aquæ menthæ piperitæ	q. s. ad.	6 oz.

M. f. mist. A tablespoonful 2 or 3 times a day.

Mixture for Chronic Rheumatism.—Whitla uses the following combination in chronic rheumatism:

Sodii iodidi		2 dr.
Sodii bicarbonatis		4 dr.
Potassii bicarbonatis		1 oz.
Liquoris arsenicalis		1½ dr.
Decocti sarzæ compositæ	q. s. ad.	20 oz.

M. f. mist. A small tablespoonful in a claret-glassful of effervescing potash-water 3 times a day after meals.

Mixture For Chronic Rheumatism.

Pulveris guaiaci resinæ		1 dr.
Potassii iodidi		1 dr.
Tincturæ colchici seminis		3 dr.
Syrupi		2 oz.
Aquæ cinnamoni	ad.	6 oz.

M. f. mist. A dessertspoonful to a tablespoonful twice daily.

Pills For Chronic Rheumatism.—Fothergill recommends the following formula:

Acidi arseniosi	1½ gr.
Pulveris guaiaci	1½ dr.
Pulveris capsici	15 gr.
Pilulæ aloes et asafoetidæ	1½ dr.

M. et divide in pil. 60. One three times a day.

Confection For Chronic Rheumatism.—Fernandez uses the following in chronic rheumatism:

Pulveris guaiaci resinæ	3 dr.
Pulveris rhei	2 dr.
Potassii tartartis acidæ	5 dr.
Sulphuris sublimati	10 dr.
Pulveris myristicæ	1 dr.
Mellis	q. s.

M. f. confectio. About half a small teaspoonful night and morning.

Liniment for Chronic Rheumatism.—Hare recommends the use of the following in chronic rheumatism:

Tincturæ aconiti		2 dr.
Olei terebinthinæ	1 oz. ad.	2 oz.
Tincturæ opii		1 oz.
Linimenti saponis	q. s. ad.	6 oz.

M. f. linim. To be used 3 times a day.

Ointment For Chronic Rheumatism.—Hare recommends the use of the following in this condition:

Veratrinæ	1 dr.
Hydrargyri protiodidi	1 dr.
Unguenti petrolei	1 oz.

M. ft. ung. To be applied over the joints.

Osteo-Arthritis.—Gentle friction of the joints (*Yeo's Manual of Medical Treatment*) with some mildly stimulating liniment, together with gentle passive movements, applied twice daily, will be often found as useful a local measure as any. After bathing the joints with hot water, the following liniment may be used:

Olei pini sylvestris		
Tincturæ iodi	āā	½ oz.
Linimenti saponis	q. s. ad.	4 oz.

M. fiat linimentum.

DISEASES OF THE BLOOD.

Iron and Cascara in the Treatment of Chlorosis.—Liegois' formula (*Riforma Medica*) is as follows:

Iron sulphate	75 gr.
Sugar of milk	225 gr.
Powd. cascara sagrada	375 gr.

M. Ft. chart No. 100.
S.: One to be taken after each meal.

DISEASES OF THE HEART.

Valvular Incompetency.—In young subjects suffering from failure of compensation the following (*Allchin's Manual of Medicine*) is a useful formula:

Tincturæ ferri perchloridi	10 *m.*
Tincturæ digitalis	5 *m.*
Liquoris strychninæ hydrochloridi	3 *m.*
Acidi phosphorici diluti	15 *m.*
Aquæ	q. s. ad. 1 oz.

S.: Three times a day after meals.

Cardiac Tonic Mixture.—Schnitzler gives the following as a cardiac tonic:

Infusi adonis vernalis (made by infusing 60 gr. of the leaves in 4 oz. of water)	4 oz.
Spiritus menthæ piperitæ	5 *m*

M. ft. mist. A tablespoonful 4 times a day.

Sedative Drops to Allay Cardiac Excitement.—Schnitzler gives the following combination as useful in this condition:

Extracti belladonnæ	3 gr.
Tincturæ digitalis	2½ dr.
Aquæ laurocerasi	ad. 1 oz.

M. f. mist. Two drops 3 times a day.

Cardiac Tonic.—Bamberger gives the following as a cardiac tonic:

Syrupi floris aurantii	4 dr.
Infusi convallariæ majalis (Made by infusing 2½ dr. of the plant in 12 oz. of water)	q. s. ad. 6 oz.

M. S.: A tablespoonful every 2 hours.

Iron and Digitalis Cardiac Tonic.—Whitla employs the following combination:

Tincturæ digitalis	160 *m.*
Tincturæ ferri perchloridi	3 dr.
Spiritus chloroformi	3 dr.
Glycerini puri	1 oz.
Aquæ destillatæ	ad. 4 oz.

M. f. mist. A teaspoonful in a wineglass of water 4 times a day, after food.

Cardiac Tonic Powders.—Schnitzler recommends the use of the following as a cardiac tonic:

Pulveris digitalis	3 gr.
Quininæ sulphatis	18 gr.
Pulveris rhei	18 gr.
Sodii bicarbonatis	18 gr.

M. et divide in pulv. 10. A powder twice a day.

Cooling Acid Mixture in Pericarditis.—Bamberger recommends the following formula to be used in pericarditis:

Acidi phosphorici diluti	½ dr.
Syrupi mori	5 dr.
Aquæ	q. s. ad. 6 oz.

M. f. mist. A tablespoonful very hour.

Ulcerative Endocarditis.—The following formula is recommended (*Yeo's Manual of Medical Treatment*) in ulcerative endocarditis:

Quininæ sulphatis	12 gr. ad. 36
Acidi citrici	24 gr. ad. 72
Syrupi limonis	1 oz.
Aquæ chloroformi	q. s. ad. 6 oz.

M. f. mist. A tablespoonful every 3 or 4 hours.

Mixture in Convalescence From Endocarditis.—Yeo (*A Manual of Medical Treatment*) prescribes the following in convalescence from endocarditis:

Potassii iodidi	32 gr.
Potassii bicarbonatis	80 gr.
Spirit. ammon. aromatici	4 dr.
Tincturæ cinchonæ comp.	1 oz.
Aquæ	q. s. ad. 8 oz.

M. f. mist. A tablespoonful 3 times a day.

A Cardiac Tonic and Febrifuge in Pericarditis.—Bamberger uses the following tonic in pericarditis:

Quininæ sulphatis	6 gr. ad. 8 gr.
Sacchari albi	80 gr.

M. et divide in pulv. 6. One every 3 hours.

DISEASES OF THE LIVER.

Purgative Pills in Hepatic Cirrhosis.—Bamberger gives the following in hepatic cirrhosis:

Pulveris radicis rhei	2 dr.
Extracti aloes	30 gr.
Extracti colocynthidis	6 dr.
Extracti rhei	q. s.

Ut. f. pil. 60. Two to be taken twice a day.

Pills in Chronic Hepatitis.—Martin recommends the following pills to be used in chronic hepatitis:

Extracti taraxici	36 gr.
Extracti aloes	12 gr.
Extracti colchici acetici	6 gr.
Pulveris ipecacuanhæ	6 gr.

M. et div. in pil. 12. Two every night.

Mixture in Hepatic Cirrhosis.—Whitla recommends the use of the following combination in this condition:

Acidi nitro-hydrochlorici diluti	½ oz.
Extracti taraxaci liquidi	2 oz.
Tincturæ nucis vomicæ	3 dr.
Extracti cinchonæ liquidi	3½ dr.
Infusi chiratæ	q. s. ad. 12 oz.

M. f. mist. A tablespoonful in a wineglassful of water, to be taken 4 times a day before meals.

To Check Hepatic Degeneration.—Bruce uses the following combination in this condition:

Liquoris arsenicalis	3 *m.*
Ferri tartrati	5 gr.
Potassii bicarbonatis	10 gr.
Aquæ chloroformi	q. s. ad. 1 oz.

M. f. haustus. To be taken 3 times a day.

In Early Stages of Hepatic Cirrhosis.—Da Costa gives the following combination to be used in the early stages of hepatic cirrhosis:

Sodii bicarbonatis	½ oz.
Infusi gentianæ	6 oz.

M. f. mist. A tablespoonful 3 times a day between meals.

In Hepatic Congestion.—Murchison recommends the use of the following in this condition:

Ammonii chloridi puri	½ oz.
Aquæ menthæ piperitæ	3 oz.

M. f. mist. A dessertspoonful 3 times a day.

DISEASES OF THE GENITO-URINARY TRACT.

Salol in Cystitis.—It is advantageous to employ salol internally in the form of an emulsion. The following preparation is recommended (*Journal de Médecine de Paris*) in the treatment of cystitis or gonorrhea instead of the powdered drug:

Salol	1 dr.
Gum arabic	1 dr.
Gum tragacanth	3 gr.
Tinct. tolutani	2½ dr.
Syr. simp.	1 oz.
Aquæ destil.	q. s. ad. 4 oz.

M. S.: One teaspoonful 3 times a day.

DISEASES OF THE KIDNEYS.

Acute Nephritis.—The following is recommended (*Le Nord Médical*) in the treatment of acute nephritis:

Absolute rest in bed, the legs wrapped in cotton covered with oil silk; exclusive milk diet; a glass of milk and vichy water every two hours. Hot drinks to produce sweating, especially the infusion of juniper berries. Give saline purgatives to promote excretion by the intestines, and the following to be taken internally:

Cinchonæ sulph.	2 gr.
Benzonaphthol	5 gr.

M. S.: One such cachet to be taken three times a day.

DISEASES OF THE RESPIRATORY TRACT.

Edema of the Glottis.—The following combination (*Le Progrès Médical*) is recommended in the treatment of this condition:

Aluminis		
Acidi tannici	āā	75 gr.
Ext. krameriæ		2½ dr.
Aquæ	q. s. ad.	1 pint

M. S.: To be sprayed into the throat by means of an atomizer 5 or 6 times a day.

Infantile Bronchitis.—Debove (*Le Progrès Médical*) recommends the following:

Syr. lactucarii		5 dr.
Syr. auranti		
Syr. papaveris (poppy)	āā	1½ oz.

M. S.: From 4 to 6 teaspoonfuls daily; or:

Syr. lactucarii		5 dr.
Syr. belladonnæ		
Syr. aurantii flor.	āā	2 dr.
Syr. tolutani		1 oz.

M. S.: From 4 to 6 teaspoonfuls daily.

Pneumonia.—Aufrecht (*Nothnagel's Encyc. of Medicine*) states that he uses quinine and iron in every case. For adults he prescribes the following:

Quininæ hydrochlor.	15 gr.
Ferri sulph.	45 gr.
Pulv. glycyrrhizæ rad.	52 gr.

M. ft. capsulæ No. 40.
S.: Two capsules twice a day.

For children he recommends the following:

Quininæ hydrochlor.		
Ferri sulph.	āā	22 gr.
Pulv. glycyrrhizæ		15 gr.
Ext. glycyrrhizæ	q. s.	

M. ft. pil. No. 30.
S.: Take 2 or 3 pills daily, according to age.

DISEASES OF THE NERVOUS SYSTEM.

Rickets.—Hare recommends the following:

Olei morrhuæ		6 dr.
Syr. calcis lac. phos.		
Liq. calcis	āā	3 oz.

M. S.: One-half to one teaspoonful 2 or 3 times daily. Shake thoroughly.

For Gastralgia and Nervous Dyspepsia.—H. A. Hare advises the following formula for these conditions:

Sod. bromidi		2 dr.
Chloralis		30 gr.
Aquæ chloroformi		
Aquæ dest.	āā q. s. ad.	4 oz.

M. S.: Two teaspoonfuls after each meal.

Nervous Headache.—An excellent combination for nervous headache is the following:

Caffeine citrate	1 gr.
Sodium bromide	5 gr.
Phenacetine	5 gr.

To be taken, in above quantities, as one dose, and repeated in one hour if necessary.

Neuralgia.—Laborde recommends this combination for neuralgia:

Aconitinæ nitratis cryst.	1/7 gr.
Quininæ hydrobromatis	75 gr.
Syrupi	q. s. utt. ft. massa.

M. ft. massa et in pil. No. 1 div.
S.: One pill every 4 hours until 5 or 6 are taken. The following day take at longer intervals if there be any disturbance of digestion or formication in the extremities.

Neuralgia.—Liebreich is authority for the following formula to be used in cases of neuralgia:

Butyl. chloral	60 to 75 gr.
Alcohol rect.	2½ fl. dr.
Glycerini	5 fl. dr.
Aquæ destillatæ	4 fl. oz.

M. S.: Two to four teaspoonfuls at once.

Paralysis, with Wasting.—In such conditions as chronic poliomyelitis, the following will be found a good combination:

Spartein sulph.		6 gr.
Tinct. ferri chlor.		
Sodæ salicylat.	āā	2 dr.
Acid. citric.		5 gr.
Olei gaultheriæ		15 *m.*
Glycerine		½ oz.
Liq. ammon. acetat. (Br. Ph.)		½ oz.

M. S.: One teaspoonful 3 times a day.

Nervous Enteritis.—Ritterband (*Medical Record*) recommends the following combination to be used in this condition:

Tinct. opium		10 drops
Aquæ aurantii flor.		20 drops
Old rum		
Syr. simp.	āā	40 drops

M. S.: One dose.

For Insomnia.—*Yeo's Manual of Medical Treatment* gives the following formula for insomnia:

Chloral hydrate	10 gr.
Sodii bromidi	15 gr.
Tincturæ lupuli	½ dr.
Aquæ chloroformi	1 oz.

M. f. haustus. To be taken at bed-time.

INFECTIOUS DISEASES.

Diphtheria.—Patterson (*Southern Medical Journal*) recommends the following in the treatment of diphtheria:

Pot. chloratis.	15 gr.
Acidi muriatici dil.	1 dr.
Tinct. ferri chloridi	1½ dr.
Aq. destil.	6 oz.

M. S.: Two tablespoonfuls in water every half hour for adults and proportionately less for children.

Influenza.—The following combination containing heroin is recommended (*New Orleans Medical and Surgical Journal*) in the treatment of influenza:

Heroin	¾ gr.
Ammon. chloridi	1 dr.
Syr. picis liq.	1 oz.
Syr. tolutani	1 oz.
Syr. pruni virg.	½ oz.

M. S.: Two teaspoonfuls every 3 or 4 hours.

DISEASES OF GASTRO-INTESTINAL TRACT.

Habitual Constipation.—Cases of chronic constipation associated with general debility and anemia, and dependent on want of muscular tone in the intestinal walls, require tonic as well as aperient treatment. In such cases nux vomica with quinine and iron is especially useful. In the constipation of chlorosis the following prescription (*Yeo's Manual of Medical Treatment*) will be found valuable:

Ferri et quininæ citratis		80 gr.
Liquoris strychninæ		40 *m.*
Syrupi simplicis		1 oz.
Aquæ	q. s. ad.	8 oz.

M. fiat mistura. Two tablespoonfuls to be taken each day, an hour before food, and:

Aloes extracti	2 gr.
Belladonnæ extracti	1/6 gr.

M. fiat pilula. To be taken every night.

Or the following, which is very efficacious, but not so agreeable to take:

Ferri sulphatis		16 gr.
Magnesii sulphatis		1 oz.
Quininæ sulphatis		12 gr.
Liquoris strychninæ		40 *m.*
Acidi sulphurici diluti		40 *m.*
Aquæ	q. s. ad.	8 oz.

M. fiat mistura. Two tablespoonfuls twice a day, an hour before breakfast and dinner.

This mixture will often succeed in overcoming constipation in anemic women after most other aperients have failed, and it also acts as a blood tonic.

Gastralgia in Children.—*Le Progrès Médical* recommends the following in the gastralgias of children:

Tinct. belladonnæ	
Tinct. calumbæ	
Tinct. arnicæ	
Tinct. opii camph.	āā 1 dr.

M. S.: From 5 to 10 drops in a little sweetened water.

For Severe Diarrhea.—*Yeo's Manual of Medical Treatment* gives the following formula:

Bismuthi carbonatis	15 gr.
Magnesii carbonatis	10 gr.
Tincturæ cinnamoni	½ dr.
Mucilaginis	1 dr.
Aquæ	ad. 1 oz.

M. f. haustus. To be taken occasionally when the diarrhea is urgent.

For Severe Vomiting.—*Yeo's Manual of Medical Treatment* recommends the use of the following for severe vomiting:

Spiritus ammoniæ aromatici	15 *m.*
Aquæ laurocerasi	1 dr.
Spiritus chloroformi	15 *m.*
Aquæ	q. s.ad. 1 oz.

M. f. haustus. To be taken occasionally to allay vomiting.

For Gastric Fermentation.

Olei caryophylli	
Olei cinnamomi	
Olei menthæ pip.	
Creosoti	āā 1 *m.*

M. S.: Take at one dose.

Preferably this should be given in a capsule with about 6 minims of olive oil. One or two capsules should be given 3 times a day, after meals. *Butler's Text-Book of Materia Medica, 4th. Edition.*

Chronic Dysentery.

Magnesium sulphate	30 gr.
Sodium sulphate	30 gr.
Ferric sulphate	½ gr.
Quinine sulph.	2 gr.
Water	2 oz.

M. S.: One dose. Repeat 4 times daily.

Hyperemesis.

Creosote	¼ minim
Muriate of cocaine	1/20 gr.
Cerium oxalate	2 gr.
Tincture nux vomica	¼ minim

M. S.: One dose. Repeat every half hour until relieved.

For Intestinal Antisepsis.

Carbon. depur.	0.3
Pancreatini	0.1
Benzonaphtholi	0.5

S.: Every 3 hours.

Argent. colloid.	0.3
Sacchari lactis	0.3
Glycerini	
Aquæ destil.	q.s.

M. ft. pil. No. 30.

S.: Two pills 3 times daily before meals.

Guaiacoli benzoic.	10.0
Ol. feniculi	gtt. 5

M. ft. capsules.

S.: One to two capsules 3 times a day after meals.

—*Praktitchesky Vratch.*

DISEASES OF EAR, NOSE AND THROAT.

For the Coryza of Influenza.

Cocaini mur.	
Mentholi	āā 0.12 gm.
Acidi borici	
Antipyrini	āā 0.8 gm.

M. ft. Pulvis.

S.: Insufflate 3 or 4 times daily.—Zelensky.

Chronic Laryngotracheitis.—Ingals (*Medical Record*) gives the following formula for **chronic laryngotracheitis:**

Formalin	15 *m.*
Menthol	½ dr.
Tinct. iodi	2 dr.
Alcohol	1 oz.

M. S.: Inhale 4 or 5 times daily.

Tubercular Laryngitis.—Richards (*International Journal of Surgery*) recommends the following formulæ in the form of insufflations in the treatment of this condition:

Morphinæ sulph.	5 gr.
Iodoformi	3 dr.

M. S.: A small amount to be insufflated by means of a powder blower; or:

Morphin. sulph.	1/30 gr.
Hydrarg. chloridi mit.	20 gr.
Sacch. lactis.	40 gr.
Bismuthi subnit.	40 gr.

M. S.: To be used as an insufflation. He states that intratracheal injections of guaiacol, menthol and orthoform, as in the following formulæ, frequently afford relief and possibly retard the progress of the disease:

Menthol	30 gr. to 2½ dr.
Ol. amyg. dulcis	1 oz.
Vitelli ovi	6 dr.
Orthoformi	3 dr.
Aquæ destil.	3 oz.

M. ft. emulsio.

S.: To be used on a swab or in an intratracheal syringe, preferably the latter; or:

Camphoræ	
Menthol	
Guaiacol	āā 48 gr.
Olei olivæ	q. s. ad. 2 oz.

M. S.: To be introduced with the intratracheal syringe during inspiration.

For Chronic Nasal Catarrh.

Sodii boratis	2 dr.
Acidi benzoici	10 gr.

M. fiat pulvis No. 1.

S.: To half a tumblerful of water add half a teaspoonful each of the powder and glycerine. Use freely as a lotion. *Butler's Text-Book of Materia Medica, 4th. Edition.*

MISCELLANEOUS.

Hiccough.—The following formula is used in hiccough resulting from flatulency:

Spir. aetheris compositi	1 fl. oz.

S.: Teaspoonful in cold water.

The following combination is given for hiccough with gastric or intestinal indigestion:

Tinct. nucis vomicæ	1 fl. dr.
Sodii bicarbonatis	4 dr.
Spir. chloroformi	2 fl. dr.
Tinct. capsici	1 fl. dr.
Tinct. gentianæ compositæ	q. s. ad. 3 fl. oz.

M. S.: Teaspoonful in water after meals.

Burns.—Biddle (*Pennsylvania Medical Journal*) states that 50 per cent. of the deaths following burns is caused by the shock. He recommends keeping the circulation and nerve centers in the best possible condition. To do this he advises strychnine, digitalis, whiskey and aromatic spirits of ammonia in full doses, with a good, nutritious diet. In order to control the pain and delirium and to procure the necessary amount of rest, he recommends the following:

Pot. bromidi	20 gr.
Chloralis hydratis	6 gr.
Elix. simplicis	q. s. ad. ½ oz.

M. S.: To be taken at one dose and repeated as necessary.

For Lymphangitis, Adenitis and Other Septic Processes.

Arg. colloid	4 oz.
Aquæ dest.	1¼ oz.
Ceræ albæ	2½ oz.
Adipis benzoinatæ	2½ dr.

M. S.: Rub thoroughly into the skin at the seat of the lesion. *Butler's Text-Book of Materia Medica, 4th. Edition.*

Hyperpyrexia.—Bathing should be resorted to in order to reduce the hyperpyrexia in the acute attacks. This may be accomplished by repeated wet packs. By this method slow abstraction of heat takes place and, by allowing the patient to remain in the pack for a considerable length of time, sweating is produced. If the temperature is not properly reduced in this way, then a cold sponge should be ordered, as in other infectious diseases.

The Treatment of the Opium Habit.—S. O. L. Potter, in his *Materia Medica, Pharmacy and Therapeutics*, has collected the following formulæ, which have been found useful in the treatment of the **opium habit.** It is useless to try to cure a patient while he is pursuing his ordinary work; failure will result unless there is complete seclusion and entire giving up to the treatment. It is very important to keep the patient in total ignorance of the rate of reduction of the opium.

Ammonii bromidi		
Sodii bromidi	āā	½ oz.
Potassii bromidi		1 oz.
Liq. potass. arsenit.		1 dr.
Syr. tolutan		1 oz.
Aquæ menthæ piper.		1½ oz.
Syr. hypophos. comp.		3 oz.

M. S.: One dr. to 2 dr. in water 3 times daily. Each dr. thus containing 21 1/3 gr. of total bromides.

—Mann.

Tinct. capsici		
Potassii bromidi	āā	4 dr.
Spt. ammoniæ aromat.		3 oz.
Aquæ camphoræ	q. s. ad.	6 oz.

M. S.: A dessertspoonful several times daily, in the depression of alcoholism and the opium habit. Instead of the bromide, Fowler's solution, 50 *m.* may be added; or tinct. nucis vomicæ, 2 dr., or 5 dr. of tinct. aurantii amari.

—Ringer.

Codeinæ		16 gr.
Alcoholis	q. s. ad.	solv.
Cocainæ hydrochlor.		16 gr.
Elixir simplicis	q. s. ad.	2 oz.

M. S.: One dr. in water, occasionally, when great restlessness. Formula never to be given to the patient.

—Potter.

Tinct. cannabis ind.		40 to 60 *m.*
Spt. ætheris		1 dr.
Aquæ	q. s. ad.	1 oz.

M. S.: One dose, if insomnia is very protracted.

—Fleming.

Tinct. nucis vomicæ		3 dr.
Ac. phosphor. diluti.		5 dr.
Syr. pruni virg.		2 oz.
Aquæ	q. s. ad.	4 oz.

M. S.: Two dr. twice daily as a nerve tonic.

—Potter.

Hemicrania.—N. F. Howard (*Atlanta Journal-Record*) employs the following combination in the treatment of migraine:

Ammon. muriatis		3 oz.
Tinct. belladonnæ		1 dr.
Tinct. hyoscyami		2 dr.
Aquæ menth. pip.		4 dr.
Aquæ camphoræ	q. s. ad.	16 oz.

M. S.: One-half to one teaspoonful given in sweetened water every 2 or 3 hours.

Anorexia in Old and Debilitated Subjects.—Dr. L. Shelby Greene (*Medical Summary*) has had most excellent results with the following formula:

Powd. capsicum	20 gr.
Quinine sulph.	½ dr.
Sodium bicarb.	1 dr.
Ext. nucis vomicæ	1½ gr.

M. et ft. in caps. No. 18.

S.: Give one immediately after each meal, 3 times per day.

Bruises and Contusions.—The following (*Jour. Amer. Med. Ass.*) are valuable as local applications in the treatment of bruises:

Plumbi acetatis		5 gr.
Tinct. opii		5 dr.
Aquæ destil.	q. s. ad.	6 oz.

To be applied freely to the inflamed surfaces; or:

Ichthyol	4 dr.
Oil of bay	20 *m.*
Tinct. capsici	7 *m.*

M. S.: Apply carefully on bruised spots around the eye; or:

Spts. camphoræ		2 dr.
Tinct. arnicæ		½ oz.
Ext. hamamelidis	fl. q. s. ad.	4 oz.

M. S.: Apply locally on lint.

Incontinence of Urine.—For this condition Descroizilles prescribes:

Strychninæ sulphatis	2 gr.
Syrupi	6 fl. oz.
Aquæ	2 fl. dr.

M. S.: A half teaspoonful one to 20 times a day.

Diuretic Pill and Mixture.—Murchinson recommends the following combinations as diuretics:

Pulveris scillæ	1½ gr.
Pulveris digitalis	½ gr.
Pilulæ hydragyri	2 gr.

M. f. pil. To be taken 2 or 3 times a day.

Potassii acetatis		20 gr.
Spiritus aetheris nitrosi		½ dr.
Decocti scoparii	q. s. ad.	1½

M. f. haust. To be given with each dose of the above pills.

Aperient Lemonade.—Mathieu employs the following combination in making aperient lemonade:

Acidi citrici		5 dr.
Magnesii carbonatis		3 dr.
Syrupi simplicis		2 oz.
Tincturæ limonis		20 *m.*
Aquæ	q. s. ad.	10 oz.

M.

Aperient and Stomachic.—Bruce recommends the following combination:

Sodii bicarbonatis		15 gr.
Spiritus ammoniæ aromatici		10 *m.*
Tincturæ sennæ compositæ		15 to 30 *m.*
Infusi gentianæ compositi	ad.	1 oz.

M. f. haustus. To be taken 3 times a day 5 minutes before meals.

Agalactia.—The following combination is recommended in this condition:

Strychninæ sulphatis		
Pilocarpinæ hydrochloratis	āā	1 gr.
Sacchari lactis		1½ dr.
Alcohol		q. s.

M. et ft. tabellæ triturationes No. 60.

S.: One tablet every 4 hours.

Indications. The various malt extracts, with or without cod-liver oil, are available. Massage of the breasts is also recommended:

Ext. ergotæ		
Ext. nucis vomicæ	āā	6 gr.
Quininæ hydrochloratis		24 gr.

M. et. ft. pil. No. 24.

S.: One pill every 6 hours.

Indications. Use in anemic subjects.

Flatulence.—For this condition **Huchard** recommends that a teaspoonful of this combination be taken before each meal:

Bismuthi salicylatis		
Magnes. calcinat.	āā	4 dr.
Pulv. carb. ligni.		6 dr.
Olei anisi		2 dr.

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The Phipps Institute.—The highly important announcement is made that Mr. Henry Phipps, a former partner of Mr. Andrew Carnegie, will establish in Philadelphia an institute for the study, treatment and prevention of tuberculosis. About $1,200,000 will be devoted by Mr. Phipps to this object, of which sum about $200,000 will be used for the necessary buildings, the rest of the money constituting an endowment fund.

The object of the generous donor is not to establish merely a hospital, although an extensive hospital will be maintained, but to conduct an institute for the study of the problems presented by tuberculosis. This will give the new institution a far wider range of activities than mere hospital work, and will make it, and the city in which it is located, a most important center of research in tuberculosis. The plans seem to have been already well thought out, and we hope in the near future to present a more detailed and authentic statement of the whole project.

For the present we merely confine ourselves to congratulating the country at large, and the city of Philadelphia in particular, on the inception of this great charity. The need for such an institution is an urgent one, and no place could have been more happily selected for it than the city of Philadelphia. This city is already the seat of many great charities and of many schools and hospitals of established reputation. The new institute will find here a proper environment, both in a large population and in a truly scientific atmosphere.

The criticism that a hospital for consumptives should be established in a rural location seems far of the mark. Mr. Phipps wants his institute to be a great working laboratory, as well as hospital, and its location in a great city is necessary in order that it may have all medical facilities and also that a large population may have ready access to it.

Dr. Lawrence L. Flick will be the director of the new institute.

How Can Endowments Be Used Most Effectually in Scientific Research?—Apropos of Mr. Phipps' handsome endowment we may point out the fact that it is one thing to establish an institute and another thing to conduct it with profitable results. A pre-arranged discussion on this intensely interesting subject took place at one of the meetings of the American Society of Naturalists and Affiliated Sciences, several men of science taking part in it. Prof. Chamberlin spoke of the present status of research in this country. He showed how research is a mere side-issue, being almost entirely subordinate to teaching, and urged the endowment of special chairs of research as well as special schools devoted to investigation; endowments should also be used to encourage cooperative research among several institutions in order that certain broad problems may be attacked from many sides. Prof. Welch said that, while there are many ways by which research may be benefited by endowment, it is impossible to point out the best way. He related the experiences of the Rockefeller Institute, showing the good it had accomplished by enabling promising young men to acquire the erudition necessary for successful investigation. This, he thought, was of greater value than the investigation itself, since by the aid of a fellowship a worthy young man enters upon a field of scientific investigation full of future possibilities. More could be accomplished by having in this country an institution similar to the Pasteur Institute in Paris, or the Institute for Experimental Medicine in St. Petersburg. While unable to make a public announcement, as yet, he thought that there was every assurance that the man, and not the subject, should be taken primarily into consideration.

Prof. Boas thought that endowment should be used for the publication of scientific books. Prof. W. M. Wheeler struck the right keynote in his able and sarcastic criticism of the present status of fellowships, or what he called the "lunch-counter policy." He depicted the position of the unfortunate "fellow" who subsists on alms and is utilized by the institution for all sorts of services, whose research is simply an excuse for the few hundred dollars. What we want, he said, is fellowships without niggardly restrictions. Select young men who possess investigating instincts, and give them enough money to detach themselves from unsuitable environment.

Prof. Hugo Münsterberg, who provoked a great deal of laughter and applause by the statement that his features, as well as his English, were "made in Germany," seemed to please the audience most by his witty and pointed remarks. He dwelt at length on the fact that equipment alone does not make research, and that some of the institutions in Germany, where the best work has been done, are far inferior in equipment to some American frontier colleges. What is wanted is men, and in this country the ablest men sit behind counting-counters and in offices and are engaged generally in business pursuits, while many a worthless chap enters upon a scientific career. That these able men are not attracted by scientific fields is due largely to the fact that there is nothing in a scientific pursuit in this country to satisfy their ambitions.

The discussion, like many other discussions of this sort, closed without any practical conclusions.

Philadelphia's Low Death-Rate.—It is no longer in order for some of our disinterested neighbors to point the finger of scorn at Philadelphia for the alleged unhealthfulness of this city. Some of our friends in New York and Baltimore especially may take notice. As for the citizens of Philadelphia itself, some of them may also cease to croak. They claim the good old Anglo-Saxon right to abuse their own institutions, but they, too, must not fail to note that the death-rate of Philadelphia is rapidly on the decline.

According to the statistics of the Registration Division of the Bureau of Health, published last week, the death-rate of Philadelphia for 1902 was 17.67 per 1000 inhabitants. This is the lowest for 23 years, the rate in 1879 having been 17.17. In 1901 the rate was 18.26. We have not at hand the figures for other large cities for 1902, but a comparison with the figures for 1900 (only two years ago) is interesting. In that year the death-rate of New York was 20.4; of Brooklyn, 18.1; Boston, 20.1; Chicago, 16.2; Cincinnati, 19.1; Charleston, S. C., 37.5; Philadelphia, 21.2. It is thus seen that Philadelphia has made an enormous advance in the last two years. We hope the other cities have kept pace with us, for the truth is that the mortality-rate in most of our American cities is too high. This is shown by a comparison wih some of the large European cities, by which it is seen that they have lower death-rates, as a rule, than American cities. Exceptions occur, however, in Vienna and St. Petersburg.

The meaning of this improvement in the saving of life in a large city like Philadelphia is most interesting. Supposing that Philadelphia has, in round numbers, a population of 1,300,000 (which is probably not far from the exact figures), a gain of from 21.2 to 17.67 in the death-rate means an average of 3½ lives saved per 1000 inhabitants, or a total of 4,550 lives saved. No statement could be more eloquent than these figures!

That sanitation has improved vastly in Philadelphia in recent years, all unprejudiced observers know. This is shown especially in improved streets, in methods of disinfection (both in private houses and in public institutions, schools, etc.), in methods of handling contagious diseases, in vaccination and in an improved water-supply. The public—which in Philadelphia is a highly intelligent one—has been educated to disinfect its houses, to boil and filter the water and to look out for its health generally. This has borne fruit, and the result is one of which the city may justly be proud.

The Woodward Poisoning Case.—The execution of Paul Woodward a few days ago in Camden, New Jersey, closed a case that offers some points in medical jurisprudence for passing criticism. The crime charged was the murder of two boys with strychnine. Their bodies were found in a wood near their homes after they had been missing several days. The muscles were limp, and external decomposition had set in slightly, but the internal organs were not materially changed. Post mortem examinations, carefully and scientifically made, failed to disclose or suggest any cause of death. Chemical examination of the stomach and of portions of the liver and kidneys of each child resulted in the discovery of appreciable amounts of strychnine; and, inasmuch as the prosecution proved the purchase of the drug, the association of the prisoner with the boys, and other links of circumstantial evidence, a conviction was not unexpected. The defence was principally an alibi. Some effort was made to combat the medical testimony, but without material result.

A feature of the trial was the performance of the well-known physiological test by introducing some of the poison into the body of a frog and comparing the effect with that produced by using a sample of pure strychnine. The exhibition of chemical tests to a jury is not unusual, but when, some years ago, in a trial in England, it was proposed to show the effect of strychnine on dogs for the purpose of enabling the jury to compare the phenomena with those that were observed in the person for whose murder the prisoner was on trial, the judge held that the jury were not experts and their inferences could not be regarded as sound. We think that this view deserves serious consideration. Indeed, it is doubtful whether the exhibition of any tests should be permitted. The statement of the expert is, after all, the final authority. If he is disposed to misrepresent his results, he can easily produce a falsified sample and perform tests with it.

In the Woodward case a special injustice was possible, for there was no evidence as to the symptoms exhibited by the deceased persons, the bodies having been found long after life was extinct. Hence, the jury might have inferred that the tetanic convulsions exhibited by the experimental animal showed the same symptoms that were exhibited by the victims in the case under consideration and, while such an inference might have been correct, it was hardly of such a nature as to risk the suggestion of it to a nonexpert jury. The evidence showed that the chemical tests were made with care, and the results were entirely reliable. In stating the amount of strychnine found, the chemists expressed it as sulphate, because that is the most familiar salt of the alkaloid, and it was deemed probable that it was used. This is, however, an assumption that was hardly necessary, and it might be better if in all such cases the amount should be stated in terms of the pure alkaloid.

Abbe's Operation for Tic Douloureux.—So long as the human race suffers from that most painful of maladies, *tic douloureux*, just so long will its treatment be a subject for discussion. At the present time medicines have been exhausted and surgery has practically attained its limit, and yet the ideal treatment has not been reached. Most surgeons have come to look upon the excision of the Gasserian ganglion as the only treatment upon which faith can be built, but this operation cannot be looked upon as ideal, since it carries with it a high mortality, resulting from hemorrhage, shock, infection, etc. Division of the sensory root, as suggested by Spiller, has been once successfully performed by Frazier. This operation, however, is very nearly as dangerous, and certainly as difficult of performance, as the excision of the ganglion.

Dr. Robert Abbe, in the *Annals of Surgery*, for January, 1903, urges the exposure and resection of the second and third divisions of the nerve within the cranium, and the interposition of rubber tissue in order to prevent regeneration, and refers to five cases in which he has successfully practised this method. In one instance the patient has been free from pain for six years. Abbe first employed this operation in a case in which he found it impossible on three different occasions to remove the ganglion because of hemorrhage. Since in each of the five patients operated upon this treatment has been successful, the author certainly has some right to claim for it precedence over the more formidable and dangerous operation of excision of the ganglion.

The second and third branches are exposed through an opening made in the temporal region, measuring about 1½ inches in diameter; they are then divided at their respective foramina, the proximal portions being drawn down with forceps and divided. About ¼ to ½ inch of each nerve is resected, the field of operation dried, and a piece of rubber tissue, which has been sterilized in bichloride solution and measuring 1½ inches long by ¾ inch in width, is carefully laid over both the foramen rotundum and ovale, and held in this position by iodoform gauze. In a few minutes the gauze may be removed and the Gasserian ganglion allowed to settle down upon the rubber tissue. One of Abbe's patients has been free from pain for six years, one for five years, one for 1¾ years and another for six months. These results are certainly impressive, and, when taken together with the fact that the operation is simpler and less dangerous than the one usually recommended for tic douloureux, they certainly make a strong appeal for trial to medical men, surgeons and their patients alike.

Alkaloids of Ipecacuanha as Simulators of Morphine.—In a paper recently read before the (British) Society of Public Analysts, Messrs. A. H. Allen and G. E. Scott-Smith report the results of some careful examinations of the alkaloids of ipecacuanha. It is probable that they were led to this study by the investigation of a case in which another chemist reported the presence of morphine in a cough mixture to the extent of ½ grain per ounce. Their examination of a portion of the same mixture showed that no morphine had been used in its manufacture, and that the error was due to confusing the reaction of the ipecacuanha alkaloids with that of morphine. It is possible that all the alkaloids of ipecacuanha are not isolated, but three have been indicated: Emetine, cephaeline and psychotrine. The formula of the last has not been determined. The mixed alkaloids from a sample of Carthagena ipecacuanha contained about 51% of emetine, 44% of cephaeline and 5% of psychotrine. Emetine has not been crystallized, but easily forms crystallizable salts. The other alkaloids crystallize easily. The separation of them from each other is based principally upon their solubilities in ether, but the details need not be given here. Samples of the mixed alkaloids were obtained from the official (B. P.) extract, and were tested by some of the morphine tests with the following results: Ferric chloride gave a blue, changing to green; mixed opium alkaloids treated similarly gave a greenish blue. Froehde's reagent gave tints ranging from purple to violet, closely resembling those given by the mixed opium alkaloids, but not exactly like those yielded by pure morphine. Starch and iodic acid gave an immediate blue with some samples, but failed with others.

The isolated ipecacuanha alkaloids do not all give equally striking results. Psychotrine appears to be the more active reducing agent, but this may be due to an impurity not yet definitely recognized. Apart from the fact that extraction of the mixed alkaloids by means of chloroform will eliminate morphine, Allen and Scott-Smith found that, where a drop of Froehde's reagent is applied to the ipecacuanha alkaloids, and then a drop of hydrochloric acid, an intense red is produced (due to cephaeline), while the mixed opium alkaloids gave a purple with the Froehde's reagent, which fades when hydrochloric acid is used. As a means of identifying ipecacuanha, they recommend the isolation of psychotrine, which forms octahedral crystals resembling those of arsenous oxide.

The Late Professor Wislicenus.—John Wislicenus, who died on December 5 last, at Leipzig, in his sixty-seventh year, was not known to the general medical profession, and yet his work may at no distant day be important in the theories of physiology and pathology. He was not an authority in biological analysis, such as Hoppe-Seyler, nor a worker in physiolgical chemistry, such as Chittenden, nor a discoverer of synthetic industrial products, such as Bayer, but, while active in some of the practical fields of chemistry, his chief work has been the elucidation of the intricate molecular relations which determine the functions of compounds and the existence of isomers. In a department of the science still but little cultivated, the study of the spatial relations of atoms within the molecular bounds, he worked assiduously and enriched our knowledge with many interesting data. Some day, under a great generalizer, a chemical Darwin, the numerous threads of our knowledge of structural chemistry will be made the basis of a generalization which will influence chemistry and physics as the principle of natural selection has influenced biology.

In the course of an obituary notice of Wislicenus, the *Oesterr. Chem. Zeitung* relates the following incident, which shows the extreme attention to detail required in modern chemical research: Wislicenus, at Leipzig, and Fittig, at Strassburg, experimented along the same line, the bromine derivatives of some organic acids; but, although apparently following exactly the same methods, obtained discordant results. Each chemist insisted upon the correctness of his results, and an active controversy arose, which was happily settled when it was learned that Wislicenus carried out the bromination in a dark room, while Fittig worked in a room open on one side to daylight. The difference in illumination made a difference in the chemical functions of the bromine.

The Leper Colony in Hawaii.—The fact that the people of the United States have a leper colony in Hawaii, numbering more than 750 souls, is perhaps not generally appreciated. We glean some interesting items from clippings from the *Hawaiian Gazette*, recently sent us by a correspondent.

The residents of Molokai—the leper colony—signed a petition last fall to the United States Senate protesting against the transferring of the settlement to the care of the Federal Government, and claiming that the territory is able to take care of it. The motive for this petition seems to have been a fear that the personal liberties of the lepers would be abridged, and especially that a law would be passed separating the sexes. We have commented on this subject before, especially with reference to the procreation of children. The United States Government apparently has a delicate problem to solve in this connection.

We learn also that a trial is being given to the plant known as *Tua Tua*, another alleged cure for leprosy. But the stuff is nauseous, and only six patients were taking it. As about sixteen months are required to test its virtues, it is likely that it will go the way of all other "specifics." The poor lepers have their own troubles.

Lectures on Tropical Diseases.—Surgeon Charles F. Kieffer, U. S. A., will deliver a course of lectures at the Jefferson Medical College, in Philadelphia, on tropical diseases and tropical hygiene. We are informed that this will be the first course of lectures on these subjects ever given before any medical school in this country. This announcement should be of importance to the profession generally in this city, for the Jefferson College will welcome all physicians who may wish to attend. The lectures will be given on Fridays at 1 o'clock P. M.

Dr. Kieffer has had ample opportunity to study the subjects of which he will speak, and his course of lectures marks a new era in medical instruction in this country. The United States is, in part, a subtropical country, and its new dependencies across the seas are wholly tropical; hence the importance of systematic instruction on the diseases and hygiene of the tropics.

Dr. VanDyke's Prayer.—We have heard a good story—and one that seems to be well authenticated—about Rev. Henry VanDyke, the novelist and poet, and Mr. Bok, the editor of a well-known popular journal in Philadelphia. It seems that Mr. Bok wanted to find some one to write him a prayer, suited to the Christmas season, for publication in the *Ladies' Home Journal*; and, not unnaturally, he selected Dr. VanDyke, who has an enviable literary record. The prayer was written and published, and Mr. Bok remitted for it with a check for a goodly sum. But the author of the prayer returned the check, not because he was dissatisfied with the amount, but because he did not wish to be paid for saying his prayers. Whereupon Mr. Bok, not wanting to keep what he apparently considered to be another man's conscience money, handed it over to the Home for Crippled Children in this city.

It is to be supposed now that all parties to this transaction are happy (especially the crippled children), and even the most confirmed sceptic will not deny that that particular prayer bore fruit. The incident is highly creditable both to Dr. VanDyke and to Mr. Bok.

An Ancient Medical Shrine.—The fact that history repeats itself is seen as well in medicine as in politics. Human nature all through its history has exhibited a wonderful sameness, and in nothing is this fact more clearly shown than in the close association of religion with healing. In Hindoo. Greek and Christian alike the religious motive has always been tinctured with a craving for the cure of bodily disease, and our present-day Eddyites and Dowieites are but the representatives of that blind fanaticism which mistakes the deity for a therapeutic power.

Among the great medical shrines of antiquity, the temple of Aesculapius at Epidauros, in Greece, was the most conspicuous. Dr. Charles L. Dana, of New York, has described this shrine in an interesting paper, published in the proceedings of the Charaka Club, which we notice in another column. The temple at Epidauros was a structure of singular beauty, and was set in an environment which made it a natural health-resort for the ancient world. The fact of especial significance, which Dr. Dana points out, is that there was probably a minimum of real therapeutics in the practice of the place, but that reliance was placed largely on influencing the religious emotions. From what we know of Greek therapeutics, this inference is justifiable. The temple at Epidauros was a great center for suggestive therapeutics, or mind cures. So successfully did it fill this rôle that it endured for eight hundred years.

Here is a record that is unsurpassed in the history of faith-healing. The history of the temple of Aesculapius at Epidauros should supply food for thought to those who think they have found a new means of cure in playing upon religious credulity. They will find they are working an old and worn-out scheme. Dr. Dana's paper is fully and beautifully illustrated, and should be widely read by those physicians who are interested in the history of their profession.

Current Comment.

HIS CURIOUS EXPERIENCE.

I have had some curious experiences in this country. Perhaps the most curious was in Chicago. The Board of Health there made me undergo an examination in medicine, although I think I know something about my branch of my profession. Curiously enough, some weeks later they made me a doctor of laws, though I know nothing of law.

—*Dr. Lorenz, in a Speech in New York.*

KEEN VERSUS GALLINGER.

The scientific opinion of such an expert as Dr. Keen ought to be final in determining the opinion of the layman, otherwise knowledge would be at the mercy of ignorance. As regards the ethics of the discussion, it is plain that the view which considers the prohibition of experiments upon living animals as "altruism," and the application of such experiments for saving human life as "selfishness," would logically place the veterinary surgeon at the head of the medical profession, and would exhalt the Brahminical civilization above the Christian. On the legal side, the practice of vivisection, like everything else which concerns physical pain and death, should be carefully guarded from inexpert hands and should be limited to those who are thoroughly qualified for it by training; and to prohibit it because some surgeons are cruel would be like abolishing law courts and newspapers because some lawyers and editors are immoral.

—*The Outlook.*

UNABLE TO ADD A POSTSCRIPT.

The Wisconsin millionaire believer in Christian Science, who died immediately after dictating a letter saying there is no such thing as sickness, was unfortunately unable to add a postscript stating that there is such a thing as death.

—*The New York World.*

Correspondence.

IMPERSONATION BEFORE THE STATE EXAMINING BOARD.

By HENRY BEATES, Jr., M. D.,
of Philadelphia.
President of the Pennsylania Board of Medical Examiners.

To the Editor of the **Philadelphia Medical Journal**:

Experience as a State Board Examiner has taught me that it is possible, and has successfully been practised, to bring about substitution by impersonation in graduating from medical schools, and, of course, the cheat is carried along to the State Examining Board. Our system of examination does not familiarize us with the candidates, and if a man appears the second or third or more times for examination, declaring each time that he trusts this particular session will find him licensed, it can be very readily seen how that same man may be taking the examinations for some one else. This year, a couple of men whom I do not know, were before us a second time. In looking up the handwriting of their papers, it was naturally to be infered that they had a substitute at a prior examination, or this time were impersonating the names of those who failed before. I immediately sent word to Harrisburg not to grant the license to these men if by chance they had happened to pass, until we could satisfy ourselves that everything was regular and above suspicion.

Somehow the Pittsburg papers became acquainted with the matter, and promptly communicated with the Philadelphia newspapers. As the matter was out, I had to give such explanations as were, as usual, partially presented through the columns of the daily papers. Another practice to which you could refer consists in a medical college of a lower standard taking the rejected candidates, say of the first year of a higher standard college, and admitting them to their second year. Of course, these second-rate colleges claim to have submitted the rejected candidate of the higher college to an examination in their first year's work; they always pass these, and so this type of student can go down the ladder for the 4 years. The commercial medical college that has taken him in, I will say, frequently refuses to graduate him, but they have his fee. This man, having failed in 4 colleges, then takes a summer course in schools that are located in various parts of the United States, may or may not attend the institution after having sent in his fee that varies from 5 dollars to whatever can be extorted, and receives a diploma. The Pennsylvania law demands that we recognize the diploma of a "regularly incorporated medical school," and that a student should have studied medicine "four years."

One of our candidates studied his first year, if memory serves me aright, in the State of Ohio, his second in Virginia, his third in Maryland, and his fourth in Indiana. Knowing the methods above described, I requested that his license, if he passed, be withheld until I could satisfy myself that he had regularly graduated, and had technically fulfilled the requirements of the law, *i. e.*, having successfully passed each year's requirements. I am glad to say that I am now in possession of documents signed by the state official, which guarantee that his diploma was obtained upon merit. It would not be disadvantageous to have the profession know of these practices of the medical schools.

We discovered some time since a very bright but, unfortunately, unprincipled doctor in Philadelphia, who makes his living by passing examinations for students in colleges of arts and science, as well as medicine. He passed examinations in a medical college in this city for another student. He passed an examination for a license for medicine in Maryland; one in Pennsylvania, and has had freshmen enter Princeton, Yale and Columbia on the results of his work. He has also obtained the license of the State of New York for an individual, for which he has received quite handsome returns.

In closing, I will state that these methods have been prevented, but until the photographic plan suggested is adopted, every State Board, Pennsylvania included, is liable for obvious reasons to have the cheat successfully practised, and it is only our extreme precaution at this time which has given rise to a suspicion which thus far has not been proved to be well founded; it is only an evidence of our care.

A REMONSTRANCE.

By ARISTIDES AGRAMONTE, M. D.,

of Havana, Cuba.

To the Editor of the **Philadelphia Medical Journal:**

In the issue of December 27, 1902, of the **Journal**, referring to an address made by Gen. Wood, it is said that the "discovery made by the Army Commission composed of Drs. Reed, Carroll and Lazear," alone, "would amply repay the cost" of the Spanish-American War.

It is my plain duty to myself and in justice to the truth, to call the attention of your readers to the fact that I was a member of that Commission and I cannot, under any consideration, relinquish, animated by a false sense of modesty, the quota, large or small, which is mine by right, of the honor derived by such achievement, much less so when I was the only member who had been engaged in yellow fever investigation before the appointment of said Commission, and have continued in that work since its dissolution.

I could pass, unnoticed, the oft-repeated reference in the American press to "Dr. Reed's discovery," or the "demonstration made by Major Reed and his colleagues;" but when the names of said colleagues are mentioned I wish to see my humble one where it belongs.

In the name of justice I ask you to publish these lines.

DR. ELMER'S CYRTOMETER: A CORRECTION.

By ROBERT POTTER ELMER, M. D.,

of White Haven, Penna.

To the Editor of the **Philadelphia Medical Journal:**

In your journal of January 3, 1903, I published an article describing a new form of cyrtometer. Since then it has become apparent to me that the drawing produced by it would be distorted and inaccurate unless all the arms were of equal length. In the small model which I had constructed this was so nearly the case that it was overlooked. When all the arms are equal the diagram will be of life-size, and hence the apparatus will lose its quality of reduction, although it still retains all its other advantages.

I sincerely regret that I did not discover this before publication.

GASTRIC HEMORRHAGE IN YOUNG WOMEN.

By HENRY WALLACE, M. D.,

of Tombstone, Arizona.

To the Editor of the **Philadelphia Medical Journal:**

The editorials in your issue of December 27, just past, were read with great interest.

Regarding gastric hemorrhages in young women it might be of interest to you to receive a short report of a case seen by the writer some 3 years ago.

A young woman of about 25 years of age was seized with a copious hemorrhage from the stomach. To my own knowledge her general health had been perfect in all respects. Rest, ice and a few small doses of ergot prevented a recurrence. The etiology was then studied. Without any question in my mind, the trouble was due to the patient's becoming chilled at the commencement of menstruation by exposure to cold and damp.

There has never been any evidence of stomach trouble since, nor a return of the condition.

My diagnosis in this case was, without any question, "Vicarious Menstruation."

Reviews.

The Proceedings of the Charaka Club. Vol. I. New York. William Wood & Company. MDCCCCII.

It is a pleasure to receive occasionally from the medical press a book which is not devoted entirely to the grim practicalities of medical science and art. As a rule now-a-days, medical men devote themselves rather too exclusively to the mere utilities. They ignore the humanities of their profession; whereas they might, if they would, cultivate a little spirit of belles lettres, for surely no profession more easily contributes to the graces of literature than that of the healing art.

They are beginning to do this sort of thing better in New York, for there they have established the "Charaka Club." This is an association of congenial spirits who are interested in the literary, artistic and historical aspects of medicine, and who hope to find some recreation, if not profit, in dealing with this, the less serious, side of their art.

The first volume of the proceedings of the Charaka Club contains some very admirable papers. Dr. B. Sachs gives us a brief commentary on ancient Hindoo medicine, from which we gather that the ancient Hindoos, like most other ancients, were very ignorant of the principles of modern pathology—a fact which is not surprising. Dr. A. Gerster comments on the Hippocratic doctrine of injuries to the cranium, and makes the very striking statement that cranial surgery up to the second half of the nineteenth century had substantially remained where the great Coan had left it, 400 years before Christ.

Perhaps the most scholarly, and certainly the most attractive, paper is by Dr. Charles L. Dana, on "The Cult of Æsculapius, His Statues and His Temple." The paper is copiously illustrated with pictures of the best-known statues of the god, and of his temple at Epidauros. This great shrine was for eight hundred years a resort for the sick and injured. Such places as our modern Lourdes in France and St. Anne de Baupre in Canada, cut a poor figure compared with this temple, either in fame and success or in architectural splendor. Some of our modern faith-curists and miracle-mongers should reflect that this Pagan shrine was, as Dr. Dana says, the best illustration of how long a suggestive therapeutics, backed by divine authority, can maintain itself against the scepticism and incurable ills of the world. Dr. Dana also contributes an admirable paper on the Evil That Has Been Spoken of Physicians, in which he shows that most of the standard jokes date from before the Christian Era. Dr. Collins contributes two little tales out of his office experience; Dr. Peterson writes some very excellent verse, and Dr. Holden describes, with considerable erudition, the Ophthalmology of the Ancient Greeks.

William Wood & Company have printed this volume in a highly artistic style, and it will commend itself to the scholar and book-lover both for its contents and for its artistic merit. [J. H. L.]

The Mattison Method in Morphinism. By J. B. Mattison, M. D., Published by the Author. E. B. Treat & Co., New York. $1.00.

In a brief monograph of 40 pages, which is modestly entitled by its author "The Mattison Method of Morphinism," Dr. Mattison expounds his ideas upon the treatment of the chronic opium habit. We believe that it is a defect of the medical profession no less than of the laity to place an inordinate value upon the various drugs introduced into the human system and to consider as of relatively slight importance the various hygienic measures that may be employed. This is particularly true of physicians in charge of institutions in which the system employed becomes a matter of routine gradually perfected in itself and carried out largely by the trained attendants, whereas the drugs prescribed from day to day by the physician form his chief interest and impress the patient as being his most important concern.

There are many methods of treating the morphine habit. Essentially they all consist in the withdrawal of the drug, and the encouragement of the patient to resist the desire for it, an encouragement that is largely promoted by an efficient rest-cure after the drug has been withdrawn. Dr. Mattison's method is by no means the worst that has been suggested. It impresses us as being very good, indeed, and possibly—as he claims for it—one of the most humane of all methods. It is based essentially upon the substitution of sodium bromide for morphine, this being in part accomplished before the rapid withdrawal of the drug commences. The most original feature is probably the dosage employed. Dr. Mattison is bold with his drugs; he is even bolder with the English language. We think that occasionally the rhetoric has laid traps for him, and we can imagine the lexicon chuckling when he slips into such expressions as "gastro-bowel" or "post-poppysoporific." There are two statements in the book which are worthy of notice. One—and this we believe, is true—that many morphine habitués, after apparent recovery, become drunkards. Dr. Mattison believes that total abstinence is the only preventive. Another is that 70% of the inmates of his institution are medical men. [J. S.]

American News and Notes.

PHILADELPHIA AND PENNSYLVANIA.

College of Physicians, Philadelphia.—At the meeting held January 7, the officers of the College during the past year were all re-elected. The councillors elected were Dr. F. R. Packard, Dr. H. R. Wharton, and Dr. C. W. Burr. Dr. J. Alison Scott was appointed upon the committee on the Mütter Museum, in the place of the late Dr. F. A. Packard.

Henry Phipps Institute for the Study, Treatment and Cure of Tuberculosis.—Mr. Henry Phipps, of New York, has notified Dr. L. F. Flick, of Philadelphia, of his intention to build, equip and endow a hospital in Philadelphia for the isolation and treatment of consumptives in the advanced stage of the disease. Dr. Flick is to be the director of the institution. Mr. Phipps has contributed $300,000 for land and buildings, with an endowment of from $30,000 to $40,000 annually besides. The hospital will have 100 beds and will be equipped with the latest, most approved methods for the treatment of consumptives. As it is the intention of Dr. Flick to have this hospital erected in a thickly populated part of the city, it will be necessary that the Act of 1899, which prohibits the erection of a new hospital in the populated districts of any city of Pennsylvania, be either amended or repealed. As we announced last week, the directors of the Presbyterian Hospital, Pittsburg, are also anxious to bring about this legislation.

Philadelphia Pediatric Society.—At the last meeting, held January 13, the address of the retiring president, Dr. S. McC. Hamill, was an eulogy of the late Dr. F. A. Packard. The following officers were elected for the ensuing year: President, Dr. D. J. Milton Miller; vice-presidents, Drs. J. H. Jopson, A. A. Eshner and J. H. McKee; secretary, Dr. C. H. Weber; recorder, Dr. D. L. Edsall, and treasurer, Dr. H. B. Carpenter.

St. Agnes' Hospital.—During the coming summer, improvements costing $200,000 will probably be made. The principal feature of the proposed improvements is the erection of a south wing, similar to that now on the north side of the central building. This wing will be 150 feet long and 3 stories high, and will contain a new operating room. Three other buildings will be erected, an isolation hospital, a children's hospital and a nurses' home.

The Health of Philadelphia.—During the week ending January 10, 217 cases of typhoid fever, with 14 deaths, were reported, as compared with 144 cases, with 10 deaths, in the week preceding. Between January 10 and 13 over 100 more cases were reported. There was also an increase noted in the number of cases of smallpox and scarlet fever, but a decided decrease in diphtheria. Thirty-three cases of smallpox were reported, as compared with 15 in the week before, and 78 cases of scarlet fever, as compared with 63 in the previous week. Of the cases of typhoid fever, 32 have occurred in West Philadelphia alone. Most of the cases of smallpox are reported in the residence sections of the city. Several cases have occurred among the workmen at the Torresdale filtration plant and some of the public schools have been closed on account of the development of smallpox cases.

Society Meetings Next Week.—The following societies will meet next week at the College of Physicians, Philadelphia, at 8.15 P. M.: Tuesday evening, January 20, Section on Ophthalmology, College of Physicians; Wednesday evening, January 21, Section of Otology, College of Physicians, and Thursday evening, January 22, Pathological Society.

Episcopal Hospital.—The board of managers of the Protestant Episcopal Hospital, at the meeting held January 7, recommended the erection of a separate dispensary building, to cost $75,000, and a separate ward for contagious disease patients.

Hospitals Receive Bequests.—The bequests of $5000 each to the Jefferson, Orthopedic, Polyclinic and University Hospitals, left by the late Mr. Thomas Elkinton, have been paid to those hospitals during the past week.

Philadelphia Pathological Society.—The meeting, to be held Thursday evening, January 22, in the upper hall of the College of Physicians, at 8.15 P. M., will be a symposium upon snake venom. Among those expected to speak are Drs. S. Weir Mitchell, S. Flexner, J. McFarland, J. J. Kinyoun, and Hideyo Noguchi.

NEW YORK AND NEW JERSEY.

Medical Library and Historical Journal.—This new journal, published in Brooklyn, N. Y., devoted to the interest of medical libraries, bibliography, history and biography, appeared January 15. It is the only magazine published in the English language, devoted to the subject of medical history. Original articles will include subjects in medical history and biography, practical medical library administration and economy, medical bibliography, the care of books, the history, instruction and use of medical libraries, etc. A bibliographical feature will be a complete index medicus of every current medical book, both English and foreign. The new journal will be published quarterly, at 1313 Bedford avenue, Brooklyn. The editors of the new publication, which costs $2.00 a year, are John S. Browne and Albert T. Huntington.

Journal of Cutaneous Diseases.—The editors of this journal for 1903 will be Drs. J. C. White and J. T. Bowen, Boston; J. N. Hyde, Chicago; H. W. Stelwagon, Philadelphia, and P. A. Morrow, E. E.Bronson, G. T. Jackson and J. A. Fordyce, New York. The acting editor of the journal, to whom all communications should be sent, is Dr. A. D. Mewborn, 224 West Fifty-second street, New York City. The price of this journal will hereafter be $3.00 a year.

Fellowship in Medicine, Columbia University.—A new fellowship in medicine, of the annual value of $1200, tenable for 2 years, called the Proudfit Fellowship, has been established at Columbia University, for research work and advanced study in internal medicine, and is offered to graduates of the College of Physicians and Surgeons.

Typhoid Fever in Paterson, N. J.—The health officer of the city of Paterson has found that the cause of the many cases of typhoid fever which have occurred recently was contaminated milk. Steps have been taken to remedy the evil.

NEW ENGLAND.

The Use and Abuse of Alcohol.—Dr. H. P. Bowditch, of the Harvard Medical School, lectured upon this subject, January 9, in Boston. He classed alcohol as a relish, since it stimulated the nervous system and thus aided digestion. It may sometimes be a food and sometimes a poison. Its properties are little understood by those who use it to excess. While alcohol liberates energy, a man who has taken enough to become intoxicated could have secured as much proteid from a quarter of a pound of bread at much less expense. As large amounts of alcohol cause flushing of the skin, it cools off the body heat. It is, therefore, used to lower the temperature and the man who drinks it before going out sleighing does not understand its properties. When taken in even larger quantities, it affects the brain, causing a man to lose control of his thoughts and emotions. If still more is taken, inability to control the muscles is followed by coma. In health, alcohol is not a valuable food, but it may be of great use in convalescence from disease.

The Freshman Class at Yale.—This year the average age of the freshman class is less than 19 years, 2 months younger than that of last year's class. The average height is 5 feet 9 inches, the average lung capacity 277 cubic inches as against 265 cubic inches last year. The average measurement of the inflated chest is 36.8 inches, the largest chest measurement being 43.8 inches. The largest lung capacity is 640 cubic inches. The lightest man weighs 94, the heaviest 207 pounds; the tallest man is 6 feet 3.6 inches, the shortest is 5 feet 2.8 inches; the youngest man is 16 years one month, and oldest 36 years 8 months. Only 20% use tobacco, about 10% less than the college average. The fact is also noticeable that only 10% cannot swim.

Foot and Mouth Disease.—This disease has practically been stamped out in New England. New Hampshire, Rhode Island and Vermont are entirely free from the disease and it is believed that the epidemic will be overcome in Massachusetts before this winter ends, unless the disease has been carried to some other part of the country where it has not yet been discovered. In New Hampshire 37 cows were killed; in Rhode Island, 75, and in Vermont, over 300.

Somerville Medical Society.—At the annual meeting, held at the Somerville Hospital, January 6, the following officers were elected for the ensuing year: President, Dr. F. G. Smith; vice-president, Dr. T. F. Flewelling; secretary and treasurer, Dr. C. E. Mongan.

Boston's Death-Rate.—Vital statistics of the city of Boston for 1902 show a decrease in cases of contagious diseases, with the single exception of smallpox. The total number of deaths was 10,972, as compared with 11,300 for 1901, the death-rate per 1000 being 18.7 as against 19.7 for the previous year. The total number of deaths in children under 5 years was 3577, as compared with 3469 in 1901. The death-rate for 1902 was the lowest since 1865, the highest having been 30.43 in 1872, when there was a great smallpox epidemic. Ten hundred and twenty-four cases of smallpox were reported in 1902, as compared with 504 in 1901.

Bequests.—By the will of the late L. G. Burnham, $150,000 were left to the Boston City Hospital for the erection of a new hospital.—By the will of the late Susan S. Kimball, $1000 were left to the Salem Hospital, Salem, Mass.

WESTERN STATES.

Bubonic Plague in San Francisco.—Surgeon-General Wyman, who recently returned from San Francisco, found the condition there much less alarming than has been reported. The city, state and federal authorities are working together in harmony, and, according to Dr. Wyman's opinion, a spread of the plague is not to be expected. All the cases that have developed in San Francisco so far have had their origin in Chinatown. On this account the Board of Health of San Francisco considers Chinatown the danger-spot which must be guarded against. Visitors will no longer be shown through Chinatown. It is, however, not necessary to destroy the buildings. An attempt is to be made to improve the sanitation and to prevent overcrowding in the Chinese section of the city.

Wisconsin State Board of Health.—Dr. Solon Marks, for over 25 years a member of the State Board of Health of Wisconsin and for a long time president of the board, has not been re-appointed by the Governor, Dr. Cornelius Harper, of Madison, Wis., having been appointed in his place. The secretary of the board is Dr. O. U. B. Wingate.

University of Chicago.—Dr. W. B. Wherry, associate in bacteriology, has been appointed to the position of bacteriologist in the Government Laboratories at Manila, P. I.

Madison Hospital, Madison, Wis.—At a meeting of the directors of the Madison Hospital Association, January 8, it was definitely decided to erect a hospital on the Greenbush site, at a cost of $24,000.

New Asylum for Violent Insane.—The Wisconsin State Board of Control has decided to ask the legislature for an appropriation of $280,000 for a new building, improvements and additions to the different state institutions. It is believed that $100,000 of this appropriation will be spent for the building of an asylum for the violent insane.

Yellow Fever at Washington.—The British bark *Comliebank*, which reached Port Townsend, Wash., January 3, from Panama, has been quarantined at the Diamond Point Station, on account of the occurrence of 2 deaths of yellow fever during the voyage. The *Comliebank* originally started for Puget Sound in October. Before she had been gone a fortnight a disease appeared, affecting several of the crew, death following in each case. The captain returned at once to Panama, where investigation showed that the disease was yellow fever. The bark again started for Puget Sound and lost 2 men from the disease during the trip. The *Comliebank* is being detained in quarantine 2 weeks and has been thoroughly disinfected. No further spread of the disease is apprehended by quarantine officials.

St. Louis Medical Society.—At the last meeting held in 1902, the following officers were elected for 1903: President, Dr. R. F. Kieffer; vice-president, Dr. L. T. Pim; treasurer, Dr. R. M. King; recording secretary, Dr. T. A. Hopkins, and corresponding secretary, Dr. Robert Barclay.

CANADA.

(From Our Special Correspondent.)

McGill University, Montreal.—Lord Strathcona has promised to contribute $20,000 toward the erection of a new gymnasium for the University, toward which $1000 have already been collected by the students. It is hoped that the entire sum necessary may be collected in time to make the new gymnasium a memorial of the seventy-fifth anniversary of McGill University, which will be celebrated next year.

New Contagious Disease Hospital, Montreal.—The Notre Dame Hospital will care for cases of infectious and contagious diseases arising among the French and Catholic population for 25 years, at $15,000 per annum. A similar offer was made that one of the English hospitals care for Protestant patients with contagious diseases, but up to the present time neither the Montreal General Hospital nor the Royal Victoria Hospital has accepted the offer.

Hamilton, Ontario.—This is said to be one of the healthiest cities on this continent. During 1902, 691 cases of infectious and contagious diseases were reported. In all, 744 deaths were registered, making the death-rate 13.7 per 1000. The infant mortality, however, was high, 137 deaths having occurred in children under one year. Of the 744 deaths registered, 105 were due to tuberculosis.

Medical Matriculation in Ontario.—The trouble which arose over the interpretation of the regulations of the Medical Council, adopted at the last annual meeting, which, if interpreted according to strict meaning, would have made medical matriculation in Ontario almost prohibitive, has been settled. The registrar of the Medical Council states that the standard for admission for 1903 shall be the same as that of 1902, and, for 1904 and subsequently, shall be either junior matriculation in arts, including physics and chemistry, with honor standing in one subject, or senior matriculation in art as now provided by the regulation.

Liquor and Cigarettes in Canada.—During 1902, 3,234,147 gallons of spirits were produced, as compared with 2,652,708, for 1901. The quantity of spirits consumed per capita was 0.796, against 0.767 for the previous years; that of beer, 5.102 compared with 4.737, while that of tobacco was exactly the same as in 1901. The cigarettes, however, consumed in 1902 were 134,236,516, as compared with 121,383,584 for the year previous.

The Prevention of Tuberculosis in Montreal.—For this object a large meeting was recently held, at which an address was delivered by Dr. A. J. Richer, who gave a great number of statistics showing the prevalence of tuberculosis in Montreal. A committee was organized for preparing a systematized plan of campaign against tuberculosis. On this committee are most of the eminent practitioners of Montreal.

National Sanatorium Association, Toronto.—At the recent annual meeting the physician in charge of the Muskoka College, at Gravenhurst, read the annual report, showing that 85% of patients had been apparently cured. During the 5 years that this sanatorium has been opened, 612 cases have been treated for consumption. The free hospital at Gravenhurst has had 90 cases during the first 5 months of its existence, 50 of whom came from Toronto. It was also announced at this meeting that a site had been secured near Toronto, and that $25,000 had been promised toward the erection of buildings upon this site; also that a fourth institution would probably soon be established on the Pacific coast.

Sick Children's Hospital.—During 1902, 5373 patients were treated, 749 of them remaining in the hospital for some time, of which number 520 were free patients. Of this 749, 447 were cured; 471 patients entered the hospital for operation, an increase over the previous year. For 2 months during the past year the hospital was closed on account of epidemics of diphtheria and scarlet fever in the institution.

MISCELLANY.

War on Rats in Manila.—The recent epidemic of plague in Manila which lasted from December 26, 1899, to March 6, 1902, caused 745 cases of the disease. During this time an active war was waged against rats, a body of Filipinos having been organized for this purpose, under the direction of the chief health inspector, armed with traps and bait. Divided into squads of 10 each, these men were distributed throughout the sanitary districts of Manila. Besides, a fee of 5 cents Mexican was paid for each rat sent to the Government laboratory by persons not in the regular rat-catching corps. As a result of this warfare, 50,000 rats were caught alive and several hundred thousand destroyed by poison. Each member of the rat-catcher corps wore a uniform with a brass shield over his left breast bearing the insignia of the corps and the number of the bearer. This uniform was worn while on duty. Each squad was provided with 2 galvanized iron buckets with covers, one containing disinfecting solution, the other for carrying the dead rats. One hundred ratbane tins and receptacles for carrying the same completed the kit of each squad. The catchers went on duty at 8 P. M. daily and distributed the ratbane throughout the entire city. Beginning not later than 5.30 the next morning, the bane was removed by the morning relief. In making rounds, the corps collected the dead rats on the premises visited, disinfected them in the solution furnished, tagging them and turning them over to the laboratory. Of the 60,000 rats sent to the laboratory, 40,666 were examined microscopically for bacilli, and of these only 242 were found infected with the plague. In addition to baiting rats in traps, a great number were caught by hand. A third method employed was to place nets over the holes and sewers into which the rats had been driven by hot water, carbolic acid solutions and sulphur fumes. Among the poisons used with success were prepared rat cheese, ratbane, a mixture of ground glass, flour, corn meal and syrup with 1% of strychnine, ground rusty bacon or boiled rice with 60% of arsenous acid and equal parts of flour and plaster-of-Paris, with a dish of water alongside. All rats sent to the municipal laboratory for examination were tagged, and thus it was possible to trace back the infected ones to the houses where they were caught. All such houses were treated as if the inmates had been infected with the plague. Since the plague appeared in Manila, cases have occurred or infected rats have been caught in 5000 houses, the owners of which were required by the Board of Health to remodel the structures and put them into a thoroughly sanitary condition. As a result of this ordinance more than 600 houses have been remodeled and cleansed, the repairs costing from $300 to $5000. As the plague raged chiefly among the Chinese and lower classes these were immunized by the Shiga antiseptic vaccine, thousands of doses of which were distributed by the Board of Health, the vaccination being performed by native physicians under the direction of a medical inspector.

Cholera in the Philippines.—The American garrison at Armok, on the Island of Leyte, has been attacked by cholera, 9 men of Company B, Eleventh Infantry, having been affected, 5 of whom have already died. The disease also continues in Mindanao and among the southern islands of the Philippine archipelago.

Bubonic Plague in Mexico.—Thirteen deaths from bubonic plague were registered in Mazatlan, January 5, and 8 deaths, January 6. Under date of January 7, there were 36 people in the pest house. The entire city is now being disinfected, houses burned and clothing destroyed. Under date of January 12, 43 patients were under treatment, and it is stated that the disease is again attacking those convalescent from previous attacks. The city has been divided into 4 sections for sanitary purposes, and each section is being thoroughly disinfected. Two deaths occurred January 11 at Hermosillo, which are said to have been due to bubonic plague. This has created much alarm. The steamship *Limantour*, which arrived at Guayamas, from Mazatlan, is now in quarantine. Reports that the plague is spreading and extending northward toward Arizona have been authoratively denied.

Obituary.—Dr. Jacob Hays, at Chicago, Ill., January 5, aged 62 years.—Dr. John F. Couch, at Somerville, Mass., January 4, aged 52 years.—Dr. Albert Waring Atwater, at Burlington, Vt., January 6, aged 41 years.—Dr. L. E. Towne, at Brodhead, Wis., January 6, aged 76 years.—Dr. Carl Hoffman, at Cresco, Pa., January 11, aged 100 years.—Dr. Oliver Wendell Weeks, at Marion, Ohio, January 12, aged 62 years.—Dr. John W. Hignutt, at Hickman, Del., January 12, aged 73 years.—Dr. Jacob L. Heller, at Philadelphia, Pa., January 12, aged 36 years.

GREAT BRITAIN.

Dr. Lorenz in England.—Dr. Adolf Lorenz, of Vienna, who reached Liverpool last week, spent some time there demonstrating his bloodless operation for congenital dislocation of the hip before visiting London, where he is at present. He will, however, not remain very long, as he is anxious to return to Vienna.

CONTINENTAL EUROPE.

How to Fight Tuberculosis.—Dr. Albert Robin, of Paris, delivered a lecture, January 7, in which he declared that all so far accomplished in the treatment of tuberculosis has been in vain, since both medical science and philanthropy have been misapplied. He maintains that sanatoria are, from the financial point of view, impracticable and that, therapeutically, they are simply chimerical. He expressed the opinion that humanitarian philanthropy in regard to tuberculosis is on the wrong track in the United States and in France, and that a complete change of tactics should be made in the treatment of tuberculosis all over the world. Dr. Robin asserted that, when tuberculosis is once firmly established in the system, it is practically incurable. Of 36 tuberculous patients leaving the sanatoria, Dr. Robin found that 10 had relapsed in 6 months, 10 more in a year, and that but 5 were eventually cured. The only efficacious method of fighting tuberculosis, according to Dr. Robin, is prevention. The predisposition to tuberculosis has recently been determined with mathematical accuracy by Drs. Robin and Binet, by 2 tests, the excess of respiratory consumption, and the daily organic demineralization. Dr. Robin states that all efforts should be directed against this preliminary stage of tuberculosis, prevention of the disease being easily attained by open air, abstinence from alcohol and complete mental and physical rest. A new ward has been opened in the Hôpital de la Pitié for the preventive treatment of tuberculosis under the direction of Dr. Robin. In view of these statements the raising of over $300,000 toward the establishment of tuberculosis sanatoria in France, founded upon the German model, by the Parisian newspaper *Le Figaro*, has caused considerable comment.

Horse-Meat Banquet.—On the evening of January 8, in Berlin, 600 persons attended a banquet consisting absolutely of horse-meat, served in various forms. The invitations were issued by the Society for the Prevention of Cruelty to Animals and the dinner was given for the purpose of demonstrating the nourishing qualities of horse-meat. The consumption of horse-meat would prevent owners from working old horses to death, since well-fed animals would bring good prices. The president of the Society announced that 30,000 horses had been eaten in Berlin during the past year. The dinner was greatly relished.

To Study Cattle Plague.—It has been announced that Dr. Robert Koch, the well-known bacteriologist, has recently sailed from Hamburg for Rhodesia, accompanied by 2 assistant physicians, to study the cattle plague there. He is sent by the British Chartered South Africa Company and, it is said, will receive as compensation $250 a day.

The Bacillus of Hydrophobia.—A despatch from Rome announces that Professor Sormagni, of Pavia, has discovered the microbe of hydroprobia. While it is to be hoped that this is the truth, it must not be forgotten that, not very long ago, another Italian professor, Bruschettini, asserted that he had discovered this microbe. Yet investigations undertaken at the Pasteur Institute in Paris showed that the bacteria isolated were certainly not those of rabies.

Suicide in Vienna.—Statistics for 1902 demonstrate that Vienna still stands foremost among European capitals in the number of suicides. Last year's records show that there were 453 deaths from suicide and 467 attempts at self-destruction. The number of women suicides increased in 10 years from 57 to 124. Most of the deaths are attributed to love and hunger. The former was responsible for 160 suicides or attempts at self-destruction, poverty for 158, insanity for 127, domestic troubles for 72 and financial losses for 19. One hundred and sixty persons hanged themselves, 148 used firearms, 60 drowned themselves and 35 took poison.

Obituary.—Dr. Josef Herrnheiser, instructor in ophthalmology in the German University of Prague, for many years editor of the *Prager medicinische Wochenschrift*, died recently in Prague.—The death has also been recently announced of Dr. A. Hénocque, vice-president of the Paris Biological Society, and of Dr. T. Zaaijer, professor of anatomy in the Medical School of Leyden, Holland.

The Latest Literature.

BRITISH MEDICAL JOURNAL.

December 27, 1902. (No. 2191.)

1. On the Growth of Bacteria in the Intestine. J. LORRAIN SMITH and J. TENNANT.
2. Two Cases of Obscure Abdominal Pain: Operations: Results. ERIC PRITCHARD and WILLIAM BENNETT.
3. Note on the Value of Roux's Operation for the Radical Cure of Femoral Hernia. J. CRAWFORD RENTON.
4. On the Treatment of Glycosuria and Diabetes Mellitus with Aspirin. R. T. WILLIAMSON.

1.—Smith and Tennant have made a series of observations on the intestines of dogs and rabbits, making cultures from various parts of the large and the small intestines and counting the colonies. They find that normally there are more **bacteria in the large than in the small intestine.** The first increase in the number of bacteria is found in the lower ileum. In pathological states, one of the first places in which a disturbance of the regulation of bacterial growth takes place is in the ileocecal region. From these studies they conclude that pathogenic bacteria taken by the mouth will be restrained from multiplying until the lower ileum is reached. Organisms like the bacillus coli communis, bacillus proteus, various micrococci and bacillus enteritidis sporogenes are found in the small intestine in large numbers when the regulation of bacterial growth is disturbed. These organisms are then endowed with increased virulence. In many forms of intestinal catarrh this is the only change that can be discovered. In typhoid fever, also, there is an increase in the number of bacteria normally present in the small intestine coincidentally with the appearance of the bacillus typhosus. [J. M. S.]

2.—Pritchard and Bennett report the case of a woman, of gouty habit, aged 53 years, who complained of acute epigastric pain, temperature of 105° and jaundice. Gallstones, as well as carcinoma of the bile-ducts, were thought of, but at operation no pathological condition of the gallbladder or bile-ducts was found. On arsenic and strychnine the symptoms were permanently improved. The authors consider the case to be one of functional nervous disturbance. They report a second case, that of a woman, a chronic invalid of gouty habit, aged 57 years, who complained of epigastric pain of irregular occurrence about 3 hours after eating. Duodenal ulcer was thought of, as well as adhesions to the stomach with increased size of the organ and gall-bladder disease. At operation fibrous adhesions were found between the duodenum and the stomach with sharp kinking of the former organ. When the adhesions were cut the stomach returned to its normal position. The pylorus was dilated. The patient recovered from the operation, but within 4 months the pain was as severe as before. [J. M. S.]

4.—Williamson has **treated 4 cases of diabetes mellitus with aspirin.** In the 4 cases when aspirin was given the sugar excretion was diminished; when the aspirin was discontinued and a few drops of peppermint-water were given in place of it, the sugar excretion increased. When aspirin was given again the sugar excretion diminished. The favorable results cannot be attributed to the diet, which was kept unchanged in each case. The author believes that the sugar excretion was controlled by the action of the aspirin. These good results were not associated with the occurrence of complications, gastric disturbance, feeling of depression or other unfavorable symptoms. During the periods of treatment with aspirin, the patients declared that they felt quite well, and the weight remained stationary or increased slightly. Aspirin is not a specific for diabetes; but it has the power, in some cases, to diminish the sugar excretion. It has less influence in the acute forms of diabetes in young people than in the less severe forms of the disease, and in chronic glycosuria. Aspirin should be given in doses of 15 grains from 4 to 6 times a day. These large doses sometimes produce tinnitus and other toxic symptoms peculiar to the salicylates. [J. M. S.]

LANCET.

December 27, 1902.

1. An Address (an abstract) on the Relations of the Members of the Medical Profession to Each Other and to the Public. JOHN CAMPBELL.
2. The Prevention of Typhoid Fever in Armies. H. E. LEIGH CANNEY.
3. Reflexes: Their Relation to Diagnosis in Rheumatoid Arthritis. R. LLEWELYN JONES.
4. Operation for Chronic Ulcer of the Stomach. C. W. MANSELL MOULLIN.
5. Congenital Hypertrophic Stenosis of the Pylorus. CLIVE RIVIERE.

2.—Canny contributes a paper **on the prevention of typhoid fever in armies,** which appears in the form of an abstract. He points out that, in the recent South African War, the evils which resulted from typhoid fever could have been avoided by keener foresight and zeal on the part of the Commander-in-Chief of the British Army when the war broke out. The following conclusions are drawn: (1) That, unless all the water-avenues to an army or camp have been protected, it cannot be assumed that the incidence of typhoid fever is due to the air-borne agencies. (2) That it is not possible to affirm that the water-avenues to an army are closed unless sterilization and the distribution of the water are carried out by specially trained men. (3) That the evidence of air-borne typhoid fever is not clearly established in recorded Indian military experience. (4) That in South Africa and Egypt the evidence is opposed to this theory. (5) That the weight of evidence from India, Egypt and South Africa is immensely in favor of the paramount importance of the water-avenues, especially in the onset of epidemics, and that the spread of the disease by subsidiary avenues, flies, dust and contact, only becomes a factor of importance under conditions of the grossest neglect of sanitation. (6) That evidence from Egypt proves that, if the water-avenues are protected, all other avenues are powerless to originate and to spread epidemics of typhoid fever in large bodies of men. [F. J. K.]

3.—Jones contributes an article **on reflexes** and their relation to diagnosis in rheumatoid arthritis. He mentions that Garrod, some years ago, noted reflexes exaggerated in 37 out of 50 cases of rheumatoid arthritis. The author finds that in asymmetrical types of the disease the deep reflexes on the diseased side are much more brisk than on the other, while the superficial reflexes show less uniformity in their behavior and may be very exaggerated or very sluggish. He finds that a striking correlation exists between the diseased joints and certain reflexes in the upper limbs. He has noticed in a few cases definite extensor reaction in response to plantar stimulation (Babinski's sign). He has also observed a striking harmony between the gluteal and plantar reactions; that is, if the plantar be sluggish, the gluteal reaction on the same side is likewise and the reverse holds good, while the opposite and unaffected limb gives normal reactions, and he contends that this sympathy existent between the gluteal and plantar reflexes occurs independently of any disease in the hip joint. The knee jerks are often increased; ankle clonus is fairly common. When the disease is symmetrical, the superficial reflexes may be either increased or sluggish. He has always observed a relatively high sensibility to painful sensation on the side of the first affected limb, but he finds that an increase in myotatic irritablity is one of the earliest features to appear in the clinical history and one of the last to fade away. He regards diminution as a good omen. With reference to abdominal reflexes, he finds that, in cases in which the disease has appeared first in the arm and leg of one side, the reflexes, epigastric, etc., on that side were more pronounced than on the other. He holds the view that grave affections of the muscles regulating respiration may be present in rheumatoid arthritis. Changes in the eye reflexes were also present. Light reflex is diminished, while accommodation is retained. He seems to favor the view that rheumatoid arthritis is due to an infectious principle, but that specificity cannot be claimed for any one particular microbe, and that any source of autointoxication may produce a toxemia, and through its action the cord segments produce what is called rheumatoid. He also mentions that at the present day there is an undue tendency to centralize all the disease to the joints, to the unfair exclusion of the muscular and sensory systems. Increased myotatic irritability points to some affection of the muscular system, and he states that this merits more careful attention. His observations have been based on an examination of over 100 cases of rheumatoid arthritis. [F. J. K.]

4.—Moullin urges **operation in cases of chronic ulcer of the stomach.** He states that when an ulcer has once become chronic it hardly ever is cured in the full sense of the term. The longer it lasts the less is the chance of healing and the greater the liability to complications. The operation, when performed before complications have set in, should present no higher mortality than interval operations for appendicitis. The conditions which prevent the healing of a chronic ulcer are entirely local. Moulin has operated upon 5 uncomplicated cases, 3 by excision and 2 by ligature of the whole thickness of the stomach and repair was rapid and complete in each. Persistent irritation of the surface of the sore and the dense, almost cartilaginous, infiltration of the base and edges prevent a chronic ulcer from healing. Some of the consequences of chronic ulcer of the stomach are perforation, subphrenic and perigastric abscess, ulceration into the liver or pancreas, perigastric adhesions, hour-glass contraction of the stomach, pyloric stenosis and hemorrhage. All of these complications can be prevented by a timely operation. The ulcer may either be excised or ligatured, according to its depth and extent. Difficulty in operating only occurs when the ulceration has reached such a size or depth or has caused such dense adhesions that simple excision or ligature is no longer practicable. [J. H. G.]

5.—Riviere discusses **congenital hypertrophic stenosis of the pylorus.** In this condition the pyloric ring appears as a long, firm cylinder; this he regards as a primary hyperplasia and that it develops after birth from a developmental error rather than a condition which arises from antenatal spasm. He reports a case in which at necropsy there was found a large elongated stomach with greatly thickened walls, and the pylorus was represented by a cylinder, one inch long, its circumference internally being ¾ of an inch. [F. J. K.]

MEDICAL RECORD.

January 10, 1903.

1. A Comparative Study of the Routine Treatment of Certain Diseases in Four of the Large New York Hospitals. HENRY P. LOOMIS.
2. Extra-uterine Pregnancy. H. J. BOLDT.
3. Adhesive Plaster Strapping for Sprains; the Indications for Its Use. FINLEY R. COOK.
4. Inguinosuperficial Hernia (Kuester). ALEXIS V. MOSCHCOWITZ.
5. Remarks on Bacteriology and Serum Treatment of Puerperal Septicemia, with an Illustrative Case. CHARLES S. WHITE.

1.—Loomis presents a comparative study of the routine treatment of certain diseases in 4 of the large New York Hospitals. His consideration includes **typhoid fever, acute articular rheumatism and pleurisy with effusion.** [T. L. C.]

2.—Boldt discusses **extra-uterine pregnancy** based upon the cases of the condition which he has observed in his own practice. He includes a consideration of the pathology, symptoms and differential diagnosis. The principal features upon which a diagnosis rests are as follows: Arrested menstruation, generally but 2 or 3 days over time. A sudden attack of pain of a cramp-like character in the lower abdomen, located more especially to the affected side, associated at times with an intense pain in the rectum of a lancinating character. The blood passed is usually dark, grumous in appearance, and its flow is generally more or less constant. The paroxysms of pain continue for an hour or more, and are at intervals of from one to 3 days or more. Bimanual examination is painful, especially when the tumor to either side of the uterus is palpated. The uterus is changed in size and consistency, and is dislocated, according to the size and position of the blood-tumor. If the patient has not nursed a baby for more than 2 years, or has previously not been pregnant at all, the presence of colostrum is an important symptom, especially when taken together with other existing symptoms. Rupture is diagnosed by the suddenness of the attack and the excruciating pain followed by more or less pronounced syncope; and if it is possible to obtain a history from a relative, the data already given may aid in corroborating the suspected diagnosis. As to treatment, the safest plan is to look upon every extra-uterine pregnancy as one would regard a beginning malignant neoplasm. Conservative and surgical treatment are considered. [T. L. C.]

3.—Cook discusses the indications for the use of **adhesive plaster strapping for sprains.** The pathological conditions which respond most readily to the strapping seem to possess one factor in common: **relaxation of tissue.** This relaxation may follow acute or subacute inflammatory disturbances of a rheumatic, specific, gonorrheal tuberculous or traumatic character. The good results obtained in strapping when such relaxation is present are due to the support thus afforded. It can be applied in cases of sprain so as to act as a perfect substitute for the injured ligaments, relieving them from all superincumbent weight which adequately accounts for the ease with which patients walk about. A diagnosis must be made with great care and the exact nature of the lesions discovered. [T. L. C.]

4.—Moschcowitz presents a case of **inguinosuperficial hernia.** In the writer's opinion, this particular case of interstitial hernia must have been brought about by the following accidents: An acute flexion at the external ring of whatever hernial contents had passed it, followed by an interference with the circulation, accompanied with the phenomena dependent upon this condition. Because of the increased contents of the funicular process where this structure was bent, undue compression was brought to bear on the reflected portion of the spermatic cord, which caused an interference with the circulation of the blood to and from the dislocated testicle. The patient did not suffer from violent symptoms, which is to be accounted for by the fact that the omentum only, and not intestines, were strangulated. A cure resulted from operation. [T. L. C.]

5.—White reports a case of **puerperal septicemia treated with antistreptococcic serum.** The patient made a good recovery. White calls attention to the fact that, following injections of the serum, there took place a diminution of the pulse-rate, a fall in temperature and a general betterment in the patient's condition. [T. L. C.]

MEDICAL NEWS.

January 10, 1903. (Vol. 82, No. 2.)

1. On the Need of a Radical Reform in Our Methods of Teaching Senior Students. WILLIAM OSLER.
2. The Instruction of Senior Students in Medicine. GILMAN THOMPSON.
3. Boiling as a Method of Sterilizing Catheters. C. B. NANCREDE and W. H. HUTCHINGS.
4. Veratum Viride as an Antitoxic. A. B. ISHAM.
5. The More Frequent Diseases of the Joints; Their Etiology and Treatment, with Report of Cases. JOSEPH H. STOLPER.
6. Intermenstrual Pain. JENNIE G. DRENNAN.

3.—Nancrede and Hutchings say: (1) Infected rubber catheter cannot be completely sterilized by boiling under 4½ minutes; (2) mechanical cleansing from all dried pus and coagulated blood will render sterilization easier and will demand a shorter time to be effective; (3) elastic and soft rubber catheters can be repeatedly boiled for 5 minutes or more without roughening of their surfaces or diminution of their elasticity and strength; (4) chemical sterilization by immersion in a 1/2000 mercuric chloride solution for 5 minutes does not sterilize any variety of catheter which has become infected, at best only inhibiting the growth of the germs, for if the mercuric salt be precipitated by ammonium sulphide the germs will grow freely when implanted in culture media; (5) should corrosive sublimate be employed for sterilization of catheters, it must be in a concentrated solution and the catheter must remain in it for a much longer time than the usual period considered amply sufficient in the laboratory; (6) formalin vapor will sterilize infected instruments in 24 hours; (7) all methods of sterilization commonly employed should be continued for much longer periods than the minimum time required for destruction of the germs in the laboratory; (8) English web catheters can apparently be more readily sterilized by heat than can soft rubber ones, probably on account of their interior construction. [T. M. T.]

4.—Isham advises that veratrum viride should be given in 20-drop doses of Norwood's tincture hypodermically as an initial dose followed by 10 drops more in ½ hour, when it falls short of emesis. In no case has a fatal termination been seen with its use, and no supporting means or modifying agents have been deemed requisite, however grave the symptoms manifested after its exhibition. The author used it not diluted, contrary to the national dispensatory, without bad results, although it leaves considerable soreness about the point of injection, which, in most instances, disappears in a day or two. [T. M. T.]

5.—Stopler says: (1) No matter how bad or how far the disease of the joint may have progressed, with our present methods the sufferer can expect not only relief, but positive curative effects, if the proper steps in treatment are adopted; (2) that, while we can have no general plan for the treatment of such disease, we have by the aspirating needle and microscope a valuable uniform plan for diagnosis; (3) that, diseases of the joints being due to many causes, the systemic conditions, family and personal history of the patient become of the utmost importance; (4) that the author's method of treatment is a modified Phelps method, but superior to Phelps in the following points: (a) Carbolic acid, if used in drop doses only, does not have the desired effect; in larger doses it causes sloughing of the parts, while bichloride of mercury, if not allowed to be absorbed, accomplishes its purpose and can be used in any quantity; (b) the 1/2000 solution, while not too strong, is strong enough for germicidal purposes; (c) the use of alcohol hardens the tissues and prevents the absorption of the mercury, which is washed out with sterilized water; (5) while the author knows that it is the practice of the profession to condemn operations on tuberculous joints, he urges the advisability and necessity of such operation. [T. M. T.]

6.—Drennan gives 2 theories for **intermenstrual pain:** (1) That it is a Fallopian tube colic, and this seems the most likely of the 2 theories; (2) that ovulation occurs some length of time prior to menstruation may seem doubtful to those who regard ovarian pain a few days before the onset of the menstrual discharge as due to a congestion dependent on ovulation. [T. M. T.]

NEW YORK MEDICAL JOURNAL.

January 10, 1903.

1. Colorado Climate and Eastern Patients. W. A. CAMPBELL.
2. The Repair of Lacerations of the Pelvic Floor. JAMES HAWLEY BURTENSHAW.
3. The Origin of Chorio-epithelioma of the Uterus. SAMUEL WYLLIS BANDLER.
4. Some Tonsil Affections. RICHARD B. FAULKNER.
5. Report of a Case of Tetanus Following Vaccination. WILLIS S. COOKE.
6. Thoughts of Fetal Intracranial Hemorrhage. DOUGLAS H. STEWART.
7. Note on the Salt Starvation Principle in Epilepsy Treatment by Bromides. L. PIERCE CLARK.

2.—Burtenshaw, in considering the subject of **lacerations of the pelvic floor,** says that, regarding the function of the perineal body previous to the publication of the classic paper by Emmet, it was generally conceded that on the integrity of the perineum depended that maintenance of the normal positions of the organs of the pelvis. He then speaks of the anatomy of the pelvic diaphragm, calling particular attention to the fascia surrounding the levator ani muscle. As regards **repair of pelvic lacerations,** he says that the structures are never restored to their normal condition, but the patient's conditions are. The operations of perineorrhaphy or colpoperineorrhaphy, as performed to-day, are fully discussed. [P. B. B.]

3.—Bandler, in discussing the origin of chorio-epithelioma of the uterus, speaks of the controversy, as regards its etiology, existing between the various investigators; one class claiming that the growth is of normal origin, whilst others claim it to be of fetal origin. He then speaks of the symptoms produced by this tumor and discusses in great detail its etiology. The macroscopical characteristics and also the microscopical appearance of the tumor are set forth. [P. B. B.]

4.—Faulkner, in speaking of **tonsillar affections,** first reviews the anatomical situation and structures of these glands. He states that they are various lymphoid collections situated in the pharynx and in various areas throughout the alimentary canal. He also speaks of the microhistology of these organs. Their function appears to be the generation of leukocytes which are destructive to micro-organisms, and other deleterious agents that enter this canal, hence when the secretion of these organs is below par, the individual is rendered susceptible to various infectious processes. Therefore, with the knowledge of the anatomy of the tonsils, of their absorptive powers and of their important phagocytic functions, wisdom seems to demand that, in every case of tonsillar affection through antisepsis, greater care in the preservation of lymphoid structure, more conservative surgical and decidedly more comprehensive and detailed medical treatment of the nasopharyngeal cavity should be carried out. [P. B. B.]

5.—Cooke reports an interesting case of **tetanus following vaccination.** He first considers tetanus in general and also speaks of the treatment. The case reported occurred in a girl, aged 4 years. The vaccination was typical and pursued a normal course until 3 weeks after it was performed, when manifest symptoms of tetanus began. The disease persisted with moderate severity for a period of almost 2 months, after which the child recovered under ordinary treatment. Cooke is at a loss to understand from whence the infection came, because the vaccine employed was above suspicion, and thorough antisepsis was used in preparation of the arm. However, the child was allowed to play out-doors and thus probably from exposure contracted infection. [P. B. B.]

6.—In discussing **fetal intracranial hemorrhage,** Stewart states that the term hemorrhage should be extravasation, inasmuch as the former term presupposes an external appearance of blood. He says intracranial hemorrhage is an obstetrical misnomer, embracing cerebral apoplexy and meningeal extravasation in the newborn child, and is usually dismissed from further thought with the comment, "caused by pressure." Naturally, the question arises: What is the source of pressure? He then speaks of the various theories as to its etiology, and states that he himself believes the accident arises from unequal squeezing. The caput succedaneum is not caused by direct, but by uterine driving pressure and pelvic crush, the filtration appearing on the part where pressure and resistance are wanting. In speaking of the treatment, nearly all methods have failed, but theoretically the Kemp irrigator and normal salt solution would appear to work well. He believes, however, that more can be done by prophylaxis. [P. B. B.]

7.—Clark urges the importance of **hypochlorization of diet** in conjunction with the bromides and organic bromine salts in the **treatment of epilepsy.** Most epileptics are fond of table salt; therefore, he believes that we should withdraw the normal table salt, thus reducing the total chlorides in the body. Sodium bromide should be administered instead of ordinary sodium chloride, as it is nearest like it in point of taste. Hypochlorization of diet should, of course, be employed with general hygienic treatment, massage and hydrotherapy. In general, he has obtained good results from this plan of treatment, the patients remaining free from bromism, from gastric irritation, constipation and the mental hebetude common in the old forms of bromide sedation. He believes that hypochlorization is a valuable adjuvant principle, and a decided therapeutic advance since the discovery of the bromides. [P. B. B.]

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

January 8, 1903. (Vol. CXLVIII, No. 21.)

1. The Malignancy of Joint Tuberculosis. Illustrated by a Series of 47 Cases. CHARLES F. PAINTER.
2. The Importance of Increased Hospital Accommodations for the Treatment of Measles. JOHN H. McCOLLOM.
3. An Experimental and Practical Demonstration of the Value of Downes's Electrothermic Angiotribe. JOHN W. KEEFE.
4. Plague Serum in Three Cases. W. J. CALVERT.

1.—From Painter's article the following facts are deducted: (1) Tuberculous disease tends to recur after apparent cure in a considerable proportion of cases: (2) this recurrence is most commonly a local one. Metastases are not common; (3) trauma, direct or indirect, is frequently associated with recurrence; (4) persons who have suffered from bone and joint tuberculosis should be cautioned that they are not well when symptoms have ceased and that reasonable care must be exercised to avoid recrudescence; (5) deformity and shortening should be corrected as far and as accurately as possible to lessen the chances of recrudescence; (6) mechanical treatment, especially fixation, should be used in the acute conditions of childhood. Exploratory interference, when discretion is used, with a view to removal of isolated foci, is advisable in many cases in children, and is to be urged in the majority of the recrudescences, if seen early. The author insists that patients with hip disease, Pott's disease and tumor albus have tuberculosis, and must be treated as much as if they had phthisis. [T. M. T.]

2.—McCollom says (1) that measles is not necessarily a mild disease; (2) there are a greater number of individuals living in boarding-houses and lodging-houses who require hospital treatment, if ill with measles; (3) present accommodations are insufficient; (4) in order properly to protect scarlet fever patients and measles patients from cross infection, a separate pavilion is imperatively demanded for the treatment of those ill with the latter disease. [T. M. T.]

3.—Keefe mentions the advantages of this instrument: (1) Rapidity of operation; (2) asepsis and cleanliness during operation; no soiling with blood or pus; (3) hemostasis without the aid of a ligature; (4) no secondary hemorrhage from the slipping of ligatures, or the subsequent infection of the same, causing death or discharging sinuses to remain for months; (5) less pain subsequent to operation, as the tisues are not puckered or constricted by ligatures; (6) the manner of using these instruments is very simple, and one should try this method before passing judgement thereon. [T. M. T.]

4.—Calvert reports 3 cases treated with the plague serum, and from his experience in these cases says that it is very evident that large quantities of serum must be used if favorable results are to be expected. In one patient the usual terminal septicemic symptoms were not present, in the other not marked and in the third patient a few organisms were found in the blood on 4 successive days. A drop in temperature was noted in these patients, although, since this drop has occurred when no serum was used, not much importance can be attached to it. In the patient that recovered the quantity of serum that was given was so much larger that the above statement was given. [T. M. T.]

AMERICAN MEDICINE.

January 10, 1903.

1. The Treatment of Epilepsy by the General Practitioner. WILLIAM P. SPRATLING.
2. Report of Two Cases of Transverse Position of the Fetus with Prolapse of an Arm and Impaction. CHARLES S. BARNES.
3. Gastrosia Fungosa. MARK I. KNAPP.
4. The Causes of Death in Diphtheria. BERNARD KOHN.
5. Pertussis, With Special Reference to Its Early Diagnosis from the Blood Findings. ALFRED WANSTALL.
6. A Case of Infection With the Doublepored Dog Tapeworm (Dipylidium Caninum) in an American Child. CH. WARDELL STILES.

1.—Spratling, in discussing the causes of epilepsy and its treatment, lays especial stress upon **heredity and stress**, and characterizes the manner of their action by saying that heredity always acts first from the brain; stress, toward the brain, being in one primarily central, in the other primarily peripheral. Habit epilepsy is universally recognized. In emphasizing the importance of heredity as a causal factor, he urges the necessity of determining: (1) What is the cause of the disease in a particular case, is it heredity in greater part or stress in greater part? (2) If it is stress in the greater part, what is the stress, what is its form of action and how soon can it be removed? If it is heredity in greater part, what is its form? Spratling enumerates the commoner forms of stress and outlines the principles which should govern the treatment of epilepsy. Especial study of the individual case is important. Implicit dietetic measures must be instituted. The bromides are of value, but, in the writer's opinion, have never yet, unaided, cured in a single case. The patient's general condition must be improved as far as possible, and all possible sources of irritation, such as that caused by adenoids, errors of refraction etc., should be remedied. [T. L. C.]

3.—Knapp holds that **gastrosia fungosa** is a disease, not a symptom, and is due to the presence within the stomach of relatively large quantities of organic acids which may have been introduced as such into the stomach, or may have formed there. The disease permits of subdivision into 3 distinct classes: (1) **Organacidia gastrica simplex**, a pathologicochemical condition of the stomach in which the organic acids have been introduced in fruits, salads, etc.; (2) **gastrosia fungosa** in which the organic acids are due to mold vegetation in the stomach, and (3) **zymosia gastrica** in which the organic acids are due to the presence in the stomach of growing sporulating budding yeast. [T. L. C.]

5.—Wanstall has studied the blood in cases of pertussis, with especial reference to the early diagnosis. He concludes that there seems to be good ground for the opinion that an **increased percentage of lymphocytes**, at least equaling or exceeding that of the polymorphonuclear neutrophilic cells is a valuable diagnostic aid before the characteristic symptoms of the disease make the dignosis easy. But like the doctrine of polymorphonuclear leukocytosis in general, the figures are more convincing in the mass than when considered individually. [T. L. C.]

6.—Stiles reports a case of infection of a 16-month-old child with the double-pored dog tapeworm. The parasite which he describes belonged to the family *Taeniidae*, subfamily ***Dipylidinae***. **[T. L. C.]**

DEUTSCHE MEDICINISCHE WOCHENSCHRIFT.

November 20, 1902.

1. Concerning Prurigo Lymphatica. A. BUSCHKA.
2. Inoculation Metastases of Carcinoma. L. BRIEGER.
3. Concerning Malignant Lymphomata. J. SPIJARNY.
4. The Relation between Tuberculosis and Cancer. E. ARONSOHN.
5. The Importance of the Schueller Cancer Parasite. H. MOHR.
6. Two Cases of Cancer of the Esophagus that Exhibited the Clinical Picture of Aortic Aneurysm. (Conclusion.) R. KUCKEIN.
7. Contribution to the Treatment of Empyema.

2.—The recent article of Ohlshausen (abstracted from the same journal) has led Brieger to make a brief note of a patient from whom, during January, 1884, a carcinoma of the ovary was removed, the patient being a girl, 19 years old. In July of the same year the patient died, after having exhibited ascites and infiltration of the wound. When the wound was cut through it was found to be a mass of nodules, from the size of a pea to that of a cherry. Brieger states that he has implanted foreign carcinoma tissue in the anterior chamber of the eye in rabbits, after having injected those animals with human blood from carcinoma patients. A marked pannus developed. After this decreased it was possible to observe the gradual solution of the carcinoma tissue. The blood of these animals had the same effect upon normal human blood and upon normal persons and carcinoma patients. The same absorption was noted when pieces of chancre were introduced into the anterior chamber. These experiments are being continued. [D. L. E.]

3.—Spijarny, in a discussion of malignant lymphoma, devotes himself chiefly to the relation between malignant lymphoma and tuberculosis. He considers it demonstrated that both malignant lymphoma and tuberculosis may be present in the same person, and also that a pure tuberculosis may closely resemble malignant lymphoma in its clinical course. He reports a case in which he considers that both tuberculosis and malignant lymphoma were present, an extirpated gland having shown the characteristic appearances of malignant lymphoma. The signs of tuberculosis were not absolute during life; but the patient died, and was reported by the physician that made the post mortem to have exhibited a general miliary tuberculosis. [D. L. E.]

4.—The relation between tuberculosis and carcinoma is discussed by Aronsohn, and 23 cases are reported. In these patients there was tuberculosis with a more or less marked family history of carcinoma. The author believes that the frequency of a family history of carcinoma in tuberculous cases is extremely striking. He mentions other authors that have repeatedly reported about 10 per cent. of cases of tuberculosis in which a family history of carcinoma was obtainable. He considers it probable that carcinoma in the immediate ancestry in some way predisposes to tuberculosis, probably by reducing the general resistance. This seems to be especially active in connection with tuberculosis, but it is also noticed in connection with other infectious diseases. The author believes that carcinoma, lupus and tuberculosis may show a marked tendency to arise in numerous members of the same family. [D. L. E.]

5.—Mohr has investigated the importance of the Schueller cancer parasite, and has especially excluded the possibilty of these parasites being cork-cells by making preparations without using cork-stoppers. He has found the parasites present, even in these preparations; and he believes that Volker is wrong in considering that they are cork-cells. While he does not state the importance of the parasite, Mohr believes that it is worthy of further investigation. [D. L. E.]

6.—Kuckein discusses some of the most important symptoms in his cases of carcinoma of the esophagus that resembled aortic aneurysm. The pains were extremely striking; and were of the radiating character common in aneurysm. The fact that they appeared chiefly at night was, perhaps, of importance in suggesting carcinoma; but they were so marked, and pain is so much more prominent a symptom of aneurysm, that they were considered to indicate the latter. Another symptom of marked consequence in determining the diagnosis of aneurysm was the occurrence of compression of the trachea, a symptom that is also far more common in aneurysm than in carcinoma. A common cause of dyspnea in aneurysm, besides compression of the trachea, is paralysis of the recurrent laryngeal nerve. This is far more common in aneurysm than in carcinoma, although some statistics indicate that it is almost equally frequent in the two. As to the presence of disturbance of deglutition, this is said to occur in about 15 per cent. of cases of aortic aneurysm; but it is then usually of a subjective character, and there is little tendency to regurgitation of food. Actual stenosis is comparatively rare. In these cases, as noted, there was no disturbance of swallowing. This is quite rare in carcinoma of the esophagus. Even dulness, prominence of the thoracic wall and pulsation may be present in carcinoma. In one of these patients pulsation was present. The use of the X-rays has been recognized to be a method that cannot be absolutely depended upon for the demonstration of aneurysm. In these patients, however, the appearance was that of an expansile pulsation, but it was caused purely by the pulsation of the aorta, which lay at the edge of the growths. In one of the patients reported, blood was constantly present in the sputum. This was due to perforation of the trachea; but it strongly indicated aneurysm, rather than carcinoma. [D. L. E.]

7.—A patient is reported in whom pus was found at the angle of the eighth rib. Five cm. of that rib were resected, and the abscess-cavity was opened. The cavity was not large, but the wall was very dense. It did not improve satisfactorily, consequently, after 4 weeks, a vertical incision was made. The intercostal muscles of the eighth interspace were cut through, and the ninth rib was resected. The abscess then healed rapidly. This method of operating has been subsequently adopted with marked success in all cases of empyema, a cross incision being made with resection of 2 ribs. After making the first incision the pus is partly emptied in order to make it possible to go on safely with deep narcosis. The operation is safer and easier when carried out in this way, and the results are also considered better. [D. L. E.]

MUENCHENER MEDICINISCHE WOCHENSCHRIFT.

November 18, 1902. (No. 46.)

1. Serum Agglutinins. K. LANDSTEINER.
2. The So-Called Hardening of Children. HECKER.
3. The Results of the Tuberculin Treatment According to Goetsch's Method. W. ROEMISCH.
4. Some Remarks upon the Treatment of Tuberculous Diseases with Sodium Sumarandi, According to Landerer. H. RIEGNER.
5. Gonorrheal Urethritis in Male Children. FISCHER.
6. Inflammatory Tumors of the Abdominal Wall Produced by a Foreign Body that has Perforated the Intestine. A. WAGNER.
7. Barend Joseph Stokvis. PEKELHARING.
8. Paracelsus and His Reformation. K. BAAS.

1.—Landsteiner has undertaken to study **the agglutinins that become attached to the agglutinated corpuscles.** For this purpose he agglutinated red bloodcorpuscles with a solution of abrin, then washed the agglutinated masses of red corpuscles until the washing fluid agglutinated slightly if at all, and then digested the corpuscles in physiological sodium chloride solution at a temperature of 50°. The result was a powerful agglutinating solution. As the liquid used in washing nearly always showed faint, barely recognizable traces of agglutinin, it is possible that even at normal temperature some separation takes place, but this is certainly slighter than the separation which takes place when higher temperatures are employed. Similar results were obtained when instead of abrin solutions the corpuscles of a goose or pigeon were agglutinated with beef serum, the corpuscles washed, and, after testing the wash water, the clumps digested either at room temperature, or at 50° or 55°. If the temperature was 50° the reaction was stronger; if 55° it was distinctly weakened. Similar results were obtained with rabbits' blood. The agglutinins obtained from the clumps were capable of agglutinating the red bloodcorpuscles of other species. Shiebeyama having observed that immune hemolysin was not so much affected by dialysis as normal hemolysin, it occurred to Landsteiner that, perhaps, nonimmune hemolysin was more affected by injurious agencies. He, therefore, made a series of investigations with 2 parts of serum, one heated to 52° and the other to 60°, some of the serum being immune and some normal. He found that, although the temperature of 60° inhibited the hemolytic action, mixtures of this with the serum heated to 52° produced a very active hemolytic substance. Mixtures of various specimens of immune serum seemed to act upon the corpuscles as if the effects of the different serums were added and no other results ensued. Landsteiner concludes that agglutinating substances having their absorption in the agglutinated bodies can be recovered. When so recovered they are distinguished from the serum in which they originally occurred by their more pronounced specific action. Normal serum contains a number of agglutinating substances that are not specific in character. It is not decided whether the reproduction of certain substances already formed in the animal body is necessary for the origin of immune bodies, or whether there is formation of immune compounds. In either case it is probable that the specific total reaction is due to the combination of substances that of themselves have only a slight specific reaction. In this way we can explain satisfactorily the origin of specific substances. [J. S.]

2.—See editorial **Philadelphia Medical Journal**, 1903, page 43.

3.—Roemisch, encouraged by the results obtained by Goetsch in the use of **minute doses of tuberculin for the cure of tuberculosis**, reports 8 cases in which he has employed it. Considerable improvement was noted in all the patients, although absolute cure was not certain in any. Indeed, in some the sputum still contained tubercle bacilli. In nearly all, however, there was gain in weight, improvement in the physical signs and in the subjective symptoms. (The paper is still unfinished.) [J. S.]

4.—Riegner reports 9 cases of tuberculosis treated with **hetol**. Usually the arm was surrounded by elastic bandages and the region of one of the swollen veins carefully cleansed with alcohol and ether. A carefully sterilized syringe was filled with sterilized solution of hetol, the needle thrust into the vein, a drop of blood allowed to escape from it, and then a few drops of blood drawn into the syringe and the injection made. The results were sufficiently encouraging to justify the continuance of the employment of hetol given by this method, as when carefully employed it has proven not to be dangerous. [J. S.]

5.—Fischer reports the case of a **boy of 9 years**, who had an **acute purulent urethritis**. Typical gonococci were found in the smear preparations of the pus. Fischer has been able to collect 69 cases of this condition in boys before puberty. A study of these cases inclines him to believe that rheumatism is relatively uncommon as a complication, and that strictures are very uncommon. The course is usually more violent than in the adult. [J. S.]

6.—Wagner reports the case of a woman, 52 years of age, who developed pains in the right lower portion of the abdomen, with high fever. A diagnosis of paratyphlitis was made, but in the course of 14 days the symptoms subsided. Later renewed swelling and pain occurred, but it did not compel the patient to give up work until, during an effort to lift a heavy weight, she suddenly felt sharp pain and became seriously ill. When examined after this, a tumor, the size of a man's head was found just above the right Poupart's ligament. It was slightly tender and attached to the abdominal wall. An operation was performed, and a supposed sarcoma of the abdominal wall that had perforated into the peritoneum was found. Microscopically it did not appear to be very malignant. During a later dressing a pus pocket was opened, containing more than a liter of pus. Later the **abscess** again developed, and on this occasion a **small fish bone** was found in it, that the patient stated had been swallowed 2 months before the first symptoms appeared. This evidently was the cause of the symptoms and had produced the appearance of a fibrovesicular sarcoma. [J. S.]

7.—**Barend Joseph Stokvis** was born in 1834, in Amsterdam. His father was a physician of some distinction. He received his degree in 1856, having investigated the question of the formation of sugar in the liver. He subsequently became interested in the physiology of uric acid, and continued his laboratory work in spite of a rapidly increasing practice. Later, when associated with Koener, he studied the pigments of the body. In 1874 he was made professor of general pathology and clinical medicine. He devoted himself, however, chiefly to the teaching of general pathology. His greatest work was "General Therapeutics," the first volume of which was published in 1891. The first part of the third volume did not appear until 1899. Pekelharing, who contributes this review of his life, warmly praises his personal qualities, his scientific interest and his love of art. [J. S.]

8.—Baas gives a sympathetic and appreciative account of **the character and life of Paracelsus.** He repeats the general facts of his life: That he was born on the 17th. of December, 1493, and was educated by his father, a member of the family of Bombaste von Hohenhein. He was also educated in theology and philosophy by various dignitaries of the Church. He subsequently studied in the mining laboratories of Sigmund Fugger, where he laid the basis of his knowledge of alchemy. Baas believes that Paracelsus can be regarded as the founder of pharmaceutical and medical chemistry. It can be said, at least, that from these laboratory studies his preference for metallic drugs arises, for he always considered these more active than vegetable drugs. In particular he introduced lead, iron, antimony and mercury. During these studies he also wrote a book upon the diseases of miners. He subsequently studied medicine as it was then taught. After his studies were over, he took a long scientific journey to various parts of the world, acquiring as much experience as possible, seeking knowledge not only from the physicians, but from all sorts of healers, even shepherds, Jews and gypsies. He was also military surgeon in the wars of the Netherlands, Denmark and Italy. He soon acquired a reputation for being able to aid after other physicians had failed. Finally he settled in Strassburg. Here he aroused much enmity, and in 1566 accepted a call to the University of Basel. In his teaching here he insisted upon the importance of experience and experiments. He burnt the old medical books, and quarrelled with his colleagues. He claimed that apothecaries were his enemies, chiefly because his prescriptions were simple, and he insisted that they should have a better preliminary education. His chief service to medicine was his effort to rescue it from the thraldom of scholasticism by securing remedies in as pure and simple a form as possible, and by treating wounds in a cleanly manner rather than by covering them with salves and plasters. But he was so uncompromising in his statements that he rapidly collected a group of enemies, and finally, after a quarrel with the city fathers, he was obliged to fly in order to save himself from arrest. From this time he was a wanderer from one place to another, often miserable and in bitter want. Finally he settled in Nuremberg, where he studied syphilis. Two years later he went to Saint Gallen, where he wrote numerous theological and philosophical articles. Later he had an opportunity of observing and describing an epidemic of plague, and finally he settled in Salzburg, at the request of the Archbishop, in which placed he died, on the 24th. of September, 1541. [J. S.]

BERLINER KLINISCHE WOCHENSCHRIFT.

December 15, 1902. (39 Jahrgang, No. 50.)

1. True Aneurysm of the Right Sinus of Valsalva. FRIEDRICH KRAUS.
2. Acute Inflammation of the Pharyngeal Tonsil. H. BECKMANN.
3. The Abuse of Boric Acid. WILHELM DOSQUET-MANASSE.
4. The Effect of Albumin Bodies on Bloodclotting. H. BRAT.
5. A Curative Serum for Combating Morphine Poisoning and Similar Intoxications. LEO HIRSCHLAFF.

1.—**True aneurysm of the right sinus of Valsalva rupturing into the right ventricle is a very rare condition.** Such a case, in a man of 27, who dated his symptoms from overexertion during his military service 4 years before, is reported by Kraus with interesting details and photographs. There were both hypertrophy and dilatation of the entire heart. The cause of the condition is generally some chronic aortic disease. [M. O.]

2.—**Acute pharyngeal tonsillitis** is a common affection, attended with recurrence very frequently, both in children and adults. Then degeneration of the inferior turbinate bone may follow with or without sinusitis. The deeper respiratory passages and the ears may also be affected. Fully 95% of the cases of otitis media are due to inflammation of the pharyngeal tonsil. The condition is found with rheumatism and the infectious diseases, and commonly results in hypertrophy. Cervical adenitis is also a consequence of pharyngeal tonsillitis. The pharyngeal tonsil should always be removed, since that alone is of service in treating all conditions of the nasopharynx, ear, etc. [M. O.]

3.—Dosquet-Manasse found that, when **boric acid** was used **as a preservative in meat,** it was employed in large amounts. While its presence does not prevent putrefaction entirely, it conceals putrefaction to a certain extent. No antiseptics are good preservatives. Therefore, meat should be prepared aseptically, not antiseptically. No bacteria can be found in cooked meat. But **boric acid is a poison,** and becomes dangerous when present in very large quantities. [M. O.]

4.—Brat reports in full several experiments to show **the influence of albumin bodies upon blottclotting.** The effect of gelatose and gelatine is similar to that of peptone. Since the plasma obtained after the injection of albumin bodies agglutinates the red bloodcorpuscles of the same animal, some chemical changes have occurred in the erythrocytes. An increased amount of globulin is found. The injection of albumin bodies was followed by more clotting, seemingly due to the excretion of plastic materials from the erythrocytes. This effect of gelatine, gelatose, etc., is because they are substances the toxicity of which increases with the grade of their hydration. [M. O.]

5.—Hirschlaff reports his experiments upon mice and rabbits in the preparation of **a curative serum for treating morphine poisoning.** The investigations are given in detail. Increasing doses of morphine are followed by the appearance of some resisting substances in the blood, so that, by injecting this serum, it is possible to produce immunity to the toxic effects of morphine. The case-history of a man to whom this serum was successfully given after he had swallowed a large dose of morphine follows. Other cases are also quoted. [M. O.]

WIENER KLINISCHE WOCHENSCHRIFT.

November 27, 1902. (XV. Jahrgang, No. 48.)

1. Tuberculosis of the Thyroid Gland. PAUL CLAIRMONT.
2. Cystoscopical Diagnosis. JOSEF HALBAN.
3. The Differentiation of Diphtheria Bacilli from Pseudodiphtheria Bacilli by Agglutination. JOSEF SCHWONER.
4. The Variola-Varicella Question. NORBERT SWOBODA.

1.—After reviewing the literature, Clairmont reports a case of **tuberculosis of the thyroid gland** in a child of 2 years. This had developed in 3 weeks, causing marked dyspnea. The tumor was removed by excision and excochleation. Histological examination showed tubercular granulation tissue. In 6 months recurrence was found in the fistula persisting, which, however, healed completely after the second operation. This tumor again showed tubercular granulation tissue. The child has kept perfectly well since. Though no primary cases are reported, this seems to have been primary, as no other localization of the tuberculosis was found. A positive diagnosis has never been made. The only treatment is operation. [M. O.]

2.—Halban demonstrates the value of **cystoscopy in the diagnosis** of laceration of the urethral opening after passage of a renal calculus, of inguinal hernia of the bladder, of chronic fibrous periurethritis, and of adhesions between the intestines and bladder, reporting in detail cases under each separate heading. The treatment follows, depending wholy on the results of cystoscopical diagnosis. [M. O.]

3.—After reporting his experiments, Schwoner concludes that a **serum obtained by immunization with diphtheria bacilli** agglutinates diphtheria bacilli when in high concentration. This serum agglutinates pseudodiphtheria bacilli and other bacteria in concentration corresponding to that of normal horse serum. Therefore, **agglutination, with this serum, concentrated, differentiates true diphtheria bacilli from pseudodiphtheria bacilli.** The serum obtained by immunization with pseudodiphtheria bacilli agglutinates homologous serum. Besides, pseudodiphtheria bacilli are not one single bacterial species. [M. O.]

4.—Swoboda demonstrates **the difference between varicella and variola**, showing that they are not the same affection. In adults sporadic cases of these diseases may resemble one another very much in their clinical course. For varicella may cause marked symptoms in an adult, as is shown by his cases, and is often mistaken for variola. Morphologically there is no difference between these 2 diseases; clinically they are generally very different. Lesions may be exactly similar. Yet the etiology always goes back to contagion from one of the 2 diseases. The many cases reported to show the identity of the 2 affections simply prove the occurrence of what Swoboda calls **varicella varioliformis.** If vaccination has taken before or takes just after such an attack, the diagnosis is confirmed. [M. O.]

DEUTSCHE ZEITSCHRIFT FUER CHIRURGIE.

October, 1902. (Volume 65, Nos. 5 and 6.)

20. The Administration of Ether. C. HOFMANN.
21. Eucain B. MARCINOWSKI.
22. Joint Disease in Locomotor Ataxia. K. WILDE.
23. A Case of Muscular Valve at the Neck of the Bladder. WILLI HIRT.
24. Isolated Subcutaneous Rupture of the Biceps, and of the Sartorius. ALFRED STIEDA.
25. Steam Disinfection in Surgery. EGBERT BRAATZ.
26. The Treatment of Fractures of the Femur and Humerus in Infants and Young Children. JULIUS DOLLINGER.

20.—Hofmann believes **ether** to be less dangerous than chloroform, which always injures the internal organs. Ether should be **administered drop by drop**, and morphine should be given hypodermically an hour before it is begun. If it is necessary to get the patient under quickly, a few drops of chloroform may be used first, then ether is continued. This method is not difficult; practice alone is necessary. The subject is fully discussed. [M. O.]

21.—While eucain A is always a local irritant, **eucain B** is not, if used in proper solution, warmed to blood heat and in isotonic concentration. This is effected by the addition of sodium chloride. Its injection into noninflamed tissue is painless. Eucain B is almost 4 times less toxic than cocaine or eucain A. Symptoms of poisoning resemble those produced by cocaine. The toxic doses range between 4 and 5 decigrams. It causes but a trifling dilatation of the bloodvessels, does not dilate the pupils or influence accommodation or intra-ocular tension, while the cornea remains intact. Therefore, it is of especial value in ophthalmology. It tends to assist healing after eye-operations, but is contra-indicated in iritis. As a local anesthetic, it equals cocaine. Solutions of eucain B in hydrochloric acid keep a long time, and may be sterilized over and over. It exerts a slight antibacterial action. Marcinowski advises eucain B in all cases where cocaine was formerly employed. Its employment in the different parts of the body is discussed, the various doses applicable being given. [M. O.]

22.—Wilde gives the case-histories of 3 patients with tabes complicated **with the joint affection known as Charcot's joint.** Clinical symptoms were typical. In the treatment he uses apparatus, mercury and potassium iodide. A full review of the literature, with photographs and radiographs, follows. [M. O.]

23.—Hirt reports the case of a **muscular valve found at the neck of the bladder post mortem.** The clinical history of the case is unknown. Diagrams illustrate the rare condition found. [M. O.]

24.—Stieda reports the case-histories of 3 men, who had suffered **isolated subcutaneous rupture,** in 2 patients **of the long head of the biceps** of the right arm; in the third, **of the lower biceps tendon.** The histories of 2 men with **subcutaneous rupture of the sartorius follow.** This is due to direct violence; operation is rarely of any value in the treatment. The etiology, symptomatology and treatment are discussed. [M. O.]

25.—Braatz contributes another article upon **steam disinfection in surgery.** After detailing several experiments and reviewing the literature, he concludes that, though steam sterilization is uncertain, we have as yet nothing better for the disinfection of dressings. It is the safest and simplest method of disinfecting surgical dressings known. [M. O.]

26.—Dollinger uses **plaster of Paris in the treatment of fractures of the femur and humerus in new-born infants and young children.** This is applied in an anterior and a posterior splint, surrounding the leg to the ankle, and the body to the margin of the ribs. A similar apparatus, applied to the side of the chest, was used successfully in 5 fractures of the humerus, while the other splints were employed with success in 11 cases of fractured femur. This dressing overcomes angular deformity and shortening, yet permits carrying the child about. Photographs illustrate the application of the splints. [M. O.]

ANNALS OF SURGERY.

October, 1902.

1. Fatal Acetonemia following an Operation for Acute Appendicitis. GEORGE EMERSON BREWER.
2. Acute Suppurative Pancreatitis. FRANCIS W. MURRAY.
3. Cholecystectomy versus Removal of the Mucous Membrane of the Gall-Bladder. EMIL RIES.
4. Removal of the Bladder and Prostate for Carcinoma Through a Suprapubic Opening. MALCOLM L. HARRIS.

5. Results of Operations on the Kidney for Tuberculosis. EDGAR GARCEAU.
6. Valve Formation in the Lower Portion of the Ureter. WILLIAM E. MORGAN.
7. Excision of the Lumbar Lymphatic Nodes and Spermatic Vein in Malignant Disease of the Testicle. JOHN B. ROBERTS.
8. Report of a Case of Gunshot Wound of the Thorax involving the Heart. LEVI J. HAMMOND.
9. Measurements for Operating Distances in the Nose. HARRIS PEYTON MOSHER.
10. Contribution to the Surgery of Cleft Palate, Uranostaphylorrhaphy suitable for Certain Conditions. ALEXANDER HUGH FERGUSON.
11. Total Excision of the Scapula, with Preservation of the Upper Extremity. SIDNEY P. DELAUP.
12. A Further Note on Intrascapulothoracic Amputations. ROBERT G. LECONTE.
13. Operative Dislocation of the Head of the Femur in Tubercular Disease of the Acetabulum. EDWARD HICKLING BRADFORD.
14. Contribution to the Pathology of Supra-acromial Dislocation of the Clavicle and Obturator Dislocation of the Hip. PERCIVAL R. BOLTON.
15. A Case of Trigger Fingers. FREDERICK GRIFFITH.
16. The Hartley-Kraus Flap in Hemorrhage from the Middle Meningeal Artery. With Reports of Two Cases. SAMUEL C. PLUMMER, JR.

1.—See **Philadelphia Medical Journal**, Vol. 9, No. 24, page 1057.

2.—Murray reports a case of **acute suppurative pancreatitis** in which the diagnosis was made before operation and in which abdominal section was followed by a successful issue. The patient was a male, aged 41 years, who had suffered previous attacks of severe epigastric pain and vomiting. He presented a mass about the size of a cocoanut in the left epigastrium. The belly was swollen, the leukocyte count was 40,000 and the urine contained neither sugar nor albumin. Through an incision, somewhat less than 2 quarts of thin pus were evacuated from the lesser peritoneal cavity and that portion of the general peritoneal cavity in front of the gastrocolic omentum. The pancreas was swollen and dark-red in color. Fat necrosis was evident in the gastrocolic omentum. [F. T. S.]

3.—Ries concludes that **removal of the mucous membrane of the gall-bladder** (Mayo's operation) is a step in the wrong direction, and ought to be abandoned in favor of the more radical, more reliable, and hardly more dangerous cholecystectomy. He has subjected a gall-bladder which he removed at operation to microscopical examination and finds that the mucous glands penetrate the muscular coat so that their fundus is embedded in the connective tissue of the subserous layer. It is evident, from this, that islands of mucous membrane will remain behind after the Mayo operation and may possibly lead to the formation of a retention tumor in the remnant of gall-bladder. [F. T. S.]

4.—See **Philadelphia Medical Journal**, Vol. 9, page 1056.

5.—Garceau, from a study of 415 cases of **tuberculosis of the kidney**, concludes that tuberculosis is rarely, if ever, primary in the kidney, and the original focus is in some other organ in more direct contact with the external air in the majority of cases. The presence of the primary focus of disease in the body, even if the disease has been thoroughly eradicated from the urinary tract, makes the ultimate prognosis in these cases doubtful at least. Such foci may remain permanently quiescent, but they may also become excited to activity by a general low condition of the system, or by causes unknown to us. Patients should be told of the danger as regards the future for them, and they should lead lives of greatest regularity, with strict attention to hygiene. A change of climate is very beneficial in these cases. Reported cures of long duration occur, but they have been few. Nephro-ureterectomy should be done in all cases in which the ureter is diseased, if the patient's condition allows it. The bladder should be subsequently treated if diseased. An abandoned tuberculous ureter is an especial source of danger, on account of the great liability of subsequent tuberculosis. Nephrotomy alone should be rejected, except as a preliminary to a later nephrectomy. Resection is not justifiable, for we can never be sure that the portion removed is the only portion diseased. [F. T. S.]

6.—Morgan reports a case of intermittent **ureteral obstruction**, which he explains as follows: The obstruction was apparently due to some local inflammatory action which had taken place early in life, and which had resulted in small adhesive bands surrounding the ureter at its location just under the tip of the seminal vesicle, binding the vesicle to the ureter and to the bladder. Subsequently the mucous membrane hypertrophied, forming a valve. The ureter was dilated to 1¼ inches. The mucous fold was divided and a number 6 gum catheter allowed to remain in the ureter 2 weeks. In order to accomplish this, the patient was subjected to 3 operations. Recovery ensued. [F. T. S.

7.—See **Philadelphia Medical Journal**, Vol. 10, No. 23, page —

8.—Hammond reports a case of **gunshot wound of the thorax**, in which a 32-caliber bullet passed through the apex of the heart, inflicting a wound about ¼ of an inch in depth. The patient showed no symptoms of such a serious injury and was not operated upon. He did well until the fourteenth day, when he was attacked with vomiting, and died suddenly. The bullet was found in the subcutaneous tissues of the back. Similar cases recorded in the literature are epitomized. [F. T. S.]

9.—Mosher gives the results of a number of **intranasal measurements** to determine the available space for operative manipulations. [F. T. S.]

10.—Ferguson describes a **new operation for cleft palate**. It is intended for patients in whom the mouth is like a Gothic arch, the palate segments extending up into the cleft in an oblique manner, and in which the cleft extends into one nostril. Administer chloroform by the spray method; place the patient in the Rose position, sit at the head of the patient, open the mouth with a gag, cleanse the face and mouth with a lotion of equal parts of alcohol and water and cocainize the soft palate, pharynx and larynx. Raise a mucoperiosteal flap from the nasal septum and inner segment of the hard palate and drag it into the mouth with Brophy's hoe-shaped periosteal elevator. The instrument just mentioned is quite sharp and easily cuts through the mucous membrane and periosteum. The formation of the flap is commenced as high in the nose as possible, and it is liberated from above downward until it is hinged by its attachment to the hard palate along the teeth. Now extend the incision in the under surface of this segment to the soft palate and uvula so as to make the completed dissection form one large flap from the hard and soft palate. The second flap is now formed from the outer segment by making an incision along the teeth down to the bone, and, with a periosteal elevator, detach a mucoperiosteal flap till it is hinged by the mucous membrane along the inner border of the bone segment. The soft palate and uvula segment on this side are now split along the anterior surface. The mucous membrane on the first flap faces downward, while that of the second flap is on the nasal aspect, and when coaptated, raw surface to raw surface, they are held there by two rows of stitches. The author has practised this operation in 4 cases with satisfactory results. [F. T. S.]

11.—Delaup reports a case of **total excision of the scapula** for tuberculosis. The voluntary movements of the arm were all regained, the least perfect being abduction of the arm, which could be effected to the extent of 20 or 30 degrees. [F. T. S.]

12.—Le Conte reports a case of **interscapulothoracic amputation** of spindle-celled sarcoma of the humerus. He advises disarticulation of the sternal end of the clavicle, instead of resection of that bone, to expose the subclavian vessels for ligation. In the case reported the pleura was opened in ligating the subclavian artery between its first and second portion, and 2 large hemorrhages occurred, one from an enormously distended cephalic vein, from which the ligature had slipped, and the other from another large vein. The patient recovered. [F. T. S.]

13.—Bradford advises, and has practised in 3 instances, **dislocation of the head of the femur through an open incision for the purpose of curing tubercular disease of the acetabulum.** After opening the capsular ligament and dislocating the head of the bone on the dorsum of the ilium, the acetabular cavity is curetted, touched with pure carbolic acid and washed with alcohol. A large celluloid drainage tube, one inch in diameter, is inserted into the acetabulum and allowed to remain until healthy granulations appear. The results in the 3 cases reported were extremely satisfactory. The object of dislocating the head of the femur is to relieve the diseased acetabulum from pressure, and to give thorough drainage. When the disease has been cured an attempt to reduce the dislocation might be made, or the deformity might be corrected by subtrochanteric osteotomy. In the reported cases the condition was desperate, but a hope is expressed that the plan may be of use in less severe cases. [F. T. S.]

14.—Bolton details the anatomicopathological findings in a case of **dislocation of the acromioclavicular and hip joints,** in which death occurred from fracture of the base of the skull. [F. T. S.]

15.—Griffith reports a case of **trigger-fingers**, the locking occurring in the metacarpophalangeal joints of the middle and ring fingers; no operation was performed. [F. T. S.]

16.—Plummer reports 2 cases of **hemorrhage from the middle meningeal artery,** in which he exposed that vessel by means of the Hartly-Krause flap. The symptoms were typical in both patients. In the first patient the anterior branch of the right middle meningeal artery was found bleeding, hence it was ligatured, but the patient died of fracture of the base of the skull, with a hemorrhage into the fourth ventricle. In the second patient there was simple linear fracture of the parietal bone, above the right parietal eminence, with rupture of several small branches of the middle meningeal artery in this location. It was necessary to extend the opening made by the Hartly-Krause flap upward and backward; this patient recovered. [F. T. S.]

November, 1902.

1. The Technique of Prostatectomy. J. P. BRYSON.
2. The Prerectal Curvilinear Incision for Prostatic Abscess, With a Report of Three Cases. J. RANSOHOFF.
3. A Contribution to the Surgical Anatomy of the Middle Cranial Fossa. WILLARD BARTLETT.
4. The "Circulus Vitiosus" Following Gastro-enterostomy. G. R. FOWLER.
5. So-Called Hypertrophic Tuberculosis of the Intestine. H. F. HARRIS.
6. Perforation of the Bowel in Typhoid Fever. G. E. ARMSTRONG.
7. A New Method of Treatment for Fracture of the Neck of the Femur, Together with Remarks on Coxa Vara. ROYAL WHITMAN.
8. The Identity of Proteus Infection and Hospital Gangrene. G. R. WHITE.
9. The Implantation of Silver Filigree for the Closure of Large Hernial Apertures. WILLY MEYER.

1.—Bryson describes his **technique for prostatectomy. The patient is placed in the lithotomy position, a grooved** staff passed into the bladder, and a medium perineal incision made in such a way as to open the urethra just in front of the prostate. The knife is pushed back far enough to incise the ring at the apex of the prostate. Guided by the finger, a blunt instrument is introduced into the urethra and made to puncture the lower part of the mass from the urethral side. On its withdrawal the finger tears its way into the mass and sweeps around its periphery without tearing the prostatic capsule or the fibrous sheath of the gland. The urethra tears longitudinally. In detaching the mass from the urethra care must be taken not to take away too much of the sides or any of the roof of the canal; the floor may be disregarded, if necessary. The little bleeding which results comes from the torn mucous membrane. This process is repeated on the other side, after which a medium posterior segment sometimes remains to be dealt with. This may be done by sweeping the finger from side to side, its dorsal aspect toward the capsule, pushing it back, so as to detach it well up behind the bladder, and rolling it downward. In some patients the whole of the floor of the urethra, including the colliculus and verumontanum has been removed without subsequent harm. After the prostate has been excochleated the finger is passed into and explores the bladder. A large drainage tube is introduced into the bladder, and the wound packed with gauze. In some cases it is necessary to perform a preliminary epicystotomy for drainage and treatment of the bladder and kidneys. [F. T. S.]

2.—See **Philadelphia Medical Journal**, Vol. 9, No. 24, page 1057.

3.—Bartlett has studied the floors of 100 **middle cranial fossæ,** hoping to simplify the removal of the Gasserian ganglion. He found that the interior of skulls are no more alike than the exteriors of the soft structures which clothe them. In some instances the bony ridges on the floor of the fossæ were so prominent that ganglionectomy would have been impossible by the temporal route without first having chiseled these prominences away. The foramen rotundum is not always round, nor is the foramen ovale always oval. The infratemporal crest is of value when present, but it is inconstant. The average distance from the infratemporal crest to the foramen rotundum and to the foramen ovale was 21.5 mm. The distance from the foramen rotundum to the foramen ovale varied from 16 to 27 mm.: the average being 20.4 mm. In one instance the middle meningeal artery entered the cranium through the foramen ovale. The distance from the foramen ovale to the foramen spinosum varied from 0.5 to 18 mm., the average being 3 mm. Marked assymmetry was noted between the two sides of the skull. The distance between the foramen ovale and spinosum is greater, and that between the rotundum and ovale is less, on the right side than on the left. The greater the distance between the foramen rotundum and ovale, the shorter the distance between the ovale and spinosum. The middle meningeal artery is irregular in respect to its point of division. It may run in a canal instead of a groove, and in one reported case this vessel left the cranium by a foramen and appeared on the outer surface of the skull in the temporal region. [F. T. S.]

4.—Fowler says the conditions most to be feared after **gastro-enterostomy,** excluding collapse immediately after operation, are the "vicious circle," distension of the duodenum from forcible propulsion of the stomach contents directly into the afferent loop of intestine and reflux of the jejunal contents. If the theory advanced by the author, that the jejunal reflux is caused by the pressure of the abdominal walls upon the afferent portion of the loop, be correct, every effort should be made to prevent vomiting; the operation should be done, whenever possible, under local anesthesia. Distension of the duodenum resulting from the passage of food into the afferent loop is not to be greatly feared. The symptoms arising from the "vicious circle" are due to the passage of food into the duodenum and its more or less prompt reflux into the stomach, followed by its ejection by vomiting, or to distension of the duodenum and stagnation of the stomach contents from motor insufficiency. In either event, the indications consist in preventing any communication between the stomach and the afferent loop, and, at the same time, permitting the escape of the biliary and pancreatic secretions from the duodenum. With this object in view, Fowler follows his gastro-enterostomy by an entero-enterostomy, and obliterates the lumen of the afferent loop between the two points of anastomosis by passing a No. 20 silver wire 2 or 3 times around the afferent loop. Absorbable sutures are not sufficently stable for this purpose, and, in one case, in which silk was used to occlude the intestine, the ligature gave way at the end of 3 months. Six cases are reported. [F. T. S.]

5.—Harris gives the post mortem details of a case of **hypertrophic tuberculosis of the intestine.** The patient was an imbecile, subject to epileptic fits; death occurred as the result of nephritis, amyloid disease and abdominal tuberculosis. In the ileum were found 10 points at which the gut was constricted; just above each constriction saccular dilatation was evident. One of these constrictions was so extreme that water could scarcely be forced through it. Hypertrophic tuberculosis of the intestine occurs in both sexes with equal frequency, is most common in patients between 20 and 40 years of age, and is often associated with tuberculosis in some other organ. The disease occurred 9 times in 566 instances of intestinal tuberculosis observed in 1000 post mortems. The pathological alterations resemble those seen in ordinary tuberculosis of the intestinal tract. The symptoms are those of chronic intestinal obstruction. In most of the cases a tumor may be felt in the region of the ileocecal valve. The tumor offers considerable resistance to the hand, is but slightly movable and is usually quite tender. In a number of instances pulmonary tuberculosis has been found. During the intervals between the attacks of obstruction digestive disturbances are frequently complained of. Hypertrophic tuberculosis is probably the most frequent cause of chronic intestinal obstruction. It is sometimes impossible to differentiate between tuberculosis and carcinoma of the intestines. The former occurs earlier in life and is situated in the terminal part of the ileum or the beginning of the large intestine, while carcinoma occurs in the latter half of life and is usually found in the large intestine. In doubtful cases the presence of tuberculosis in the lungs or other parts of the body, associated with anemia, exacerbations of temperature and rapid pulse, make the diagnosis of tubercular stricture probable, while profound cachexia, with a tendency toward a subnormal temperature, indicates cancer. Medical treatment is of no avail in this malady, excision being absolutely necessary to effect a cure. Of 88 patients operated upon, 60 have been cured and 4 improved. [F. T. S.]

6.—Armstrong writes that **perforation of the bowel in typhoid fever** occurs in from 2% to 5% of all cases, more frequently in adults than in children, oftener in males than in females, generally during the second or third week of the fever, and usually in the distal 18 inches of the intestine. Of 932 cases of enteric fever treated in the Montreal General Hospital perforation occurred in 3 2/3% (34 cases). In 33 patients the condition was recognized during life, and the opening closed by operation; 6 of these recovered, one died 5 days after operation from toxemia, and not from perforation or operation. In one patient an ascaris lumbricoides, and in another several yards of tenia saginata, was extracted through the perforation. The most important symptoms are persistent pain, fixed tenderness, rigidity and thoracic respiration. Leukocytosis and obliteration of liver dulness are not to be depended upon. Early exploration is strongly recommended. On 2 occasions Armstrong opened the abdomen without finding any perforation. Of the 33 patients reported 10 were operated upon within the first 12 hours with 4 recoveries, 10 during the second 12 hours with one recovery, 3 during the third 12 hours with 3 deaths, one at the end of 48 hours with a fatal result, one after 68 hours with a fatal result, and one 7 days after perforation with recovery. Early diagnosis and early operation are the factors upon which success depends. To wait for shock to pass simply means the spread of the infection. In the majority of cases shock is absent at first, and the surgeon should aim to anticipate it and operate while the infection is confined to the narrowest possible area. Recovery without operation is the rarest possibility. The experience gained by surgeons who have opened the abdomen and failed to find any perforation, although in some instances the symptoms were fairly definite, throws doubt on the correctness of diagnosis in patients recovering without operation. The incision should vary with the probable focus of the perforation, the right lateral being the one most frequently indicated. If a general infection is present a median incision gives better access to all parts of the abdomen. All suspicious-looking ulcers should be turned in, and drainage should be employed. Local anesthesia may be employed if the patient be in very bad condition, but ether anesthesia gives a much better opportunity for thoroughness. [F. T. S.]

7.—Whitman points out the frequency of **fracture of the neck of the femur in childhood.** The rapid recovery which follows this injury in childhood indicates that the neck of the femur is forcibly depressed, rather than completely separated, at the point of fracture. Consequently, the result is better than in adult life, although further depression (coxa vera) is favored; for this reason the impaction should be broken up, with the object of reducing the deformity; this may be accomplished by forcible abduction of the thigh, using the acetabulum as a fulcrum and depending upon the lower border of the capsular ligament to fix the head of the bone. The limb is fixed in this attitude of extreme abduction by a plaster cast. This treatment may also be applied to adults, with a prospect of better results than are usually attained by other methods of treatment. After ambulation has been resumed the ordinary hip splint may be applied to remove the strain brought to bear on the weakened femoral neck. In childhood the neck of the femur gives way at some distance from the epiphyseal junction. In adolescence, however, the newly formed bone about the epiphyseal cartilage is the weakest point. Cases of coxa vara in which the disability is suddenly increased by an injury may be mistaken for true primary epiphyseal separation. Epiphyseal separation is uncommon, compared with fracture; it should be treated in the manner suggested for ordinary fracture, *i. e.*, fixation in abduction. Coxa vara is treated by forcible stretching of the contracted tissues and restoration of the normal angle between the shaft and the neck by removing a sufficient wedge of bone from the base of the trochanter. A portion of the cortex at the apex of the wedge on the inner side of the femur, opposite the trochanter minor, should be preserved. The thigh is abducted until the trochanter and neck are fixed by contact with the upper border of the acetabulum, when further abduction closes the wedge-shaped opening. The limb is retained in this position by a plaster spica. In adults simple linear osteotomy is the operation of choice, because there is usually a retroversion of the neck combined with the depression. The progress of a coxa vara may be checked, temporarily, at least, by a mechanical support; this is a palliative measure, however, and operation is favored whenever practicable. Forcible abduction of the thighs may correct the deformity to a certain extent and may be employed as a tentative measure when more radical treatment is contra-indicated. Whitman reports 21 cases of traumatic (fracture), and 52 cases of simple, coxa vara. [F. T. S.]

8.—White reports a case of **mixed infection with the bacilus aerogenes capsulatus and the bacilus proteus vulgaris** following amputation of the thigh for gunshot wound. The descriptions of hospital gangrene fitted the local clinical appearances in the case reported with so great an accuracy that White suggests the possibility of the identity of proteus infection in hospital gangrene. [F. T. S.]

9.—See **Philadelphia Medical Journal,** Vol. 10, No. 1, page 17.

THE AMERICAN JOURNAL OF OBSTETRICS.

November, 1902.

Transactions of the American Association of Obstetricians and Gynecologists.

1. The President's Address. Of Our Shortcomings: Let us Reason Together. EDWIN RICKETTS.
2. Pelvic Disease in the Young and Unmarried. C. L. BONIFIELD.
3. Extirpation of the Gall-Bladder Through the Lumbar Incision. With Report of a Case. W. P. MANTON.
4. Suprapubic versus Infrapubic Procedures in the Treatment of Pelvic Suppuration. J. J. GURNEY WILLIAMS.
5. Ice Following Abdominal Section. F. F. SIMPSON.

6. Two Fatal Cases of Tetanus Following Abdominal Section, Due to Infected Ligatures, with a Plea for the Angiotribe in Abdominal Surgery. WALTER B. DORSETT.
7. General Consideration of Drainage in Abdominal and Pelvic Surgery. JOSEPH PRICE.
8. Treatment of Pelvic Abscess. HERMAN E. HAYD.
9. The Vaginal Route for Operations on the Uterus and Appendages. With Cases. J. H. BRANHAM.
10. A Résumé of the Rationale and Technique of Bi-Inguinal Celiotomy for Complicated Aseptic Retroversion of the Uterus, etc. A. GOLDSPOHN.
11. The Irrational Starvation Treatment of Appendicitis. JOHN B. DEAVER.
12. Surgical Relations that the Region of the Appendix Bears to Pelvic Suppuration and Operative Complications. JOSEPH PRICE.
13. Some Unusual Cases of Appendicitis and the Lessons they Teach. MILES F. PORTER.
14. Four Cases Illustrating the Difficulties of Diagnosticating Appendicitis. WILLIAM WOTKYNS SEYMOUR.
15. Intra-uterine Fibroids Complicating Pregnancy, and Retained Placenta Associated with Intra-uterine Fibroids Complicating Pregnancy. Cases and Treatment. MAGNUS A. TATE.
16. Deciduoma Malignum, with Report of a Case. LEWIS S. McMURTRY.
17. Report of a Number of Cases of Operation for Peritoneal Tuberculosis, with Remarks. RUFUS B. HALL.

1.—Ricketts gives a general review of what he terms the shortcomings of gynecology, in which he touches upon some of the practical questions of the day. He objects to the performance of gynecological surgery by the general surgeon and favors an increase in the number of specialists. [W. A. N. D.]

2.—Bonifield deals with the **pelvic diseases** or symptoms which occur in those who have never been subjected to the disturbances of sexual intercourse or the perils of parturition. Many of these disorders are purely functional. He remarks that the young women of the present day are evidently more prone to pelvic disease than their mothers and grandmothers were at their time of life. The strain on the nervous system is greater. Among the affections that most commonly bring this class of patients to the gynecologists may be mentioned the disorders of menstruation, undeveloped uterus, tubercular disease of the appendages and acute displacements. Bonifield gives a short clinical account of each of these divisions. [W. A. N. D.]

3.—Manton reports a case of **extirpation of the gall-bladder through a lumbar incision**, the patient being a woman, 38 years of age. He believes this to be the first instance of removal of the gall-bladder through such an incision. The operation was entirely extraperitoneal. Ordinarily the anterior abdominal incision would be the better, but in the presence of a nephroptosis or a morbid condition of the kidney demanding operative intervention, together with an enlargement of the gall-bladder, he believes the lumbar incision may be found to offer certain advantages. [W. A. N. D.]

4.—Williams emphasizes the importance of an apprenticeship in **operative gynecology.** Conservative nonsurgical means are not applicable to every case. The presence of certain germs in a pus-tube or ovarian abscess will indicate operation, while in other cases in which different germs are present nonoperative methods may be adopted. Ninety per cent. of abscess cases are due to the gonorrheal virus. In any infected case a conservative method, surgical or nonsurgical, is simply wasting time. He considers the question of suprapubic and infrapubic surgical methods. To those who claim a 2% mortality for vaginal incision he would answer that it should be no higher by the abdominal. Hernia should not occur in more than 2% of the cases. Salpingostomy is unsurgical and favors the possibility of a misplaced pregnancy. In deciding the question of route it is well to keep in mind the conditions that are liable to be present within the abdomen. Is it possible by the vaginal route to do all the reconstruction work necessary which can be done by the abdominal route? He thinks not, and favors the latter method. [W. A. N. D.]

5.—Simpson remarks that, even in aseptic cases, to a limited extent there will be found the cardinal symptoms of inflammation localized about the field of operation. This reaction is always present and is apparently due solely to traumatism. Some of the cases may be septic, and the inflammation may spread to the peritoneum. He believes that **postoperative peritonitis** may often be prevented or controlled by the proper use of ice. It has been his custom for a number of years to employ **ice in the treatment of localized peritonitis** consequent upon inflammatory affections of the pelvic organs. In several hundred of these cases his mortality has hardly exceeded one per cent. Ice-bags are placed on the abdomen of patients in whom it is feared that peritonitis might develop. The results have been most gratifying. Cold should never be used, however, to the exclusion of other well-known medical and surgical principles and measures. [W. A. N. D.]

6.—Dorsett reports 2 fatal cases of **tetanus following abdominal section**, and due to infected ligatures. Tetanus following abdominal section is rare. Dorsett claims that the use of the angiotribe will obviate all danger of infection and will give more satisfactory results than the ligature. [W. A. N. D.]

7.—Price states that his confidence in **drainage** has always been progressive. He recognized the value of it early in his experience. A surgeon can save about everything by drainage but his mortality will be large without it. [W. A. N. D.]

8.—Hayd asserts that the teachings of Goupil and Bernetz have been amplified and embellished by modern bacteriology. They demonstrated that inflammatory processes travel by continuity of tissue from the endometrium to the tubes, ovaries and peritoneum, and also by way of the lymphatics of the cervix and body of the uterus. The gonococcus travels by the route of the mucous membrane only, while the streptococcus and staphylococcus may take either channel. Consequently pus may form in the pelvis as the result of an extension of a gonorrheal infection, of post abortum and postpuerperal processes of traumas and injuries to the cervix and body of the uterus resulting from accidents occurring during labor, and of careless surgical interference and intra-uterine manipulations. As to the **treatment of pelvic abscess,** if it were possible to locate the suppurating points and to establish free drainage by the vagina, the acute trouble would soon subside and reparative processes begin. But these pus localities are often not located, and vaginal puncture will not always relieve the condition. There is a class of cases, however, in which vaginal drainage should be first employed, namely, the sthenic cases suffering from acute streptococcic infection with high temperature, great pain and with an acutely tender mass low down in the pelvis on one or both sides. In such a case vaginal puncture is indicated. This procedure is without danger and, instead of increasing the difficulties of a future operation, it very much simplifies them. [W. A. N. D.]

9.—Branham concludes that **vaginal drainage** is the natural method it is far more effective, and safer. Extensive pelvic inflammation associated with pus-formation rapidly walls off the general peritoneum. This wall should not be broken through and cannot be interfered with without danger of general peritonitis. Opening through the vagina is associated with a minimum amount of shock and hemorrhage, and is thus indicated in extreme cases with severe toxic symptoms. [W. A. N. D.]

10.—Goldspohn remarks that the only operation for **retrodisplacement of the uterus** which has been proved to stand the double test of pregnancy, practically without exception in a large number of cases, and to yield the most ideal results, is that in which the round ligaments of the uterus are correctly traced, liberated, shortened and anchored in an anatomically correct manner, *via* their natural channels from without, (not the operation or technique of Alexander, Kellog or Longyear). The round ligaments, being a part of the muscular apparatus of the uterus itself, not only grow with it during every gestation, so that they become palpable through the abdominal wall at term, but they also undergo involution with the uterus after labor and thus resume their former function. The reason for choosing the inguinal route to operate upon these ligaments is that their weakest spots where the stretching occurs are at their insertion in the abdominal wall, where they are often very slender. The elimination of these weakest portions can be done only by the inguinal canals from without. Goldspohn describes his technique for this operation and gives a table of 34 cases so operated upon. [W. A. N. D.]

11.—Deaver concludes that an early operation for **appendicitis**, preferably in the stage of appendiceal colic, is the only rational procedure and is the only treatment which will reduce the mortality in acute appendicitis to insignificant figures. The so-called rest treatment for appendicitis fails to check peritoneal inflammation and will, in the majority of instances, harm the patient. In the cases operated upon by him in which there was no active inflammation and no infection there was no mortality. In the cases operated upon before the peritoneal inflammation had become extensive, or in those in which the appendix alone was involved, the mortality was 3.1%. In the cases suffering from advanced peritonitis, with abscess-formation, and operated upon immediately, the mortality rose to 22.7%, while the rest treatment, for which it is claimed that the mortality is greatly reduced, gave 35.3% deaths. [W. A. N. D.]

12.—Price gives a simple discussion of the important complications found and dealt with surgically by removal of pathological conditions of the right tube and ovary—a complication occurring in at least 10% of suppurative forms of tube and ovary on the right side and occasionally on the left. The appendix, when the slightest complication exists, should be removed at the time of opening of the abdomen for the pelvic condition. Price is strongly inclined to urge its removal in all cases while doing pelvic surgery. The operation cannot be too early in the acute attack. The mortality increases with the number of days of illness. [W. A. N. D.]

13.—Porter describes 11 interesting cases of **appendicitis**, and calls attention to the lessons taught by them. He remarks that the sooner a case of appendicitis which is growing progressively worse is operated upon the better. [W. A. N. D.]

14.—Seymour remarks that there is a considerable percentage of cases of **pelvic diseases** which in their very inception **closely simulate appendicitis** by such severity as ordinarily to require operation. These cases of simulated appendicitis may be divided into 2 great classes: (1) Those actually of the right iliac fossa arising from inflammation of other organs than the appendix; and (2) those more misleading cases in which severe symptoms of abdominal trouble appear, and yet the actual disease is an effusion in the chest or an inflammation of the lung of the same or even the opposite side without actual implication of the appendix. He reports 4 cases of this kind. [W. A. N. D.]

15.—Tate remarks that **intra-uterine fibroids complicating pregnancy** are an extremely rare condition. He is unable to find many cases reported, and he claims that a still greater rarity is attached to the case in which such a complication has added to it placental retention. In addition to the cases he reports he finds but 2 other such cases in literature. Intra-uterine fibroids complicating pregnancy may give rise to hemorrhage before, and often to alarming hemorrhage after, the birth of the child. The presence of a foreign body in the uterus, such as a fibroid, must frequently result in a malpresentation, as of the breech. It is also reasonable to suppose that an intra-uterine polypus can be a prime factor in the causation of an interruption of pregnancy. In the patients in which pregnancy went to full term it is surprising to note that so many of the labors were normal, the polypus not being discovered until after the birth of the placenta. If the placenta be retained, severe septic poisoning must be anticipated. The sooner it is removed the less the danger. Tate gives an abstract of the reported cases, 41 in number, and notes the complications that were reported. [W. A. N. D.]

16.—McMurtry gives a brief review of the history of **malignant deciduoma** since Sänger's article in 1888, and reports a case that has happened recently in his own practice. He remarks that a conspicuous and distinct characteristic of this disease is a decided tendency to early metastasis. The lungs and the vagina are the most frequent foci of metastasis. Ladinski has recently collected 132 authentic cases of malignant deciduoma from the medical literature of the world. [W. A. N. D.]

17.—Hall gives a short report of a number of cases of operation for **peritoneal tuberculosis**. This is not a rare disease in women. In the large majority of cases he has seen there were no appreciable manifestations of the disease in the other parts of the body. Frequently the tuberculosis of the peritoneum is associated with an agglutination of the intestines forming a distinct mass in the region of the appendix. Again, peritoneal tuberculosis often resembles a small fibroid of the uterus associated with tubo-ovarian disease. In every case in which there is an encysted dropsy or an accumulation of pus, the abdomen should be opened, the fluid evacuated and free drainage established. The results are exceedingly gratifying. [W. A. N. D.]

REVUE DE CHIRURGIE.

October, 1902. (22me. Année, No. 10.)

1. Femoral Osteotomy and Ostectomy in Ankyloses and Fractures of the Femur. EUGENE VINCENT.
2. Singular Development of the Liver Resembling a Neoplasm. SALVIA.
3. Ethyl Chloride in General Anesthesia. HENRY GIRARD.
4. Massage of the Uncovered Heart. MAURICE BOUREAU.
5. The Pathology and Prophylaxis of Postoperative Hydatid Cysts. F. DEVÉ.
6. The Radical Cure for Inguinal Hernia. L. RICHARD.
7. Dupuytren's Fracture. MALLY and RICHON.

1.—Vincent states that the method of operating upon **bilateral ankylosis of the hip** varies with the cause and the social position of the patient. **Osteotomy** is generally better than articular resection, which may, however, be indicated in young, non-tubercular subjects. Cervical osteotomy is not good; subcervical is better. The technique of the Barton operation is given, with general case-histories. **For certain fractures of the femur with overlapping** in bad position, Vincent advises the Lorenz screw, with osteotomy, the bones finally being joined by forming a Z. The article is well illustrated by diagrams and radiographs, and the literature is fully cited. [M. O.]

2.—Salvia reports a case of **abnormal development of the liver of a boy, of 3 years, which resembled a neoplasm.**

His abdomen was immense. Laparotomy was performed for a supposed fibrosarcoma of the liver and the enlarged lobe was removed, death occurring 30 hours after operation. Histological examination of the liver showed a peculiar, abnormal condition of the liver-cells, which were irregular, not arranged in acini. The greater part of the tumor was connective tissue, with scattered giant and mucous cells. A minute description of this unique condition follows. [M. O.]

3.—Will be abstracted when concluded.

4.—In 1874 Schiff advised rhythmic compression of the ventricles by the direct hand. This was first attempted in 1892, for syncope from chloroform or operation. As not one of a dozen cases resulted successfully, Boureau believes that this **massage of the uncovered heart** should be abandoned. [M. O.]

5.—After describing **hydatid cysts**, Dévé reports his experiments upon the destruction of their specific organisms. He concludes that scolices, capsules, and vesicles may all be the origin of new cysts. Their dissemination outside of the cyst should, therefore, be prevented. Experimentally, bichloride (1-1000) or formol (1-200) will destroy their vitality in from 2 to 2½ minutes. In operating upon the entire cyst, a preliminary parasiticide injection of formol (1-200) is advised, which, when left 2 or 3 minutes, will prevent the occurrence of secondary postoperative cysts, even though the specific organisms escape into the abdomen. [M. O.]

6.—In an extensive article on the **radical cure of inguinal hernia** in the army, Richard reports 55 operations performed in 16 months. The operation is indicated in young, robust individuals, for herniæ which are present, generally the result of exertion. Anatomically these herniæ are almost all congenital, making the operation easy. His technique is fully described and the case-histories follow. [M. O.]

7.—Mally and Richon report in detail 4 cases of **Dupuytren's fracture,** fracture of both malleoli by abduction. This is always an articular fracture. The prognosis is poor from a functional point of view, since, during convalescence, reflex amyotrophy of the muscles of the tibiotarsal articulation and secondary progressive deviation of the foot into valgus are likely to follow. The latter is probably the result of trophic changes in the ligaments, callus, etc. On this account the treatment is exceedingly difficult. An exactly fitted plaster gutter will keep the fracture reduced and immobile, while massage is advised if there be edema. As the callus solidifies slowly, the foot should be supported for some time after removing the apparatus. [M. O.]

BOLNITCHNAIA GAZETA BOTKINA.

August 7, 1902. (Vol. XIII, No. 32.)

1. Dermatol as a Remedy for Diarrhea.
   P. S. FALKNER.
2. Albumosuria (Peptonuria) as a Clinical Symptom.
   A. SVOJECHOTOFF.
3. Some Data from the Hospital Statistics of St. Petersburg. A. A. LIPSKY.
4. The Conditions Under Which the Medical Students of the Urjeff University Live. A. VINOGRADOFF.

1.—Falkner sees no reason why **dermatol** should have been neglected in favor of the newer preparations of tannic acid, tannigen, tanalbin and tannoform. He has used dermatol for the past 6 years in 131 cases of diarrhea from various causes with very favorable results. In 69 cases of diarrhea complicating tuberculosis he obtained entire relief in 48 and partial relief in 8. In 28 cases of typhoid fever, the diarrhea was stopped by the use of dermatol in 26. In 6 cases of diarrhea as a result of acute and chronic intestinal catarrh, entire relief was obtained in 5 and partial relief in one. In 11 cases of diarrhea as a result of gastro-intestinal cancer, the diarrhea was stopped in 5 and partially relieved in 3. In 18 cases of diarrhea as a result of divers actue and chronic affections success from the administration of dermatol was achieved in 17. [A. R.]

2.—Will be abstracted when concluded.

Society Reports.

SOCIETY OF AMERICAN BACTERIOLGISTS.

Fourth annual meeting, held December 30 and 31, 1902, at Washington, D. C.

FIRST SESSION, TUESDAY, DECEMBER 30.

At the business meeting it was decided that the society affiliate with the American Association for the Advancement of Science and appoint a delegate to represent the society. The membership was also increased to 100.

A few introductory remarks were then made by Prof. H. W. Conn, president of the society, who referred to the death of Dr. Wyatt Johnston. He urged the advisability of having a paper on some general scientific subject read by one of the members at the annual meeting.

Dr. W. W. Ford, of Johns Hopkins University, then read a **contribution to the study of agglutinins.** The object of his experiments was to solve the problem concerning the part played by the constituents of the erythrocytes in the production of lysins and agglutinins. In the experiments, clotted blood, stroma and hemoglobin solutions were used for immunizing guinea-pigs; the results obtained verified those obtained by Bordet and contradicted Nolf's assertions. He believed that the serum alone was concerned in the production of lysin, the clotted blood carrying the agglutinating substance He found it impossible, by clotting blood and separating stroma from aqueous solutions, to effect any separation of the agglutinin and lysin.

A paper was then read by Dr. D. H. Bergey, of the University of Pennsylvania, on **the reaction of certain water bacteria with dysentery immune serum.** He isolated suspicious organisms from polluted waters and, on the assumption that the Shiga bacillus may be present, subjected the bacilli to the agglutination test, using serum from a horse immunized to the bacillus dysenteriæ. Of 25 cultures, from 8 to 10 gave a positive reaction, but further investigation of the cultures proved them to be entirely distinct from the Shiga bacillus. They were more like the colon bacillus and evidently belonged to the colon group; yet even dilutions of 1:400 and 1:1600 proved positive. These experiments show that the agglutination test alone is not sufficient to distinguish the bacterium coli from the bacillus dysenteriæ. He believes, however, that the organisms which gave the reaction are pseudodysentery bacilli. Dr. Sternberg suggested that it is likely that the bacillus is present in the blood in dysentery, as in typhoid fever, at least during the early stages. Members of the colon group may produce congestion and hemorrhage of the mucous membrane of the intestines. It is possible that the presence of typhoid or dysentery bacilli in the alimentary canal has little to do with the production of the disease, which is septicemia. Intestinal antiseptics may be entirely useless. Dr. Abbott said that the organisms isolated by Dr. Bergey were suspicious from the standpoint of typhoid fever. Dr. Welch thought that the entire subject should be re-studied, for the dysentery bacilli isolated by Flexner had turned out to be pseudodysentery bacilli. Dr. Ford examined the feces in 50 cases of dysentery and isolated a group of organisms identical with the true dysentery bacillus, but not giving the agglutination reaction. Dr. Welch spoke of the technique. He believes that exact dilutions are essential and that the macroscopical test is the most accurate. Dr. Blumer investigated a case of dysentery and employed a number of cultures of the Shiga bacillus; he obtained agglutination of some only. He found the dried method unreliable. Dr. Bergey, in closing, said that he used both methods; he made observations twice, after one and 24 hours. The organisms gave either no reaction with litmus milk, or a colon reaction.

E. O. Jordan, of the University of Chicago, read a paper on **the nature of pyocyanolysin.** He questioned the assertions of Emmerich and Löw as to the nature of pyocyanolysin, a substance which, unlike other ferments, withstands high temperature. He conducted experiments which show that alkaline normal salt solutions possess great hemolytic properties. An old acid culture of the bacillus pyocyaneus produced no hemolysis but, when made alkaline, became strongly hemolytic. The same was true of the proteus bacillus. That the alkali does not reinforce the reaction was shown by the fact that the latter is obtained when rendered alkaline with simple salt solution. Dr. Abbott related some experiments showing the influence of osmotic pressure on hemolysis. Many saprophytes hemolyze erythrocytes, while the filtrates are inactive. The hemolysis produced by bacteria during the process of growth differs calorimetrically from that resulting from the filtrates. Dr. Welch corroborated these observations. He advanced the hypothesis that the difference between the action of growing bacteria and their filtrates depends upon the relation between the receptors in the bacteria and the erythrocytes.

E. P. Gorham, of Brown University, read a paper on **a mould pathogenic to lobsters,** describing a pathogenic fungus which first appears within the muscles and gradually invades the entire body; this organism kills about 95% of lobsters. The fungus resembles a bacterium and therefore presents difficulties in classification.

A paper on a fat-splitting torula yeast, isolated from canned butter, by L. A. Rogers, of the Bureau of Animal Industry, was read by title. F. D. Chester, of the Delaware Agricultural Experiment Station, read a paper **on the oligonitrophilic bacteria of the soil.** Oligonitrophilic bacteria are those which grow in nitrogen-free or nitrogen-poor media, and which possess the power of utilizing the free nitrogen of the air. Nitrogen assimilation in the soil is not the result of the activities of a single organism, but symbiosis of micro-aerophiles with macro-aerophiles. Conn pointed out the importance of nitrogen assimilation from the air, in agriculture. Sedgwick alluded to symbiosis as concerned in mixed infection. Mild smallpox may be due to pure infection. Dr. Sternberg referred to the symbiosis of a mould and Sanarelli's bacillus, the latter being carried by the spores of the mould. Dr. Bergey mentioned several instances of symbiosis in mouth infection. Chester referred to symbiosis of tetanus and subtilis, the latter being the oxygen consumer. Dr. Abbott said that he does not know what the term implies. The question whether a given instance is one of symbiosis or successive infection is difficult to settle. Dr. McFarland suggested the term association.

C. A. Fuller, of Brown University, read a paper on the **bacterial flora of the oyster's intestine.** He said that the colon bacillus is not a normal inhabitant of the oyster's intestine which possesses a bacterial flora of its own. Dr. E. K. Dunham, of New York University Medical College, read a paper on the **influence of physical conditions on the character of colonies on gelatine plates.** He referred to the objections to agar as a medium for studying bacterial colonies and to the desirability of using gelatine for that purpose. The stiffness, melting point, and viscosity of gelatine are the factors which determine the characters of a colony. The stiffness of gelatine may be in a measure controlled by the proper selection of the temperature.

Dr. James Carroll, of the Army Medical Museum, made a brief report on the **complete inhibition of the cholera-red reaction by impure peptone.** A sample of peptone was sent to him from the Philippines, which was found to contain glucose, the latter possessing the ability to inhibit the reaction. E. G. Hastings, of the University of Wisconsin, presented a paper on **milk agar as a medium for the demonstration of proteolytic enzymes,** which was read by H. L. Russell. W. M. Esten, of Middletown, Conn., read some **laboratory notes.** He showed a new electric thermoregulator, which depended for its action on the different expansibility of brass and hard rubber; he also spoke of the preparation of lactose litmus gelatine. Dr. Robin suggested the use of lacmoid instead of litmus; this substance is much more sensitive than litmus and can be sterilized without becoming reduced.

W. A. Stocking, of Middletown, Conn., read a paper on **the germicidal property of milk.** He found that the reduction in the number of bacteria in fresh milk is due, not to its germicidal property, but to the dropping out of some of the species which find milk an unfavorable medium. Sedgwick's experiments point in the same direction. Conn stated that the mere determination of the total number of bacteria has no significance: old milk which contains acid organisms in large numbers is much safer than milk containing no lactic acid organisms, as the latter is much more liable to undergo putrefactive changes. W. M. L. Coplin, of Philadelphia, read a paper on **notes on flagella staining.** He claimed that the Löffler method is superior to any other, providing certain precautions are rigorously observed. He prefers fuchsin to gentian violet. His method was given in detail. Dr. Hill, of the Boston Board of Health, showed cultures of **diphtheria bacilli** which developed a marked yellow pigment after long cultivation. The bacilli retained their cultural characteristics and were virulent for guinea-pigs.

C. E. A. Winslow, of the Massachusetts Institute of Technology, read a **note on some quantitative variations in gas production.** He found that when a typical colon bacillus was inoculated into a series of dextrose fermentation tubes, the variation in gas production was considerable. The maximum volume of gas was obtained at the end of 24 to 48 hours; by the end of 6 days the carbon dioxide was almost entirely removed. Jordan stated that the size and construction of the tube influences the amount of gas. Dr. Robin performed similar experiments with special tubes, in which the gas was collected under mercury, and observed similar variations. He also found that the quantity of gas generated by yeast in the process of fermenting sugar was so variable as to make this method inapplicable to the quantitative determination of the glucose in urine. M. X. Sullivan, of Brown University, read papers on **the chemistry of bacterial pigments and the pyocyanin and fluorescent function of bacteria.** He found that the pigment production of the chromogenic bacteria depends entirely on the composition of the medium. By varying the chemical composition of a medium composed of asparagin, magnesium sulphate and sodium phosphate, he was enabled to vary pigment formation; tartaric, oxalic and uric acids, on the other hand, inhibited the production of pigment. The best medium for the cultivation of chromogenic bacteria is one composed of potassium silicate, magnesium sulphate, potassium phosphate, glycerine and asparagin. The varieties of pyocyaneus may be changed by cultivation on the special media so as to produce the different pigments; when the medium is rich in phosphates, the fluorescence is slight.

SECOND SESSION, WEDNESDAY, DECEMBER 31.

During the business session resolutions were read by Dr. Welch on the death of Drs. Reed and Johnston. The resolution contained an appeal to Congress to pension the widow of the late Dr. Reed, whose services to the country and to the human race are inestimable. A committee was appointed to confer with a similar committee representing the Society of American Naturalists, to commemorate in some suitable way the late Dr. Reed.

Drs. E. A. de Schweinitz and M. Dorset, of the Biochemical Laboratory, Washington, read a paper on **a preliminary chemical study of various tubercle bacilli.** De Schweinitz described the composition of Dorset's egg-medium for the cultivation of tubercle bacilli. As tubercle bacilli become attenuated, their chemical composition changes, the human bacillus gaining in extractives. Bovine and human bacilli are more related than virulent human and attenuated human tubercle bacilli. He reported several cases of the transmission of bovine tuberculosis to infants through milk. But there were no intestinal lesions. Dr. Welch remarked that the fact that the tubercle bacillus may become attentuated has an important bearing on this controversy, as Dr. Trudeau first pointed out. Dr. Bergey believes that some additional light may be thrown upon this question by immunizing cattle with both bovine and human bacilli and then testing with tuberculin obtained from the respective organisms. De Schweinitz, in speaking of immunization, said that he preceded Behring, in 1894, when he published a paper in the *Medical News*, in which he showed that attenuated tubercle bacilli could be used for immunization. The point raised by Bergey was also investigated, and it was found that cattle infected with either human or bovine tubercle bacilli react alike to tuberculin, irrespective of the source. Dr. Abbott said that a bit of local pride prompted him to speak of the results obtained by Pearson and Gilliland in the production of immunity by attenuated tubercle bacilli. Not only do the experiments antedate those made by Behring, but they were more strictly performed and are more conclusive.

S. C. Prescott, of the Massachusetts Institute of Technology, read a paper on **further evidence of the apparent identity of the bacterium coli and certain lactic acid bacilli.** He investigated 61 cultures obtained from cereals, hay, water and other sources, and 44 of these were identical with the colon bacillus. He believes this is not a strictly intestinal organism and that bacteria resembling the colon bacilli are widely distributed in nature. The presence of the latter in water, therefore, has no sanitary significance, unless the number is excessively high. Dr. Welch suggested the employment of the agglutination test to determine the different varieties. Dr. M. J. Rosenau, of the Hygienic Laboratory, read a paper on **the germicidal properties of glycerine in relation to vaccine virus.** He found that glycerine possesses very feeble antiseptic properties and is not germicidal. He examined many vaccine tubes and points, but found tetanus bacilli in none. Dry points contained 5000 bacteria per cc., while glycerinated vaccine often contained 3000, many of them pus-forming cocci. Glycerinized vaccine, inoculated with tetanus spores and put up in the usual manner, showed that, while the spores can live in the mixture, they will not germinate, and they die out after 4 months. This is a strong argument against the assumption that the glycerinized vaccine carries tetanus. Dr. Kinyoun endorsed this. He conducted a series of experiments which seemed to show that the exudate from the vaccine vesicle is concerned in the reduction of bacteria in the virus, but the effect of the exudate is greatly enhanced by glycerine.

Dr. N. MacL. Harris, of Johns Hopkins University, demonstrated MacConkey's medium for the differentiation of colon and typhoid bacilli. The medium is composed of agar, sodium taurocholate, peptone and lactose. The sodium taurocholate acts as an antiseptic. The colon bacillus alone produces an opacity due to precipitation, the surface colonies thus being readily distinguished. This medium may also be used for the isolation of the dysentery bacillus. In the absence of M. Gage, of the Lawrence experiment station, a summary of his paper was given by Winslow. Gage showed that typhoid bacilli are more readily removed by filtration and more readily eliminated from the filtrate than the colon bacillus. Cold also destroys the typhoid bacillus.

NEW YORK ACADEMY OF MEDICINE.

SECTION ON ORTHOPEDIC SURGERY.

Meeting held December 19.

The president of the Academy, Dr. Robert F. Weir, called the meeting to order, delivered a brief address, then turned the meeting over to Dr. G. R. Elliott, chairman of the section, who introduced Professor Adolf Lorenz, of Vienna. Dr. Lorenz delivered an address upon **some of his principles in orthopedic surgery.** He remarked that, if some of his principles in orthopedic work differed from those in common use on this side of the Atlantic, the aim of all operators remains the same, to help the patient in the best possible way. He recommends his method as both safe and successful. As a rule, deformities should not need operations which might cause even the possibility of endangering the life of the patient. On this principle, he preferred bloodless operations, which often furnish better results than bloody operations. As long as the bones are elastic he prefers osteoclasis to osteotomy, reserving the latter operation exclusively for adolescents and adults. In deformities of the hip he prefers the bloodless method to osteotomy as long as there is the slightest motility of the point, operating with the chisel only in cases of complete bony ankylosis. He corrects all cases of contracture of the knee by the intra-articular modelling redressement as long as there is any motility. He uses the same method in all deformities of the foot, both paralytic and congenital. He considers wedge-shaped excisions of the bones of the foot a deplorable mutilation. In torticollis he much prefers subcutaneous myotomy of the sternocleidomastoid, together with modelling the cervical scoliosis, to total extirpation of that muscle. Congenital torticollis in children he considers curable by myorrhexis of the sternocleidomastoid.

He also follows the principle of the central correction of deformity, correcting each deformity in the vertex of its angle, believing that all other corrections only furnish a compensation for the deformity. Thus it is that he prefers pelvitrochanteric osteotomy to any other sort of osteotomy at the hip joint. So, too, he prefers central osteotomy of the knee-joint, *i. e.*, intra-articular correction, to all other methods. In genu valgum supracondyloid osteotomy is still the predominant method, but Lorenz believes that epiphysiolysis of the lower end of the femur allows better correction of the deformity. This is, however, only available in children between 5 and 16 years of age. He also insists upon saving the bone by dividing the soft parts as much as possible. This principle condemns cuneiform osteotomies and resections of the bones *en bloc*, excisions of bones in the treatment of club-foot, etc. In the treatment of bow-leg he performs linear osteotomy with Achillotenotomy and extension above the ankles.

He advises the expectant treatment in tubercular diseases of the joints in children, declaring that he has never made a resection of a tubercular joint in a child. Yet he admitted that some cases undoubtedly need operation. He always permits a measured function of the diseased joint, as long as severe pains do not forbid it, using weight suspension only so long as the pain lasts, always keeping the leg in slight abduction. Massage of the muscles is given as soon as the pain decreases. In hip joint disease he attempts to procure solid ankylosis in good position. He objects strongly to permanent extension, believing that every diseased articulation, in chronic disease, should not be prevented from function any longer than is absolutely necessary, contrary to the German methods of treatment. So, too, in the treatment of paralytic deformity he objects to making patients wholly dependent upon apparatus. He employs modelling redressement, combined, if necessary, with transplantation of tendons, and orders massage and exercise. These patients should become accustomed to use their legs as much as possible without apparatus or with the simplest possible apparatus, such as a flannel bandage or laced boot. He objects to all steel supports, trying to make the leg independent of mechanical appliances, using a mechanical support permanently in total paralysis only. So, also, in the treatment of scoliosis he restricts the use of corsets to the special cases which evidently need some support. Even then the muscles of the back are exercised daily. On the whole, Dr. Lorenz condemned all but those orthopedic appliances of the very simplest construction. He believes that the treatment in orthopedic surgery should always be conservative.

Dr. V. P. Gibney said he had seen and learned a great deal from watching Dr. Lorenz. Dr. Royal Whitman had been especially interested in Lorenz's contention that anterior displacement of the head of the femur, which so often followed the bloodless operation, was to be considered an incomplete success rather than a failure. Drs. R. H. Sayre, H. L. Taylor and H. M. Shaffer had all learned much from Dr. Lorenz, and commended his orthopedic achievements. The president of the Academy proposed a resolution of thanks, which was seconded by Dr. H. Gibney and unanimously adopted. A reception to Dr. Lorenz followed.

A New Fuel.—The present scarcity of fuel, either coal or wood, has led to the consideration of some substitute which would not have to be mined and which, at the same time, would be serviceable and economical. But, while many a brain is aching from the effort to solve the problem, no satisfactory solution has yet been offered, and we are still depending on the natural product to keep us from freezing. In view of this intolerable situation, which presents rather a grim outlook, any scheme promising relief for the present, as well as the future, in the shape of a coal substitute, will be hailed with delight by all concerned. Such a scheme is outlined in a project suggested some months ago by a Russian peasant, Koudrjaschoff, and is discussed by a correspondent in the *Bolnitchnaia Gazeta Botkina* (July 17, 1902.) According to this project, the house refuse, manure and excrement are to be collected in hermetically sealed receptacles and deposited in a special reservoir and left for some time to undergo a sort of fermentation. The contents are then sterilized and deodorized by means of steam and then pressed into small bricks which may be saturated with the lower grades of coal oil. This, the projector claims, will both dispose of the house impurities in a most efficient manner and, at the same time, furnish fuel, the income from which will more than cover the cost of production. The project is hardly a rational or inviting one, and could not be endorsed from a sanitary standpoint. [A. R.]

Original Articles.

THE ANATOMOPATHOLOGICAL CHARACTERISTIC OF SYPHILIS.

By J. RENAUT, M. D.,
of Lyons, France.
Translated by Maurice Ostheimer, M. D.

In a communication[1] presented to the Académie des Sciences by my chief, Dr. Henri Bouley, in 1875, I called attention to the striking analogy between the lesions of glanders, tuberculosis and syphilis, tubercular granulations, the granulations of glanders and the gummata of syphilis, which are considered typical of these three diseases. I noted the fact that all three were nodular; that they ordinarily bore an intimate relation to the bloodvessels; that they decidedly affected the corresponding lymph-glands, and that, at some stage of their evolution, they underwent degenerative and regressive changes. From this, together with a series of histological characteristics found in all, with but little variation in detail, I concluded that these lesions belonged to the same anatomopathological family. It was a daring proposition to make at that time, relatively so far distant now. For a long time before this it was believed that syphilis, with its gumma, tuberculosis, with its gray, semitransparent granulation, and glanders, with its granulation, so like that of tuberculosis that Cornil and Ranvier almost identified them histologically, were characterized, at some time, by special nodular neoplasms called typical tumors. At that time physicians spoke of a "tuberculoma" and "syphiloma," as of a carcinoma and sarcoma. That was the epoch of oncology, with Virchow's *Treatise on Tumors* and the first edition of Cornil and Ranvier's *Manuel d'Histologic Pathologique*. Something of this still prevails, though many things have changed, as science has constantly advanced. Conceptions which now have but a purely historic value persist, influencing one's judgment by the survival of simple suffixes which no longer have any object at all.

Thirty years ago, when pathologists and clinicians sought the tubercle in tuberculous patients, the anatomopathologist of Virchow's school answered that the tubercle was the tubercular granulation. First Grancher, then Thaon (how laboriously and deservingly, I know) revived the doctrine of the unity of phthisis. Finally, Villemin, then Robert Koch, established the fact that the tubercle was the living agent of contagion, since it is reproduced, is inoculated and goes on multiplying; in a word, the tubercle is the tubercle bacillus. When, in 1881, in a review[2] which caused some discussion, I suggested that every lesion of tuberculosis, whether a granulation or not, was but the reaction against the parasite, its form being due to the simple function of the reacting powers of the tissue which the bacillus enters, it was hardly believed. In time, however, it came to be believed, and now the question has been decided. To-day we know perfectly that there is no one typical tumor of tuberculosis, but a parasite or parasites of varying virulence, the lesions resulting in the effort to limit the parasite to its point of entrance, to prevent its spread throughout the organism. The action of the parasite on the tissues, the reaction of the anatomical elements and the influence of the poison secreted by the bacillus on these reacting elements, determine the special physiognomy of the so-called tubercular lesions. Though this is well known and has even become commonplace nowadays, no one has seriously thought of dividing these lesions into two groups, the tubercular lesions which are specific, and the paratubercular lesions which are not specific. They are all the simple result of organic reaction, each adapted to the stage of defence corresponding to its production.

Like tuberculosis and glanders, syphilis is a disease caused by a living pathogenic agent. There seems no doubt of this, though, up to the present time, the microbe has not been discovered. Consequently there is no reason to seek a lesion which essentially characterizes the disease, any more than in tuberculosis or glanders, as is the case, however, in diseases which are truly neoplastic. On the other hand, it is necessary to make out the general import of the lesions of syphilis. Before touching this problem we will examine the gumma, long considered the typical tumor of syphilis.

Whether a piece of tissue is taken from the primary tumor or from metastatic nodules; whether the tissue comes from an epithelioma, a carcinoma, a sarcoma, etc., anywhere in the organism, the anatomopathological characteristics in each case remain unequivocal; while, on the contrary, and this proves that it is not a tumor, a gumma varies in structure depending on the tissue in which it occurs. Almost every one, since the masterly description of Cornil and Ranvier, considers gumma of the liver typical. This is a nodule, degenerated in the center, with its edge a wide circle of young, active, living, round cells. But this is not the structure described by Colrat in gumma of the myocardium. In the brain a gumma is a large nodule, as a rule, formed of a great mass of indistinct degenerated elements, its margin being newly-formed neuroglia, which has already undergone changes, without the characteristic marginal zone of active cells. And in the skin it is still a different thing. When Cornil and Ranvier honored me by intrusting to me the edition of the fifth section of their *Manuel d'Histologic Pathologique* (Anatomie Pathologique de la Peau), I collected from all over Paris cutaneous lesions clinically called gummata of the skin. On examination I found first what I have described (on page 1205 of the *Manuel*) under the head of syphilitic tubercle. This is a nodosity found in the thickness of the derma; about it are islands of embryonal cells situated in separate bundles of connective tissue. "In the lower part of the nodule the newly-formed tissue resembles that of tendons, while at the periphery it is very like that of sarcoma, except for the presence of a very abundant network of elastic fibers. The specific inflammation determines a marked endarteritis near the tubercle, with the result that the lumen of the vessels is considerably retracted. The stenosis probably has some influence upon ulceration of the tubercle. The latter, deprived of bloodvessels in the center and at the periphery, undergoes slow molecular softening and opens externally like an abscess. The loss of substance is filled with granulations and cicatrization follows in the usual manner."

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[1] J. Renaut, Note sur les Lesions Histologiques de la Morve Equine, Aigue et Chronique.

[2] Gazette Medicale de Paris, 1881.

Since then I have continued to seek and to examine carefully all gummata of the skin, and I have always found the same thing. Gumma of the liver cannot be compared with gumma of the skin, and neither of them at all resembles gumma of the nervous centers. This is very different from carcinomatous nodules collected from the various organs, which are all alike. I concluded, finally, that gummata have no anatomical individuality, that they are even less constant in structure than tubercular granulations, which are certainly rarely alike. And I say that there is no typical tumor characteristic of syphilis. Each tissue makes its gumma as it can, because this is simply the reaction to the pathogenic agent, which, at a certain stage, causes slow obliterating endarteritis tending to produce tissue about it: tendinous fibrous tissue in the skin, because the derma is an aponeurosis; neuroglia in the nervous centers, because that is the supporting tissue there, and lymphoid marginal tissue in the liver, because that is the effect of the reaction of hepatic tissue to slow ischemia.

Each of these three infectious diseases, glanders, tuberculosis and syphilis (I omit leprosy, which might well be included), has a dominant tendency, expressed by certain anatomical characteristics common to their lesions, distinguishing them one from the other.

In glanders it is the apparition of hemorrhagic foci at which the pathogenic agent enters, causing a reaction of the tissues with tissue changes favoring its multiplication.

In tuberculosis it is the apparition of giant and epithelioid cells in the tubercular nodules, corresponding to the different kinds of granulations, and of wholly analogous cells, budding and vegetating, of intercalary tubercular inflammation. This lesion, provoked by the parasite to form favorable surroundings, is degenerative. It causes fibroformations, defensive and curative lesions round about it. This is Grancher's definition; still, I want to bring out its double, apparently antinomic, meaning.

In syphilis following the infecting chancre (lesion of inoculation comparable to the anatomical tubercle) a series of symptoms follows in classical sequence. Without exception these are all vascular, or, more exactly, arterial, due to the pathogenic agent of syphilis, undiscoverable up to the present time.

The chancre itself corresponds to an arterial territory, it is a lesion of round or slightly polycyclical contour, like those immediately dependent upon an arterial cone, the area corresponding to the distribution of an artery and its subdividing capillary branches, in which the circulation is regulated by the artery. Within the limits of this arterial cone the lesion, of more or less extent, develops, depending upon the importance of the bloodvessel which regulates it. The dimensions of the lesion depend upon those of the arterial cone. The lesion consists of a firm, resistant edema, forming a fibroformative mass in the connective tissue, which I pointed out in 1873.[3] This is a general law regulating the firm edema of vascular origin, and all the ulterior lesions of syphilis follow it.

With the first secondary symptoms, the pathological agent of syphilis produces a series of macular, congestive lesions. It affects a multitude of arterial cones, at the point of bifurcation of the arterioles of the skin, very near the surface. It acts by paralyzing the helicine muscles of the arterioles for a certain time, thus creating areas of full, active circulation at varying distances. The microbe selects the arterioles which regulate these areas. When the chest of a woman with specific roseola is suddenly uncovered it will be observed that the roseola which results from emotion does not affect the same vascular areas as the syphilitic roseola. It is difficult at this time to explain how the bloodvessels are affected, but if papular syphilis or mucous patches follow the roseola, bioscopical examination shows the lesions to be more discrete in distribution than those of roseola corresponding to deeper, better limited arterial cones. The lesion is more permanent, too, determining, with chronic edema and a noticeable dermic fibroformation, an elongation of the papillæ of the affected area always circumscribed and circular. Later, ulcerative, rarely gangrenous, syphilides may be observed. The ulcerations are less numerous than the papules, but they are of greater diameter. According to pathological anatomy it is recognized that each is due to obliterating endovasculitis, sometimes obliterating endarteritis, of the vessel which supplies the vascular cone, its base corresponding superficially to the ulceration. A distinctly thickened intima is found, even in the small arteries, with young cells scattered through it and rising over its entire circumference in convergent folds which gradually restrict the vascular lumen and finally obliterate it. Passing to partial, secundotertiary and tertiary tubercular syphilides, we see them spread out marginally, becoming polycyclical with a cicatrix in the center, at the edge developing tuberiform projections, each having a small arterial branch in the center, consisting mainly, however, of chronic inflamed dermic connective tissue with young cells scattered through it. The latter develop into fibrous tissue with cicatricial contraction. In syphilitic tubercle, the most common form of gumma of the skin (perhaps the only one), the mechanism of the lesion and its tendency toward evolution, which is plainly shown, are now understood.

In the center, regulating the lesion, one artery, proportionate in size to the tubercle, slowly becomes the seat of a subacute, progressively obliterating endarteritis. At first there is arterial inflammation throughout the corresponding arterial zone with edema and leukocytic infiltration, the fixed cells of the dermic connective tissue becoming young and active again; in short, a sort of interstitial granulation tissue. This first becomes organized into young fibrous tissue, as occurs about vessels growing into the thrombus in phlebitis. This young tendiniform tissue causes atrophy of the capillaries penetrating it, the endarteritis follows its course more easily, and bloodvessels and the tissues supplied by them cease growing under this progressively ischemic régime. Colloid degeneration results, then molecular degeneration and, finally, ulceration.

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[3] J. Renaut, Recherches Anatomiques et Cliniques sur l'Erysipele et les Edemes de la Peau, These Inaugurale, Paris, April 1874. (This was awarded the Internat Prize in the first division, August 15, 1873.)

The process is exactly the same in other gummata; endarteritis of the central vessel, ischemia and progressive degeneration from the center to the periphery, and new, embryonal fibrous structure at the circumference generally filling in. Thus, at the expense of the disposable parts of the different tissues, these morbid changes occur with but slight variation. In gumma of the cerebrum, cerebellum or medulla the neuroglia, not the lymphoid or connective tissue elements, plays the part of th newly formed tissue, finally undergoing granulomolecular degeneration. This results because the other tissues are absent where the gumma develops. Wherever it appears, the specific pathogenic agent produces subacute obliterating endarteritis, causing chronic edema and new interstitial formation. Syphilitic osteitis follows exactly the same course, though this is not at once evident, creating granulations with the affected vessel as axis, sometimes destroying the osseous tissue sufficiently to produce osteoporosis, followed, then, by a vascular reaction, osseous development with eburnation and ischemic necrosis, which results when the arteries nourishing the newly formed tissue gradually become atresic as the obliterating endovasculitis progresses.

I need not multiply examples, those which I have noted are sufficient for the following conclusion: Syphilis is an infectious disease, all the stages of which are characterized by an attack on the bloodvessels, affecting the intima of the arteries particularly. First a multitude of arterioles are affected, as is seen in the roseola, in the skin. Deeper lesions follow, but these are slight. Its action then becomes localized to territories corresponding to the important arterial branches. The lesions are then better circumscribed and have more serious consequences. By this endarteritis syphilis causes in the tissue a process of sclerosis, which persists as long as the endarteritis lasts. For that is the natural and fatal result of subacute obliterating endarteritis. This generally considered, is the histopathological characteristic of syphilis.

There can no longer be any question of the supposed distinction between syphilitic and parasyphilitic symptoms. They are, on the contrary, all explained, depending upon how far the movement of the syphilitic endarteritis has advanced. This progress causes and keeps up the sclerosis resulting. As the vasculitis progresses, the sclerosis progresses; if the former is stopped, the latter stops too, unless irreparable disorders have resulted, such as the destruction of elements which cannot regenerate. But this sclerosis is not always unchangeable or incurable. For the contrary is known of the papillary hypertrophy of mucous patches; of the fibroid tubercle of incipient gummata; of the periostosis or exostosis which has not undergone necrosis. When the pathogenic agent has become powerless to maintain vascular lesions, new vessels are easily reproduced. They develop normally in the diseased tissue, yet in most cases they preserve their normal type, causing "modeling absorption," which restores its regular structure to the tissue.

Syphilis affects the central nervous system late, producing scleroses which are rarely diffuse, more commonly systematic. As in the skin, it selects vascular territories for attack. Confirmed sclerosis, like the multiple sclerosis following certain infectious diseases, comes much later. But nothing authorizes the statement that sclerosis, once formed, becomes independent of the syphilis or remains unchanged in all cases.

TWO CASES OF PERFORATION IN TYPHOID FEVER, IN ONE OF WHICH AN OPERATION WAS PERFORMED.*

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The two cases which we now report present examples of the difficulties of definitely determining the onset of perforation in the course of enteric fever. It is well known and often emphasized that the so-called classical symptoms of perforation are wanting in conclusive detail in a large percentage of cases. In some patients, however, these symptoms are present and yet no perforation is found through the surgeon's exploratory incision.

Statistics show that perforation occurs in 3 per cent. of all cases and in 30 per cent. of fatal cases. The fact that by early surgical intervention there is hope of saving at least one-third of the cases of perforation, has brought into prominence the necessity of being able to recognize perforation as soon as it occurs. We can imagine no more hopeless task for a young interne than his efforts to seek material help from his text-books in a given case of typhoid under his care in which he sees that something has gone wrong, and suspects perforation. It is the rule in works on medicine to describe the symptoms of perforation simply as those of collapse and the symptoms of peritonitis. We quote the following description from a well-known work, and it is far more satisfactory than that given in some twenty text-books consulted. "The symptoms of perforation are due to the resulting peritonitis and are usually well marked and characteristic. The occurrence of perforation is indicated, as a rule, by the sudden onset of pain in the abdomen, accompanied with symptoms of collapse. The abdomen becomes distended and rigid with marked tenderness on pressure. The pulse is small and rapid, and there is frequently a temporary fall of temperature. Vomiting is common, the face grows pale and pinched and the breathing thoracic. If the peritonitis becomes general, the signs of prostration increase and the patient gradually sinks into collapse." (J. W. Brannan, in *Twentieth Century Practice.*)

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*Read before the Philadelphia County Medical Society, Dec. 23, 1902. The literary work in the preparation of this paper was done entirely by Dr. Coley.

Such descriptions, no matter how well they may fit certain cases, are inadequate in that it is common experience to encounter perforation in the absence of some or of all the cardinal symptoms. Osler has put the matter very aptly, in stating that the symptoms given as those of perforation are but the symptoms of the resulting peritonitis. Cushing states that no abdominal symptoms, either subjective or objective, occurring in the course of the fever, should be regarded as trivial, and a sudden change of any sort in the patient's condition should lead, first of all, to the suspicion of this most serious complication. A distinction should be drawn between the two varieties of perforation, the appendicular and those occurring in the free bowel, for their symptoms, course and prognosis vary considerably. Many cases, however, even those of perforation in the free bowel, present what may be recognized as a preperforative stage, which in some cases calls for a laparotomy, in anticipation of a complete perforation with extravasation. The presence of leukocytosis is not an infallible sign of perforation, as it may disappear with the onset of general peritonitis. It is most valuable in this anticipatory stage.

Osler, among others, does not believe that it is possible to do much with what Cushing has called the "anticipatory" or "preperforative stage." It is doubtful whether perforation *per se* presents a single constant symptom apart from the acute peritonitis which is always the *immediate* result of such a complication. Further, cases are recorded in great numbers in which the perforation did not produce even the typical symptoms of peritonitis. This fact has impressed itself upon a number of clinicians, and in this connection we would quote G. P. Yule (*Edinb. Medical Journal*, April, 1899), who reports ten cases of perforation in typhoid fever. In his experience the onset is likely to be gradual in many cases. Only one of those cases reported showed violent onset. The distension that commonly follows may be postponed for hours. There may be but little change in the pulse and no severe pain, and the patient may take nourishment freely. Under such circumstances there may be an entire lack of the usual anxious expression, the position may not be typical, and, in general, it may be extremely difficult to determine that such a grave complication has arisen.

A. McPhedran (**Philadelphia Medical Journal**, March 3, 1902), also observes that the diagnosis of perforation in typhoid fever is sometimes extremely difficult. He describes two interesting cases. The first patient had been treated for syphilis and was taking potassium iodide. He had some indisposition, which was attributed to disturbance of digestion by the iodide. He had no fever and his pulse was normal, but later he had pain in the abdomen, and there was evidently some fluid in the peritoneal cavity. Death occurred, and necropsy showed two small typhoid ulcers in the ileum, one of which had perforated. This was a strikingly mild case of apyrexial typhoid without any evident symptoms of perforation. In his second case the man was evidently in the midst of an attack of typhoid, and he had pain without any definite signs of perforation; but, since there was persistent tenderness of the abdomen, he was operated upon, and a perforation was found, almost completely walled off. The man died. Persistent pain is considered the most constant symptom of perforation.

Osler says (**Philadelphia Medical Journal**, January 19, 1901), that perforation occurs, as a rule, in the more severe cases and during the height of the disease. The rare cases during convalescence need scarcely be considered. Cases with diarrhea and with tympanites are more liable to this accident. Of the thirty cases he discusses, twenty had diarrhea, sixteen at the time of perforation, four had constipation at the time, and in ten the bowels were regular. In one it is not mentioned. There is an interesting group (six cases) of perforation with hemorrhage. "When we remember" (we are quoting verbatim) "that a large proportion of all cases of typhoid fever if left alone have no abdominal symptoms—neither diarrhea, pain nor tympanites—it is not difficult for the attendant to keep his mind constantly on the alert for the danger signal." However alert the physician may be in watching for danger signals in his severe cases, the fact remains patent that there is no single infallible symptom of perforation. The condition is frequently not discovered until the patient is at the threshold of death from diffuse peritonitis. The earlier the complication is discovered, the greater the hope of surgical intervention. Cushing has mentioned an important point in this connection (*Annals of Surgery*, May, 1901), "One reason that better results are recorded from operation during the period from eight to twenty-four hours after perforation, is that patients surviving the perforation for so long a time have a milder infection or the process has been slow enough to permit a combative reaction."

We have mentioned the fact that patients have been operated upon presenting the typical symptoms of perforation, in other words, of diffuse peritonitis, in whom no perforation has been found. Liebermeister, writing some thirty years ago, in Ziemssen's Cyclopedia, mentioned the occurence of peritonitis without perforation. Recently Mannini (*La Riforma Medica*, 1900, No. 210 and 213) has presented an admirable explanation of this condition, which is not at all an unfamiliar one, but which seems worthy of proper emphasis. Mannini directs attention to the fact that in typhoid fever the intestinal epithelium has lost much of its protective power, that the lymphatic apparatus is inflamed, and that bacteria evidently pass from the intestine, as they are found in the spleen, the liver, the kidneys and elsewhere. It is rather remarkable, under these circumstances, that peritonitis does not occur very frequently, as the bacteria undoubtedly reach the peritoneum also. The explanation of the infrequency is to be found in the fact that the peritoneum absorbs very freely and gets rid of the bacteria in this way, and also the peritoneal fluid and the leukocytes contained therein have a strong bactericidal action upon various organisms, including the typhoid bacillus. In a certain number of cases, however, peritonitis does occur without perforation, and must in such cases be attributed to diffusion of the bacteria through the intestinal wall, the occurrence of peritonitis being due to loss of the normal resisting power of the peritoneum. The only point distinguishing this form of peritonitis from perforative peritonitis is that, in the latter, air may usually be shown to be present in the peritoneal cavity.

The two cases which we wish to place on record are as follows:

The patient, A. L., an Englishman, aged 52 years, a butcher, was admitted to the wards of the Methodist Episcopal Hospital in the service of Dr. Lloyd on October 30, 1902. He had used alcohol moderately. There was no history of venereal disease. He said that he had had most of the diseases of childhood, but never suffered from typhoid fever. He had a right oblique inguinal hernia. About October 24, 1902, he was seized with intense headache, diarrhea and vomiting. The symptoms grew worse each day and were especially aggravated at night. He was examined on admission to the hospital, October 30, 1902, by Dr. Harlan Shoemaker, the medical resident, who observed that he had marked tenderness and gurgling in the right iliac fossa. A few rose spots were observed. His temperature on admission was 103.8°. The patient had had no cough whatever. Examination of the heart and lungs was negative, as was the examination of the liver and spleen. There was a moderate degree of tympany present, which it was thought might have obscured the splenic enlargement. (The postmortem record, however, shows that the spleen weighed but 6 ounces and was firm and friable.) The urine yielded the diazo reaction. The Widal reaction was positive. From the date of his admission, October 30, until November 6 his temperature was kept below 103° by tubbing. At noon on November 6, after taking milk, the patient grew deadly pale and vomited. With these symptoms he was seized with an acute agonizing pain in the epigastrium. There was moderate tympanites, but liver dulness could be made out. Soon the pain changed in character and became dull and boring. He vomited frequently and was unable to retain any nourishment by the mouth. At 12 o'clock, November 6, the time of the sudden onset of pain, his temperature was 100.2°, respiration 30 and pulse 88. At 9 A. M. it had been 100.6°, with pulse 84 and respiration 88. This was the thirteenth day of the disease. At 3 P. M., his temperature was 102.2°, with respiration 30 and pulse 84. At 4 o'clock it was 103°, at 5 o'clock it had dropped to 102°. Leukocyte counts were made during the afternoon by Dr. Shoemaker and recorded as 7,600, 8,000, 7,200 and 7,800. The abdomen became board-like in its rigidity, and the pain continued. At 11 A. M. on the 7th. Dr. John B. Roberts saw the patient, in consultation with Dr. Lloyd. On the morning of the 8th., a previous rectal examination having proven the rectum empty, a high saline enema was given and 15 to 20 hard scybalous masses of feces were passed. His condition remained about as stated, with the patient growing gradually weaker until the 11th., when the symptoms became worse. His pulse inincreased in frequency and his temperature rose. No nourishment could be retained. The abdomen was boardlike, and the patient complained of great weakness and said he felt death approaching. Toward noon of the 11th. the tympanitic condition of the abdomen had increased greatly. At 6 P. M. there was projectile vomiting, and death ensued. A feature which the resident has carefully noted in this case is the fact that from noon of the 6th., the time of the onset of the sudden pain, the excretion of the urine diminished ½. He had voided 64 ounces on the 5th. and but 20 ounces on the 10th. The autopsy was performed at midnight, 6 hours after death, by Dr. C. B. Farr, the pathologist of the institution. He has kindly furnished us with the following notes. The post mortem rigidity was very marked. Slight emaciation. Abdomen moderately distended. On opening the abdomen the coils of the intestines seemed to be united by delicate bands of adhesions which were readily separated. This condition was more marked in the lower abdomen. Considerable clear fluid occupied the peritoneal cavity. The parietal peritoneum was markedly injected, and there were flakes of lymph here and there. On separating the adhesions below, the pelvis was found to be filled with turbid, yellow fluid having a slight fecal odor. The appendix was short and adherent at its apex by recent adhesions. On following up the ileum from the ileocecal valve it was found to descend into the pelvis, where it was fixed by easily separable adhesions. Nine inches from the ileocecal valve a perforation ⅛ inch in diameter was found. About this was a zone of congestion and around this a few torn adhesions. On the mucous surface was an irregular, transverse, sloughing ulcer about ½ by ¾ inch in its dimensions. The edges were elevated and the base was formed by the muscular coat, although a considerable area about the perforation was denuded down to the peritoneum. There were numerous other ulcers also transverse in the adjacent parts of the ileum. None of them, however, extended deeper than the muscular coat. The small bowel above the perforation was greatly distended and contained fluid feces. The large bowel, especially the lower half, was empty and collapsed. There were no ulcers in the colon. The stomach was normal in size. There was a small pouch just admitting the tip of the thumb ½ inch above the pylorus. The mucous membrane of the fundus was congested (this was probably hypostatic). The esophagus contained no ulcerations. The spleen was not much enlarged, weighing 6 ounces, it was firm and friable. The kidneys appeared normal, with the exception of a slight narrowing of the cortex. The capsules were not adherent. The gall-bladder was distended, but the bile-ducts were patulous. Recent perihepatitis was present. The liver weighed 62 ounces and was very friable. The heart was firmly contracted, the muscle firm and there were valvular lesions. There were a few small yellow areas of atheroma above the aortic valves. There were no pleural adhesions. The lungs were crepitant throughout. There was a slight hypostatic congestion posteriorly.

In this patient we call attention to the fact that the fever from its onset was not regarded as severe. There was no difficulty in controlling the temperature; there was neither diarrhea (not more than two stools in the twenty-four hours) nor more than a slight degree of tympanites. The patient had complained from the first that he disliked milk, but no symptoms followed its ingestion until noon on the thirteenth day of the disease, when occurred the sudden attack of pain with vomiting. This the patient felt was due to the milk he had just taken and he stated that, while he had not vomited previously, after taking milk he had several times been nauseated. We have called attention to the fact that with the onset of the pain there was neither a drop in temperature, nor appreciable change for forty-eight hours in the pulse or respiration. Further, with the increase of tympanites following the complication, the liver dulness could be well made out and there was no exquisite or even general pain on abdominal pressure. The leukocyte counts, which were made during the afternoon of the day in which the pain occurred, varied between 7,200 and 8,000 It is questionable whether these figures should be regarded as a leukocytosis, even admitting the leukopenia which is present in typhoid.

A. S., aged 36 years, laborer. Admitted to the service of Dr. Lloyd, November 11, 1902. Patient was a laborer and had done hard work out of doors. There was a history of specific urethritis. He had used alcohol, but not to excess. Patient did not know whether he had the usual diseases of childhood or not; he had never suffered from typhoid fever; had had acute rheumatic fever. Present illness began 5 weeks before with a heavy cold. Since October 21 had had headache, fever coated tongue, loss of appetite, diarrhea, and was still suffering from these symptoms. He had a severe dry cough. On admission patient was not delirious, his temperature was high (104.6°). He had been on his feet occasionally until 2 days before admission. The patient's face was not flushed. The tongue was coated and his breath offensive. Examination of the lungs was negative. Heart—there was a systolic murmur at the apex and a reduplication in the pulse. The heart outline was normal. There was no thrill. The spleen was slightly enlarged, palpable and not tender. The abdomen was flat and slightly painful on pressure. Two roseolar spots were seen. November 17, patient's abdomen was tympanitic. November 18, roseolar eruption was profuse over the trunk, and a few spots were seen on the thigh. At 8 P. M., November 18, the patient's temperature was 103.6°, pulse 96, respirations 20. About 11 P. M. the patient vomited the nourishment which had just been taken. There was no complaint of pain. Tympanitic condition of the abdomen had increased. The patient talked in his sleep and, when aroused, complained of pain over his whole body. When questioned about his pain, he stated that it was a general soreness, as if he had been beaten. At this hour the temperature was 100°, pulse 102 and respiration 44,—a significant change. November 19 patient vomited again at 3 A. M. No complaint of pain of a localized character, but the patient stated that there was a general abdominal soreness. At this hour his temperature was 102°, pulse 116, respiration 36. At 2 A. M. the temperature was 104.8°, with pulse at 120 and respiration 44. At 5 P. M. the temperature was 103°, pulse 128, respiration 24. At 6 A. M. the patient was sweating, temperature 102.6°, pulse 128, respiration 28. Dr. Roberts saw the patient at 8 A. M., about 5 hours after perforation was suspected, but did not regard the symptoms as sufficiently conclusive of perforation. Leukocyte counts made at this hour were 5,733 and 5,600. The patient had 2 large, loose movements of a greenish color, which contained many curds. At 12 o'clock his temperature was 102°, pulse 124, respiration 28. The patient was operated upon by Dr. James P. Hutchinson at 3 P. M. Four large perforations were found, and the abdominal cavity was filled with fecal accumulations. The perforations were closed, the abdomen thoroughly washed with normal saline solution, which was also used intravenously during the operation. Death ensued in 24 hours.

This patient was admitted on what appears to have been, from the history, the twenty-first day of the disease, November 11, 1902. There was a higher degree of pyrexia than in the first case, the temperature several times reaching 104.6°. This was readily controlled by bathing. As in the first case, the patient continued fairly comfortable and did not have more than two bowel movements in twenty-four hours. The tympanites in this case, however, while moderate in degree, was greater than in the first case. The onset of vomiting was at 11 P. M., November 18, at which time the temperature was 100°, respirations 44, pulse 120. At 2 A. M., the respirations and pulse remaining the same, the temperature had mounted to 103.8°. At 3 A. M., the time of his second spell of vomiting, temperature was 102°, pulse 116, respiration 36. The general character of the temperature-curve was very similar to that of twenty-four hours before, with the difference that at that time the respirations were 20 and the pulse 88 and 90, respectively. The difference in respiration-rate, however, with the probable onset of perforation is a suggestive point.

The presence of extensive perforations and fecal accumulations in the abdominal cavity is a fact of which the symptoms we have detailed gave small indication. We have reported these two cases with the hope of calling to mind the grave responsibilty which attaches itself to the physician in every case of typhoid fever. There is great need of extended observations in cases of this sort in which the early recognition of perforation is imperative if the patient's life is to be saved by surgical means.

DISCUSSION.

Dr. James P. Hutchinson said that he believes that in the majority of cases it is impossible for either the surgeon or the physician to demonstrate conclusively the existence of perforation in the early stage, and that to delay operation until a positive diagnosis can be made will be followed by fatal results. Out of 10 cases which he has studied in the past 8 months, 7 of which he has operated upon himself, but 2 presented the fulminating type of the disease, in which there was no doubt of the diagnosis from the start. All of these patients presented symptoms of interest. They all had pain, which was generally most marked with what was presumed to be the onset of the perforation, sometimes, however, progressively increasing. There is, as a rule, a changed facial appearance; the abdomen is painful, although not constantly so, the seat of the most marked pain usually being the epigastric region, but in one case which he observed it was on the left. Abdominal distension existed in 6 out of 10 cases, but in 2 of them there was at least a quart of fecal accumulation, without distension; the abdominal wall was tense in every case. The leukocyte count, as a rule, is of some assistance; but in these cases, with one exception, there was no marked increase in the leukocytes; in that case they numbered 11,000. The pulse in every case was weak and thready, and the temperature rose and fell with about equal regularity; in 5 cases there was from 1 to 4 degrees increase in temperature and, in about an equal number, about the same extent of decrease. In 2 cases there was hemorrhage from the bowel, immediately following the attack of pain. In any case in which there is a reasonable doubt as to whether or not a perforation exists, operation is recommended, the perforation closed and the abdomen thoroughly flushed out with normal salt solution. He feels that, in a certain number of cases not operated on, nature will effect a cure. In 2 of the cases on which he operated an effort at repair had been made and, in the case which he operated on for Dr. Lloyd, one of the perforations was entirely occluded with omentum. While some cases may be operated upon when perforation is not present, it is probable that the majority of fatalities are not due to the result of the operation, but to procrastination in delaying surgical intervention. To his knowledge, in 3 cases in which operation had been performed and no perforation found, there had been a distinct amelioration of the symptoms for 36 hours; in each case the abdomen had been flushed with normal salt solution, and in each there was a distinct drop in the temperature and a distinct remission of the symptoms for 36 hours, after which the typhoid fever continued its ordinary course; all of these patients recovered. In 10 personal cases reported, although the mortality is high, in every case there was a distinct improvement after the operation; there was less pain, and in those cases in which there had been abdominal distension there was a distinct improvement in this condition, although many of the cases finally succumbed to their already septic condition. In conclusion he said that, while he does not believe that every patient with typhoid fever who shows the slightest symptoms of perforation should be operated upon, he feels that the trend should be in that direction, as he believes that this procedure assists in every case, and he considers it practically the only cure in those cases in which perforation is actually present. While there are a certain number of recoveries reported in which operation had not been done, the number is comparatively small and, he feels, should not be taken into consideration in deciding for or against surgical assistance. In regard to the statement that a delay of 24 hours in operating is practically fatal in these cases, he feels that this is an error, as in the first patient he had operated upon the perforation had existed for at least that length of time and feces were present in the abdominal cavity. Several of the cases of successful operation which he had seen were cases in which feces were found in the abdominal cavity, while he had lost 2 patients in whom no feces were present. One of the most important factors in the diagnosis is the drawn, gray appearance of the face, which was particularly prominent in the patient he operated on for Dr. Lloyd. He has never operated upon a case for perforation in which perforation was not found, although some time ago he advised an operation on a patient at the Pennsylvania Hospital, which was not done, and at the present time the patient is apparently improving. This patient probably did not have typhoid perforation. In Dr. Lloyd's case he feels that there were 2 stages of the condition, in the first perforation the omentum completely occluded the opening, but, later, a leakage of feces, occurred around the seat of this attempt at repair, and other perforations occurred.

Dr. James Hendrie Lloyd referred to the seemingly remarkable tendency to perforation in cases of typhoid fever occurring in Philadelphia during the present fall, 5 cases of this complication having been observed at the Methodist Episcopal Hospital alone, 2 of which occurred in his service, being the cases reported in the paper just read. The difficulty of making a positive diagnosis of perforation and the importance of early operation in cases in which the condition is present, were commented upon. In regard to the first case reported in the paper, he said that he felt that the case was a dubious one from the start, and, while the symptoms were suspicious at the time of the first consultation held with Dr. Roberts, neither at that time, nor at the time of the next consultation, 24 hours later, were they sufficiently grave or sufficiently marked, positively to indicate operation. In regard to the theory, advanced by Dr. Roberts, that operation is inadvisable after 24 hours from the time of the perforation, he feels that, if the symptoms are so mild and so indistinctly marked, if there is so little evidence of shock, if the patient is in such general good condition, and with such freedom from all severe symptoms that a positive conclusion cannot be reached at the end of 24 hours, and then, if a positive diagnosis can be made at the end of 36 or 48 hours, operation should be done at this late hour, as the very fact that the symptoms had been so mild at first would indicate that the patient is not too seriously ill for operation and that there is not much diffuse peritonitis. In regard to the second case he feels that an examination of the chart would reveal one of the most graphic exhibitions of what takes place in perforation in typhoid fever that could be imagined. At 3 A. M. there was sudden onset of pain in the abdomen, and within an hour the respiration rose from 20 to 44, the pulse from 6 to 120, and the patient became pallid, although there was but slight change in the temperature. These symptoms, he felt, showed a condition of collapse indicating perforation. The operation in this case, which was performed by Dr. Hutchinson, revealed a large sloughing perforation and several smaller perforations, and the speaker felt it was a very hopeless case from the surgical standpoint, although the operation was performed in less than 12 hours after the onset of the symptoms. In regard to the cases reported as recoveries without operation, he feels that a great many of these are probably instances of mistaken diagnosis, the real trouble probably being some indigestion during the convalescence from the typhoid fever. In the doubtful cases he recommends operation, even late in the case, as this offers practically the only hope for recovery if perforation exists.

Dr. Herman B. Allyn said that, while the cases reported by Dr. Lloyd and Dr. Coley indicate that it is impossible to recognize perforation in a certain group of cases of typhoid fever, yet it is not true of all the cases. The hospital physican is at a disadvantage, because he cannot have personal knowledge of the patient's temperament and surroundings, and the sort of an outcry he will make under a certain amount of pain, which one in private practice has. Pain should not be looked upon as a constant or even a common symptom of typhoid fever, and when it is present, careful search should be made for the cause. By studying carefully the patient, the character of the pain, the condition of the abdomen and the character of the symptoms, much assistance in diagnosis can be secured. Leukocytosis is absent in half the cases of perforation in typhoid fever; and, in fact, there is no symptom of perforation that may not occur when perforation is not present. Pain and tenderness are the most constant symptoms.

Dr. John B. Roberts said that the reason he advised against operation in the first case he saw with Dr. Lloyd was first, that it was doubtful whether perforation had occurred; and, second, that it was doubtful, if perforation had really occurred, whether operation would be of any value at that time. He did not believe, however, that the mere fact that operation had been delayed for 24 hours should preclude surgical intereference, if a diagnosis of perforation could be made with reasonable certainty.

from 20 to 44, the pulse from 96 to 120, and the pa-

Dr. T. L. Coley said, in closing, that in his opinion Dr. Roberts and Dr. Lloyd had done well to emphasize the change in respiration-rate in the second case from 20 to 44 within 3 hours, which was coincident with the attack of vomiting and the probable onset of perforation. He believed, however, that the act of vomiting could hardly occur, leaving perforation quite aside, without a temporary increase in the frequency of the respiration, and it might be well to recall that vomiting, while a symptom of importance, did not always mean perforation.

He referred to the use of the infiltration anesthesia by many operators in the treatment of intestinal perforation in typhoid fever. These surgeons claim that much less deleterious postoperative effects follow this method than that of general anesthesia.

TWO ERRONEOUS SURGICAL DECISIONS IN INTESTINAL PERFORATION FROM TYPHOID FEVER.*

By JOHN B. ROBERTS, M. D.,
of Philadelphia.

The cases just reported by Dr. James Hendrie Lloyd and Dr. T. L. Coley were of the greatest interest to me. Dr. Lloyd asked me on the day after the supposed perforation, in the first patient, to give an opinion as to the propriety of operative treatment. Upon examination of the man and a study of the clinical history, I decided against operative intervention. My reasons were as follows: (1) That the evidence of perforation was very inconclusive, and (2) that experience showed that intestinal suture after the lapse of 24 hours from the time of perforation was almost invariably unavailing as a life-saving measure. It, therefore, seemed to me wise to abstain from exploratory abdominal section.

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*Read before the Philadelphia County Medical Society, Dec. 23. 1902.

My opinion that the symptoms were not sufficiently indicative of perforation to justify operation was based on the following facts: The sudden pain and vomiting had occurred shortly after taking milk, which was known to disagree with him and which he had taken with reluctance; the pain was felt in the epigastrium; the temperature had risen, not fallen, after the onset of the pain, ascending from 100° to 103.2° during the subsequent five hours; a number of bloodcounts showed the leukocytes to be only 7,200 to 8,000; the pulse was only 78 to 96, and the temperature 99° to 99.6° on the morning of the consultation; the pain and vomiting were then not severe, the tympany was not great, and the rigidity of the abdomen not marked.

This clinical history, coupled with the fact that the sudden pain, which had suggested the possibility of perforation, had occurred between 23 and 24 hours previously, caused me to decline to operate then.

This was on November 7. I examined the man again on November 8, when his temperature was between normal and 100°, his pulse 80 to 100 and his respiration 24 to 28. He had been given a high rectal enema, which had caused the expulsion of scybalous feces; his pain was not marked. There was no more tympany or tension discovered than might be expected in uncomplicated typhoid fever. I saw him for the third time on November 10 and then felt sure that the disease was pursuing a natural course and that the diagnosis of no perforation was correct. The temperature was 98.4°, the pulse 96, the respiration 24. I did not see him again.

As is shown by the medical report, he became suddenly worse on the evening of that day (November 10) and died on the following evening. At 6 P. M. on the tenth the pulse was 94, respiration 24, temperature 98°. Within the next 24 hours the pulse rose to 164, respiration to 38 and temperature to 104°.

It is well known to clinicians that perforation occurs in mild as well as in severe cases of typhoid fever, and that occasionally this complication arises without any definite symptoms. It is also known that fatal peritonitis may occur in this fever without any perforation being discovered at the autopsy.

Keen mentions the case of Herringham and Bowlby, in which the symptoms pointed to perforation, but in which operation disclosed only scybalous masses of feces in the colon. The patient recovered, notwithstanding the unnecessary operation. The same authority says that "if the operation is not done within 24 hours after the perforation, there is practically no hope for a recovery."

The case before us seems to belong to the class in which perforation gives few characteristic symptoms. It is possible that the symptoms were held in abeyance at the time I first saw the man, by the morphine, gr. ¼, given hypodermically the evening before, and the two suppositories containing opium, which were introduced into the rectum a short time before my visit. It is also possible that I failed to give sufficient value to the somewhat increased rapidity of respiration, which existed on the afternoon of the day of suspected perforation. On the previous day his respiration had varied from 20 to 30, but after the access of pain the respirations were from 30 to 36 per minute.

A final thought is that, after all, there may have been no perforation until the afternoon of the tenth, and that this accident led to the rapidly increasing seriousness of symptoms and the death at the end of 24 hours. The very friable nature of the intestinal adhesions about the seat of perforation may indicate that this opinion would be tenable. The report of the autopsy states that "on opening the abdomen the coils of the intestines seem to be united by delicate bands of adhesions which are readily separated," and that the ileum, near the perforation, was fixed in the pelvis "by easily separable adhesions."

I regret that I did not see the autopsy and, therefore, am unable to express an opinion as to whether these adhesions represented a peritonitis of one day's or of five days' standing.

It would be comforting to me to be able to believe that my decision not to operate was founded on a correct diagnosis. On reviewing the case at this time I cannot but believe that my decision to abstain from exploration, incision was justified; and, yet, it apparently was an error of judgment which might have been avoided.

Eight days subsequent to the death of the patient just mentioned, Dr. Lloyd's Resident Physician, Dr. Harlan Shoemaker, asked me to look at another man with typhoid fever, in whom he suspected perforation. He stated that at about 3 A. M. the patient, who was 36 years old, had complained of severe abdominal pain and had vomited. It was about five hours after this occurrence that I, being at the hospital by chance, saw him. The man's pallor of countenance attracted my attention as I approached his bed, and I afterward noticed beads of sweat upon his forehead. He said that he had severe pain all over his abdomen, but did not make much complaint at the time, unless questioned as to the pain. He was perfectly clear in his mind and had been given no opiate.

There had been no marked fall in temperature. It had been 101.6° before the access of new symptoms and dropped to 100°, which it had reached also some days before. On this day, however, the pulse had risen from 96 to 120 and the respiration from 20 to 44. His temperature then went up promptly to 103.8°, and then fell to 102°, at which it stood when I saw him. His pulse was then 116 and his respiration 36. The abdomen was moderately distended, but the muscles were not especially tense, though I thought those of the right side of the abdomen were a little more tense than those of the left side. The notes showed that marked tympany had been a characteristic of the case two days before the serious symptoms arose, and Dr. Shoemaker said that he thought the degree of distension at the time I saw the man was about as usual. The oscillations of temperature had been rather wide during the course of the disease. The pulse and respiration had, however, not been very frequent. The former had usually been from 80 to 100, and the latter from 20 to 24. The patient had been given no enema, for he had had diarrhea. There had been no hemorrhage from the bowels. The stools on the day of perforation were green and contained many curds.

As I examined the patient and considered the points just mentioned, I noticed that the respiration was peculiar. He breathed rapidly, with a peculiar quick motion of the abdominal muscles without using the muscles of the chest. As I called the attention of Dr. Shoemaker to this fact, the peculiarity ceased and he breathed normally, using the thoracic muscles, though there was an abnormal increase in the number of the respiratory movements. I suggested at the time that the previous peculiarity in breathing might have been due to our presence. The fact that he resumed normal thoracic breathing made me doubtful as to the presence of peritonitis from perforation.

The examination caused me to think that there was a possibility of perforation, but I did not feel justified in urging immediate operation. I, therefore, suggested that a leukocyte count be made and that the man be carefully watched for further developments. The leukocyte counts made shortly after my examination showed their number to be 5,733 and 5,600.

During the day the symptoms became rapidly more urgent, and Dr. Lloyd, having seen the patient, called a surgical consultation. I was not obtainable, being out of the city for a few hours, but my colleagues, Dr. James P. Hutchinson and Dr. E. W. Holmes, examined the man and agreed with Dr. Lloyd that perforation had undoubtedly occurred. Dr. Hutchinson opened the abdomen and found four large perforations in the lower part of the ileum. The abdominal cavity was soiled with a large amount of feces. The openings in the bowel were sutured, the abdominal cavity thoroughly washed with normal salt solution and drainage established. Intravenous injections of salt solution were given during the operation. Death, however, occurred in 24 hours.

A study of this case shows that I attached too little importance to the abrupt rise in the rates of pulse and respiration, which occurred coincidently with the sudden access of pain and vomiting. I ought to have been driven to immediate exploratory celiotomy by these symptoms and the man's pallor, sweating and pain, even though his pain was not localized and was unaccompanied with marked tympany and abdominal rigidity. In reaching my decision "to wait and watch," too much value was given to the result of the abdominal examination and not enough to the general symptoms. Too much importance was attached to the resumption of breathing with the thoracic muscles while I was examining him. The absence of a decided fall in temperature when pain occurred, the want of marked increase in tympany and muscular rigidity, the lack of localization of pain and the tendency to a decrease in rapidity of respiration, at the end of five hours, should not have nullified the evidence of depression and danger given by the sudden pain, the pulse and the respiration, during the early hours of the morning, and the subsequent pallor, sweating and general abdominal pain. The last symptom was evidently due to the multiplicity of lesions. It is possible that I would have recognized the summons for immediate operation, if I had had the advantage of knowing the patient's previous condition from personal observation. The resident physician was pretty sure that the man was suffering from perforation, because he recognized the sudden change for the worse in his symptoms. The situation was like that which often occurs when a surgeon sees a patient with perforative appendicitis, who previously had not been under his personal observation. It takes more than one visit to make the condition clear to him. The diagnosis must often rest on the change in character of symptoms rather than on the symptoms themselves.

My mental attitude and my failure to operate at once may have been, to some extent, due to the outcome of a case of suspected perforation from typhoid ulceration, seen by me in Dr. Lloyd's service at a time intermediate to the dates at which I examined the two cases just discussed.

A girl of 18 years had been under treatment for typhoid fever for about four and a half weeks, when she unexpectedly had sudden pain and tenderness in the right iliac region, accompanied with vomiting. The cramp-like pain occurred just before the vomiting. There was slightly increased resistance over the right rectus muscle, and the pain became localized near the iliac fossa. Examination showed a decided bulging of the abdomen over an area, about six inches long and three inches wide, to the right of the median line and at a point a little below the level of the umbilicus. She vomited three times during the day, but distension of the abdomen was absent except at the place mentioned. Her temperature had been near the normal line for three days and her pulse and respirations about 80 and 20, respectively.

Upon the occurrence of the suspicious symptoms the temperature dropped from 98.4° to 97.2°, and the pulse rose from 94 to 100. The localized pain, the circumscribed distension and three attacks of vomiting were about the only other symptoms of importance. The respiration was unaffected. Investigation revealed the fact that the woman had required daily enemata for constipation during nearly the whole course of the fever, and upon questioning she replied that the pain had occurred shortly after the administration of an enema.

I advised a waiting policy and asked that a leukocyte count be made. The blood-examination was made next day and showed the leukocytes to number 8,400.

The local distension was apparent for a few days, but gradually disappeared. The patient steadily convalesced, showing occasional subnormal temperatures like that first observed on the day of the sudden pain and vomiting. The decision to abstain from surgical intervention was here proved to be correct, though at the time I felt anxious lest the continuing bulging of the abdomen might mean perforation with local peritonitis. It will be observed that the leukocyte count was higher in this case than in the two cases of demonstrated perforation.

It is pretty evident from these three cases that the ordinary leukocyte count is of very little value in determining the question of perforation in typhoid fever. It is possible that there were errors in the counting. The recent suggestion that a differential count of the leukocytes is requisite may be true. If an increase in polymorphonuclear leukocytes occurs in perforative peritonitis, a determination of the number of these cells is of great clinical importance.

A reference to a recent case of perforative peritonitis with death in a few hours may be permitted in this study of intestinal lesions. On December 9 I operated on a woman who had had for about three days strangulation of the small intestine in an old umbilical hernia. When the sac was opened and the strangulated gut drawn out of the ring, there was seen a marked linear groove around the intestine. This showed that the constriction had been very great. After some minutes' observation of the circulation of the damaged bowel, I concluded that it was wise to return the loop of gut and not resect. At the end of about two and a half days, when the symptoms seemed to indicate a speedy convalescence, the patient suddenly had agonizing pain in the abdomen, followed by a rise in the pulse, respiration and temperature. In a few hours the pulse went up from 114 to 132 and 140, the respirations from 24 to 32 and 52, and the temperature from 100.2° (in the mouth) to 106.4° (in the rectum). There was present clammy sweating. The patient died in eight hours.

The serious turn in symptoms was reported to me five hours after the advent of pain, and I immediately ordered preparations for opening the abdomen, as I felt sure perforation by sloughing had occurred at the point at which the small bowel was grooved by the constricting hernial ring. I reached the patient in an hour to find her moribund and, therefore, did not operate. Inspection of the abdominal cavity after death showed an opening extending around about one-third of the circumference of the bowel and extravasated feces in the peritoneal cavity.

In this case the violence of the symptoms and the knowledge that a suspected point was present made the diagnosis of perforation easy. It is noticeable, however, that there was apparently no fall in temperature, such as is supposed usually to accompany intestinal perforation. The increase in rapidity of respirations and of pulse and the pain were the prominent symptoms. Upon these and the rapid rise of temperature the diagnosis was made. It is, I suppose, possible that there may have been a temporary fall in temperature unobserved by the nurses.

Careful consideration of these cases of perforation of the bowel in typhoid fever leads me to the following conclusions:

The occurrence of pain and the increased rate of pulse and respiration are probably the most valuable early diagnostic symptoms of perforation.

The count of leukocytes seems to have little value, unless it be hereafter proved that a count of the polymorphonuclear leukocytes has diagnostic significance.

A sudden fall in temperature is not a necessary accompaniment of perforation.

A NEW METHOD OF HEMO-ALKALIMETRY AND A NEW HEMO-ALKALIMETER.

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That the reaction of the blood is liable to considerable variation is well attested by the results of empiricism or clinical experience. This variation is dependent upon the physiological alterations of the blood in health, but to a more pronounced degree is it shown in disease, in which blood-changes resulting from the pathological processes become more manifest. And yet, while abundant observations have been confirmatory of these deductions, the clinical value of the phenomenon has been in no way significant, owing to the fact that the results of the observations have utterly failed to offer any definite relationship that might exist between the alkalinity and any of the demonstrable features of the blood.

The present paper has been written with a view to submitting for consideration an improved means, it is believed, of dealing with a new method of hemo-alkalimetry, and to describe an instrument devised expressly for that purpose. A subsequent paper will invite attention to the results attained from an experimental investigation of the various morbid conditions that offer an intimate relation between the alkalinity of whole laked blood to the color index;* *i. e.*, the relative proportion of hemoglobin contained in each erythrocyte, and also to present a few observations relating to the varying degrees of the blood's alkalinity.

Owing to their individual preferences, different experimenters have at various times resorted to the employment of certain chemical indicators, such as litmus, lachmoid, tropaeolin, erythrosin, etc. The writer's method, however, entirely dispenses with the use of such reagents, and in their stead he takes into consideration the hemoglobin only, basing the point of neutralization upon this important constituent. This substance is recognized in even very dilute mixtures, by its characteristic spectrum of oxyhemoglobin, the absorption bands of which disappear at the exact point of neutralization when titrated with tartaric acid solution.

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*This conclusion is based upon blood counts made in the department of pathology, Jefferson College Hospital, in 75 cases, representing quite a number of the various morbid conditions. The most constant exception to this rule is observed in enteric fever, in which the alkalinity falls below the color index.

The characteristic spectra of methemoglobin and carbonyl, or carbon monoxid hemoglobin, disappear in the very same way when the bloodmixture is neutralized.

The advantage of the spectrum test over the use of lachmoid or litmus paper is evident. With the latter the red color of the hemoglobin may be readily mistaken for the result of chemical action, or this reaction may be positive from the penetration of the serum into the test paper or plaster plates before the corpuscular elements are entirely neutralized, this being due to the affinity of the acid for the free alkali of the serum and the resistance of the corpuscles, while with the spectrum test the absorption bands of oxyhemoglobin are in evidence until the whole blood is neutralized. Another important feature is that the test is effected in a closed cylinder, thereby preventing the exposure of the blood to atmospheric pressure, and thus obviating the decrease in alkalinity which is always incident to the withdrawal of blood from living tissues.

Natural as would be the inference to suppose that the point at which the absorption bands of oxyhemoglobin disappear is due to the quantity of hemoglobin present in the specimen under consideration, experimental results have indisputably shown that the alkalinity of the blood-mixture, and not the quantity of hemoglobin present, is under all circumstances the determining factor. In support of this assertion we have the simple experiment of adding solutions of known concentration of disodium phosphate, in minute quantity, or of weak phosphoric acid solution to the blood-mixture, and repeating the test; the point of neutralization will be found to vary with the degree of concentration of the acid or alkaline solution added as a control experiment.** We have, therefore, in the blood a *natural indicator*, as seen by the spectroscope, up to the exact point of neutralization, as two parallel bands between D and E of Fraunhofer's lines; the line nearest to D is darker, narrower and more strongly marked; that next to E is less sharply defined and broader. It is then only necessary to select an acid solution that is permanent and stable, and to determine the degree of alkalinity mathematically.

Experiments were made with solutions of specially prepared pure oxalic acid (made by the action of nitric acid upon sugar), but preference has been given to Merck's chemically pure *reagent, acid tartaric* (crystals) in solutions of .065 gm. to 200 cc., or grain 1 to ℥vii ʒii, and to prevent the formation of fungus growth in the solution, alcohol, 1 part, to 8 of distilled water, was added. After considerable study and experimentation a method is about to be described that combines the advantages of accuracy, uniformity and simplicity. The test requires no special technical skill and its accomplishment demands only a few minutes of time.

The hemo-alkalimeter is made up as follows: The first part (Fig. 1, B) consists of a glass stopper through which passes an automatic capillary blood-pipet, containing 20 cmm. by volume, or 15 mg. by weight (of normal blood), the exposed end of which is ground to a tapering point. The caliber of this little tube remains the same throughout. It may be remarked that a thick glass is used in the manufacture, and presents the advantage of being so ground as to afford a magnifying surface, in this respect resembling the clinical thermometer. This stopper, with the contained blood-pipet, is fitted into a clear glass test-tube (Fig. 1, A) containing 3 cc., the upper end of which is expanded into a bulb containing on its side a minute opening (Fig. 1, C) for the purpose of admitting air. The top of the bulb is placed close to the stopper, allowing the capillary tube to pass to the center of the bulb, this situation being selected in order to prevent an adherence of the blood between the sides of the test-tube and the capillary pipet. The test-tube is graduated in cubic centimeters, and the equivalents in mg. of NaOH to 100 cc. of blood are also represented.

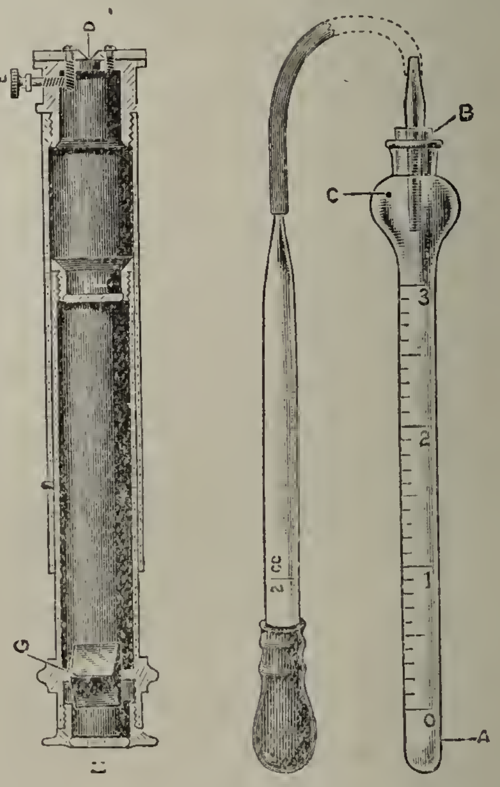

Fig. 1.

Hemo-alkalimeter about one-half actual size.
A—Alkalimeter tube.
B—Automatic blood pipet.
C—Opening for the admission of air.
D—Cleft of spectroscope, into which he alkalimeter tube is placed at the point A.
E—Cleft adjustment.
F—Diaphragm to intercept reflected light.
G—Nicol prism.
H—Eye piece.

The second part of the instrument, the *reagent pipet*, consists of an appliance made up of a glass tube terminating with a rubber bulb and having at its other extremity a piece of rubber tubing which fits over the sharpened end of the capillary blood-pipet previously described. In conjunction with this instrument a spectroscope should be used, the

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**The experiment should be made with a tartaric acid solution 0.065 gm. to 100 cc., otherwise the spectrum bands of oxyhemoglobin may disappear by overdilution.

We wish to add that experiments were conducted with numerous chemical indicators, in the hope that one could be found that would be convincing proof that the absorption bands of oxyhemoglobin disappear at the point of neutralization, but, owing to the fact that mixtures of blood and distilled water give no positive reaction to any of the indicators examined, we are forced to relyupon the experiment of adding standardized solutions of phosphoric acid and disodium phosphate, and also to conclude that in many instances when inorganic compounds are combinedwith organic compounds, the usual tests for the organic will not suffice.

Browning pocket spectroscope answering all purposes.

The test solution to be employed is made up as follows:

Acid Tartaric "Merck" (Crystals Reagent),
$H_2C_1H_4O_6$Gr., 1 gm. 0.065
Alcohol C_2H_5OH ʒ vi cc. 20
Aquæ destil. H_2O q. s. ℥ vii ʒ i cc. 200
0.300 acid to 1 liter,
1-200 of normal.

The alcohol is added to prevent the formation of fungus growth, but not in sufficient quantity to precipitate the albumin of the blood in any morbid condition.

Method of Employing the Instrument.

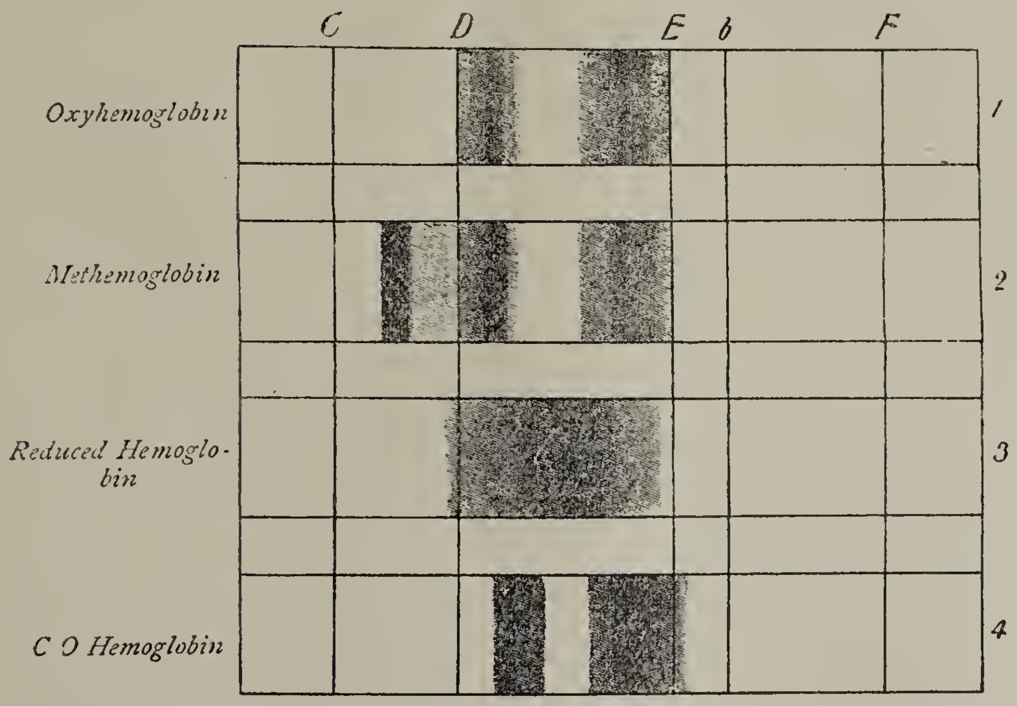
A drop of blood is obtained from the finger-tip or lobe of the ear in the usual manner. The test-tube is held horizontally, and its contained blood-pipet fills automatically by capillary attraction when the sharpened end is touched to the blood drop as it emerges from the wound. With an ordinary minim pipet, with a piece of rubber tubing over the free extremity into the test-tube, wash this column of blood with distilled water up to the point (Zero) O, which is the first division from the bottom, always holding the test-tube vertically. Close the opening in the bulb of the test-tube with the thumb and invert the tube several times to cause a thorough mixing of the blood and water. The *reagent pipet* is filled with the acid reagent, and the rubber tubing is fitted over the sharpened end of the blood-pipet; by compressing the rubber bulb the acid solution is forced through the pipet into the test-tube, the aperture in the glass bulb being closed before the pressure is relaxed, to prevent the mixture of the acid solution and the blood. Having done this, the test-tube is inverted several times while still being attached to the reagent pipet, care being exercised to keep the reagent pipet in a vertical position to avoid a gravitation of the acid solution into the rubber bulb of the reagent pipet, thus preventing a chemical action upon the rubber nipple with the formation of a flocculent precipitate. The interval (Fig. 1, A) between the closed end of the tube and the first marking O should be placed in the cleft of the spectroscope (Fig. 1, D), and observations be taken as to the existence of bands of oxyhemoglobin. Should these bands be present, the careful addition of acid solution is necessary. As the bands become fainter and fainter we know that we are approaching the point of neutralization, and it becomes necessary to add the acid, one drop at a time; then invert the test-tube and examine with the spectroscope as before. After performing several tests with this instrument it will not be necessary to apply the spectroscope so frequently to determine the point of neutralization, as the eye quickly learns to detect this characteristic change by the color of the blood-mixture. When the bands of oxyhemoglobin suddenly disappear, the observation is at an end. It is then only necessary to read the result from the scale on the test-tube, which is graduated in cubic centimeters and the equivalents expressed in milligrams of sodium hydrate to 100 cc. of blood.

As a uniform light is necessary for physiological experiments, artificial illumination should be selected as being always available; an open gas light was employed in our experiments entirely, and the relation of the spectroscope to the source of illumination kept always constant.

Scale of equivalents computed from a basis of 15 mg. of blood to 2 cc. of acid solution. 1-200 of the normal.

Cc. of regent.	Mg. of NaOH to 100 cc. of blood.
2.6	345. " "
2.4	319. " "
2.2	292. " "
2.0	266. " "
1,8	239. " "
1.6	212. " "
1.4	176. " "
1.2	169. " "
1.0	133. " "
.80	96. " "
.60	79. " "
.40	53. " "
.20	26.6 " "

It is not customary to express the alkalinity of blood by the quantity of acid required for its neutralization but in milligrams of an alkali, sodium hydrate being generally selected for the purpose,



Principal blood spectra.

Fig. 2. Principal Blood Spectra J. C. Da Costa Jr.

the calculation will be as follows: The equivalent weight of tartaric acid $\frac{(H_2C_2H_4O_6)}{2}=149.64$. Tartaric acid being dibasic, one-half the number of molecules are taken to make a normal solution, which equals 75 gm. (approximately) to a liter; for the present solution there is taken 1-200 of the normal, which is equivalent to 375 mg. to a liter. Sodium hydrate has 40 atoms to its molecule, which gives an equivalent of 40 gm. to a liter, therefore 1-200 of the normal tartaric acid solution is equal to 40-200 or 200 mg., and each cc. of acid solution will give an equivalent of .0002 mg. of the alkali.

Every 100 cc. of blood will equal 266 mg. of sodium hydrate.***

The degree of alkalinity of the normal blood varies within wide limits, as the estimations arrived at by various observers would tend to show. Thus, Krause expresses this point as from 162 to 533 mg. of sodium hydrate to 100 cc. of blood; Engel, with a different method, places it from 479 to 533 mg. of sodium hydrate to 100 cc. of blood, while Mya and Tassinari, from experiments with blood drawn directly from the veins, give 516 mg. of sodium hydrate to 100 cc. of blood as normal. Our own observations have conclusively shown that there exists a practically constant fluctuation in the rising and falling of the alkalinity in relation to the color index; from this circumstance it has been proved necessary to select for the purpose healthy male individuals who show blood-counts of 5,000,000 erythrocytes, 7,000 leukocytes and 100 per cent. of hemoglobin (approximately), with a color index of 1.0, to represent a standard or unit of comparison for averaging the male sex. The normal alkalinity would then be equal to 266 mg. of sodium hydrate to 100 cc. of blood, as 2 cc. of acid solution are required to neutralize the alkali. In the case of the female, let us suppose that we find the erythrocytes numbering 4,500,000, the leukocytes 7,000 and the hemoglobin having a percentage of 90 per cent., with a color index of 1.0; then the alkalinity would be the same as in the male subject; but should the count only reach 4,000,000 erythrocytes (a frequent occurrence in robust women) and the percentage of hemoglobin 75 per cent., and a color index of 0.9, then the alkalinity would suffer a decrease to 239 mg. of sodium hydrate to the 100 cc. of blood. In health, therefore, there can be no definite and exact estimate of the blood's alkalinity, owing to the normal physiological alterations observable in the perfectly healthy individual.

The discrepancy present in the degree of alkalinity of normal blood, given by Engel as 479 to 533 mg. of sodium hydrate to 100 cc. of blood, and those obtained by our method—266 to 292 mg. of sodium hydrate to 100 cc. of blood—is no doubt due to the high alkaline concentration with which the lachmoid paper employed by Engel is fixed. This test paper does not react to strongly acid urine as does ordinary litmus paper, but requires a stronger acid solution to give the acid reaction. The results obtained by von Jaksch—260 to 300 mg. NaOH to 100 cc. of blood—and by Schultz-Schultzenstein—260 to 300 mg. NaOH to 100 cc. of blood—compare very closely with those obtained by the writer's method. Normal blood with a color index of 1.0 gives an alkalinity equal to 266 mg. NaOH to 100 cc. of blood, and as it is not unusual to have a color index of 1.1 or 1.2, the alkalinity may be equal to 292 mg. NaOH to 100 cc. of blood.

The question may be asked: What importance attaches itself to a decrease in the blood's alkalinity? What relation does it bear, or in what manner does it assert itself, in regard to pathological processes? Unfortunately the question defies a satisfactory answer. Elaborate researches, conducted by the most searching of inquirers, have yielded no definite results, simply because of the fact that there is no distinct point from which the alkalinity can be definitely found to have appreciably increased or diminished. To the necessary existence of such a point we wish to allude, for it is convincing, to say the least, that an apparently constant relation is at all times asserting itself and thus can be rendered of utility as a standard of comparison. This point is the color index,**** or the richness in hemoglobin of the individual red cells. (Our data and variations from this point in disease will be treated of in a subsequent paper.)

It must be remarked that variations in the color index determined will vary within wide limits, according to the deductions arrived at by different observers; thus the personal equation in hemoglobin estimations, the technique of the blood-count and the slight variations which of necessity will occur from a faulty technique in the application of the hemo-alkalimeter are factors of importance. Should these variations or errors occur, we can well account not only for the difference in the color index but likewise for a deviation from the parallel relation of the alkalnity to the color index, which will make it higher or lower than our results. Correction can be made for this difference after making sufficient tests to determine if the equation be above or below the color index. The instruments employed in our experiments were the Dare hemoglobinometer and the Zappert modification of the Thoma-Zeiss counting apparatus.

The degree of the blood's alkalinity in health and disease has been arrived at by a variety of methods devised for that purpose, and, while the alkaline constituents of the blood show a wide degree of difference of variation, the results obtained in numerous morbid states present a most striking uniformity. The differences in the degree of alkalinity arrived at by various observers can be attributed in part to the physiological variations from time to time, but more especially to the procedure employed, being relatively higher when whole blood is used than when the alkalinity of the serum alone is estimated.

***I wish to acknowledge the services of William C. Bichy, Ph.D., rendered in the standardizing of the test solutions and for the mathematical calculations involved in this paper.

****This index is arrived at by multiplying the actual figures of the blood count by two; then pointing off two decimal places from the left for blood counts less than 5,000,000, and three decimal places if 5,000,000 erythrocytes or upward are present. The hemoglobin percentage is then divided by this result. Let us suppose the blood count arrived at was 4,500,000, multiplying this result by 2 and pointing off two decimal places from the left (as it is below 5,000,000), we will obtain a percentage of 90. Let us assume a hemoglobin percentage of 85 per cent. which divided by the percentage of erythrocytes, say 90, would give us a color index of 0.9.

In the former method the reaction of the serum and cellular elements is taken into account, while in the latter only the alkalinity of the serum enters into the calculation. Thus, in the experiments of Liebreich, plaster or clay plates were soaked in litmus solution, the blood was brought in contact and allowed to remain for a moment upon its surface. The serum penetrated the plaster, while the bloodcells remained as a film, which was washed off in running water, the reaction being indicated by a change in color of the litmus. Zuntz in his investigations has resorted to the use of glazed litmus paper to prevent the penetration of the bloodcells. Landois' method, as modified by von Jaksch, consists in quantitative estimation and has yielded information of value relative to the alkalinity of the blood in the various morbid conditions.

This test is essentially as follows: Into a series of watch-glasses are placed concentrated solutions of sodium sulphate with varying quantities of tartaric acid per cubic centimeter, which are employed to neutralize the alkalinity of the blood, which is drawn from the back of the individual by means of wet cups, 0.1 cc. of the blood being added to each of the eighteen test solutions representing different concentrations of the acid; the mixtures of blood and acid solution are tested with sensitive red and blue litmus until one specimen is found that is negative to both; this specimen will represent the quantity of acid required to neutralize 0.1 cc. of the blood examined. With this method it is necessary to obtain an accurate result within one minute and a half, because of the fact that there is a rapid decrease in the blood's alkalinity when drawn from the natural channels. With a perfect technique the method is accurate, but it possesses the marked disadvantage of calling into use the cupping-glass to obtain a sufficient quantity of blood for the test; while the employment of the method requires the use of litmus as an indicator, it possesses the distinct advantage of taking into consideration the corpuscular value, its use, however, is hardly practicable for clinical work.

Haycroft and Williamson employ but a single drop of blood, but, in this test, serum alone is used, the litmus paper being glazed to prevent the penetration of the bloodcells into the test paper; a series of these papers representing different degrees of concentration of oxalic or tartaric acid of known strength are successively touched to the blood drop, the alkalinity being determined by the amount of acid in which the reagent is fixed.

Tauszk suggests that the blood be weighed and titrated with tropaeolin or litmus, but Meyer has shown this method to be faulty, because of the circumstance that the reaction varies with the color of the blood and the quantity of the contained carbon dioxide. Löwy titrates venous blood with litmus, and Schultz-Schultzenstein employs erythrosin in a similar manner. Kraus takes the blood with a lancet, and the quantity of carbon dioxide is determined by weighing. Engel's method, beside being economical, not only so far as the amount of blood employed is concerned, also facilitates the titration and is probably the most exact and simple method suggested. The indicator is lachmoid, and in neutral preparations this paper is a purplish-blue; when the alkalinity of the blood is neutralized by the addition of tartaric acid solution in sufficient quantity and placed upon the test paper with a glass rod, the stain exhibits a red in place of a purplish-blue color. A possible source of error may occur here, for the point of neutralization may be obscured by the natural red color of the hemoglobin, which, when laked, may be mistaken for the result of chemical reaction.

Wright's method is virtually a modification of some of the other tests suggested, save for the fact that he titrates with a dilute sulphuric acid solution, claiming this to be more permanent than solutions of organic acids.

The methods suggested and the tests actually applied depend upon the employment of such agents as litmus, lachmoid, tropaeolin and erythrosin to indicate the point of neutralization. The great difficulty encountered with the various indicators prepared by an excess of acid or alkali above the neutral point is to be found in the fact of the marked variability in different specimens in regard to their reaction, in consequence of which the test cannot be said to lack absolute infallibility. By spectrum analysis the exact point of neutralization is not only definite, but the turning point is uniformly constant and not subject to the variability of chemical indicators, a matter of very great moment when it is recollected that the total alkalinity of the blood is so slight.

The test solution is also of considerable importance. In our experience the solution brought forth by Engel is prone to a rapid deterioration, brought about by bacterial action. Certain it is that the reagent becomes weaker from precipitation of the organic acid, resulting in the formation of a flocculent precipitate. This fact must not be lost sight of in physiological experiments, in which it is not desirable to change the solution, and a stock sufficient for the entire series of experiments is prepared.

A more exact method of deduction must evidently be found in the employment of the test in a closed vessel, not depending for the result upon the use of chemical indicators but upon the disappearance of the absorption bands of oxyhemoglobin, as is observed with the spectroscope.

Our experiments were conducted with a solution of tartaric acid C. P. (Merck's reagent), to which was added alcohol just sufficient to prevent the development of bacteria, but not enough to precipitate the blood albumins. This solution is permanent, even when exposed to the light for a reasonable time; a solution prepared three years ago is to-day entirely free from precipitate. Molecular changes, however, undoubtedly occur, as the solution ages, and therefore it is advisable to renew the solution before making a series of physiological experiments.

Greater accuracy is obtained by reducing the strength of the solution and increasing the volume of reagent required to neutralize a given quantity of blood, for the greater the quantity of solution employed, the more accurate will be the volumetric estimation. With Engel's method 9 to 11 drops (0.5 cc.) are required, while with the one under discussion 2 cc. are required to neutralize normal blood. The quantity of blood required for an examination is of the utmost importance, especially in profound anemia. Our test is made with 20 cmm. by volume, or 15 mg. by weight, of blood giving the following estimation: 5,000,000 erythrocytes, 7,000 leukocytes, 100 per cent, of hemoglobin, color index 1.0, alkalinity 266, mg. of sodium hydrate to 100 cc. of blood. The method suggested by Engel requires four times this quantity. Other features contributing to the accuracy of the method are to be found in the exclusion of air from the alkalimeter tube, and likewise from the automatic collection of blood.

A few experiments have been made in testing the solvent alkalinity with solutions of potassium hydrate C. P. (Merck's reagent). This reagent, when added in sufficient quantity, changes the spectrum of oxyhemoglobin at the point of reduction of the hemoglobin, and since the alkalis attack the leukocytes to a far greater extent than the acids, important information may be acquired from this phenomenon; the number of tests, however, are as yet insufficient for conclusive deductions.

It is a curious fact that the numerous observers with their widely dissimilar methods have arrived at precisely the same conclusions regarding those diseases in which the alkalinity of blood suffers a marked reduction, the most constant of these being pernicious anemia, leukemia, pronounced anemia, fevers, uremia, organic diseases of the liver, etc. Great reduction of the alkalinity of the blood in chlorosis is as yet a disputed question. In a subsequent paper will be studied a series of cases, in the hope of verifying the results deduced from this method and those of earlier experiments, and while the number and variety of the cases are far too few to justify more than a mere hint of the possibilities for an extended study of this phenomenon in disease, yet they will be so tabulated that a sincere hope is entertained that they may at least serve as a stimulus to the investigating mind to enter this important and interesting department of clinical research, and by uplifting the veil of obscurity bring to a clearer light the relation that the alkalinity bears to disease, and to determine in a definite manner if any clinical value is attached to the variations in the alkalinity manifested.

A Case of Poisoning by Corrosive Sublimate.—Dezarnoulds (*La Médecine Moderne*, September 3, 1902) has reported a case of poisoning by corrosive sublimate, in a woman who had aborted when 2 months pregnant. A midwife at once gave an intra-uterine injection of 4 grains of bichloride, followed by vaginal injections of the same quantity of mercury twice daily. After 3 days the patient noted anuria and edema, and was moved to the Bichât Hospital, Paris, 5 days after her abortion. Catheterization showed complete anuria. Her breath was foul and her gums were ulcerated and bleeding, evidently the result of the mercury. She was given milk and hypodermic injections of normal salt solution, while the mouth was frequently washed with hydrogen peroxide. The stomatitis grew worse, and diarrhea developed, with normal temperature, edema, coma and death 12 days after admission to the hospital. The autopsy showed renal lesions only. The absence of cerebral disturbances and subnormal temperature were noticeable, together with the small amount of the corrosive sublimate given. Yet the symptoms of mercury poisoning were typical.

[M. O.]

Health Reports.

Health Reports: The following cases of smallpox, yellow fever, cholera and plague, have been reported to the Surgeon-General, U. S. Public Health and Marine-Hospital Service, during the week ending January 10, 1903:

SMALLPOX—United States.

			C.	D.
CALIFORNIA:	Sacramento.	Dec. 20-27.	1	
	San Francisco.	Dec. 21-28	12	
COLORADO:	Denver.	Dec. 20-27	3	
ILLINOIS:	Chicago.	Dec. 27-Jan. 3	6	
INDIANA:	Evansville.	Dec. 27-Jan. 3		1
	South Bend.	Dec. 27-Jan. 3	1	
MAINE:	Biddeford.	Dec. 27-Jan. 3	26	
MARYLAND:	Baltimore.	Dec. 27-Jan. 3	1	
MASSACHUSETTS:	Boston.	Dec. 27-Jan. 3	20	4
	Cambridge.	Dec. 27-Jan. 3	5	
	Chelsea.	Dec. 26-Jan. 2	1	
	Fall River.	Dec. 27-Jan. 3	3	
	Lawrence.	Dec. 27-Jan. 3	1	
MICHIGAN:	Grand Rapids.	Dec. 27-Jan. 3	7	
NEBRASKA:	Omaha.	Dec. 27.-Jan. 3	3	
NEW HAMPSHIRE	Manchester.	Dec. 27-Jan. 3	8	
	Nashua.	Dec. 27-Jan 3	2	
NEW JERSEY:	Camden.	Dec. 27.-Jan. 3	3	
NEW YORK:	Buffalo.	Dec. 27-Jan. 3	1	
	New York.	Dec. 27-Jan. 3	4	
NORTH CAROLINA.	Charlotte.	Dec. 1-31	126	21
OHIO:	Cincinnati.	Dec. 26-Jan. 2	7	1
	Cleveland.	Dec. 27-Jan. 3	7	1
	Dayton.	Dec. 27-Jan. 3	10	
PENNSYLVANIA:	Altoona.	Dec. 27-Jan. 3		3
	Erie.	Dec. 27-Jan. 3		5
	Philadelphia.	Dec. 27-Jan. 3	15	1
	Pittsburg.	Dec. 27-Jan. 3	16	7
	Wiliamsport.	Dec. 27-Jan. 3	1	
RHODE ISLAND:	Newport.	Dec. 27-Jan. 3	1	1
	Warwick.	Dec. 24-31.	4	
SOUTH CAROLINA	Charleston.	Dec. 27-Jan. 3	4	
TENNESSEE:	Memphis.	Dec. 27-Jan. 3	4	
WISCONSIN:	Green Bay.	Dec. 28-Jan. 4	2	
	Milwaukee.	Dec. 27-Jan. 3	4	

SMALLPOX—Foreign.

ARGENTINA:	Buenos Ayres.	Oct. 1-31.		12
BELGIUM:	Ghent.	Nov. 8-15.		1
	"	Dec. 6-13.		2
BRAZIL:	Bahia.	Nov. 29-Dec. 13.	12	
CANADA:	Quebec.	Dec. 20-27.	2	
ECUADOR:	Guayaquil	Dec. 13-20		3
FRANCE:	Marseilles.	Nov. 1-30		37
GREAT BRITAIN:	Leeds.	Dec. 13-20	11	
	Liverpool.	Dec. 13-20.	56	
	London.	Dec. 6-13.	1	
	Manchester.	Dec. 6-13	3	
ITALY:	Palermo.	Dec. 6-20.	25	
MEXICO:	City of Mexico.	Dec. 14-28	4	1
RUSSIA:	Moscow.	Nov. 29-Dec. 6	4	
	St. Petersburg.	Dec. 6-13	16	3
TURKEY:	Constantinople.	Dec. 7-14.		1

YELLOW FEVER.

COLOMBIA:	Panama.	Dec. 22-29	4	
ECUADOR:	Guayaquil.	Dec. 13-20.		1
MEXICO:	Tampico.	Dec. 13-20.		1
	Vera Cruz.	Dec. 20-27	11	4

CHOLERA—Insular.

PHILIPPINE ISLANDS:	Manila.	Nov. 2-15	184	12
	Provinces.	Nov. 1-15	252	17

CHOLERA—Foreign.

EGYPT:	Alexandria.	Dec. 1-13.	82	6

PLAGUE—United States.

CALIFORNIA:	San Francisco.	Dec. 11	1	

PLAGUE—Foreign.

MEXICO:	Ensenada.	Dec. 31. .Offic'ly Rep		
	Mazatlan.	Dec. 31. .Offic'ly Rep		

LA RIFORMA MEDICA.

November 20, 1902.

1. Hereditary and Congenital Cardiopathies. G. ARNONI

1.—Arnone states that, contrary to the old belief, stati tics show that congenital affections are more frequent i the left heart than the right; and the mitral valve, pro ably by reason of an hereditary tendency, is malforme at birth and a true stenosis results; or, if the valves b come affected later from some simple cause, it is becaus it offers a *locus minoris resistentiæ* by reason of its defe tive evolution. The author believes that marriage shou be forbidden to those with marked hereditary predispos tion to cardiac affections, and that it should be the phys cian's duty to fortify such patients against that tenden and guard them from all influences which would tend excite cardiac disease. [R. L. F.]

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Serum-Therapy in Typhoid Fever.—Over a year ago Chantemesse published his first article showing the results of his antityphoid serum in the treatment of typhoid fever in Paris (*Bulletins et Mémoires de la Société Médicale des Hôpitaux de Paris,* November 15, 1901). At the Egyptian Medical Congress, held last month, he reported later results, from April, 1901, to December, 1902 (*La Presse Médicale,* December 24, 1902). A review of the statistics of the various hospitals of Paris, omitting that under the direction of Dr. Chantemesse, showed that the combined mortality from typhoid fever was 19.3%. While there were naturally variations, the lowest recorded mortality in any hospital exceeded 12%. In the hospital in Dr. Chantemesse's charge, where serum-therapy was adhered to in every case, there were but 7 deaths out of 186 patients, a mortality of 3.7%. Other treatment employed was practically the same in all the hospitals. Three out of the 7 deaths were due to perforation, one to purulent peritonitis, and one to intestinal hemorrhage. All these patients came under treatment late in the disease. Chantemesse has noted no complications in patients coming under treatment early. So necessary does he consider immediate serum-injections that he gives them even before the diagnosis is certain, for 2 cc. can do no harm. So far in Paris 356 patients have received this serum-treatment, with but 17 deaths, a mortality of 4.7%. At Toulon, out of 151 patients treated, 13 died. Adding this, the mortality was 6%. The German army statistics, always held up as a model in France, give a mortality of 9.5% in typhoid fever. Chantemesse explains the effect of this serum in that it is not only both anti-infectious and antitoxic, but, above all, it excites phagocytosis. Thus it is almost specific in typhoid fever. Besides, he calls attention to the necessity of isolating typhoid fever patients for the protection of other patients. This he considers an important means of prophylaxis.

Exploratory Abdominal Section.—The difficulty of diagnosticating the nature and extent of intra-abdominal disease-processes is conceded by all internists, and daily demonstrated by surgeons; indeed, some surgeons do not like to make a positive diagnosis before opening the abdomen, but are content to divide their cases into the operable and the nonoperable, being satisfied if their judgment do not err in excluding those cases which would not be benefited by surgical procedures. The internist is more apt to strive for a diagnosis; this is true to so great an extent that medical specialist and diagnostician are often regarded as synonymous terms. But all surgery is not operation, nor all medicine diagnosis. The tendency of the former toward operation without careful, thorough efforts to define the pathological process, and of the latter toward oblivion regarding the treatment while studying the development of disease, is harmful and should be checked.

The early resort to exploratory laparotomy, before exhausting all other means of diagnosis, breeds superficiality and detracts from judgment; that it is without danger to life is an argument lightly launched by the thoughtless against any possible objection that may be raised. Most abdominal operations, however, are of necessity exploratory in nature; it is only after the parts have been exposed that the real condition is "discovered" or "revealed" (words common in surgical literature). The permanent success of surgery for cancer of the stomach lies in exploration before the detection of a tumor, and to wait for peritonitis to fortify a belief that intestinal perforation has occurred before closing the opening, usually means a vigil for death.

It is because of the uncertainty of stating precisely what lies beneath the abdominal wall that many cases, especially those in which the diagnosis of malignant disease has been made, should be subjected to exploratory operation. In cases of advanced malignant disease, exploration may often be supplemented by palliative measures, such as gastro-enterostomy, duodenostomy, ileosigmoidostomy or a Maydl operation, which prolong life and make it tolerable. In some cases, instead of malignant disease, the surgeon will find tuberculosis, cholelithiasis, gastric ulcer, chronic pancreatitis, or some other condition equally amenable to treatment. At one time abdominal tuberculosis was universally regarded as malignant, and at the present day we read reports of cases in which a diagnosis of cancer of the head of the pancreas has been made and in which recovery follows exploration, the tumor proving to have been a chronically inflamed pancreas. In rare instances, huge masses in other portions of the abdomen disappear after exploration alone.

In view of the doubt which surrounds abdominal diagnosis, of the possibility of the existence of some remediable condition, of the chance of effecting a symptomatic cure by palliative measures, and in view of the sometimes remarkable resolvent effect of an incision, we have no right to deny those suffering from presumably malignant disease of the abdomen the hope engendered by a celiotomy.

Congenital Hypertrophic Stenosis of the Pylorus and Its Treatment.—Hypertrophic stenosis of the pylorus is a condition about which, until recently, practically nothing was known, and which was seen only in the post mortem room. During recent years, however, there have been numerous reports of infants operated upon for a stenosis of the pylorus occurring a few weeks after birth.

Cautley and Dent (*Lancet*, December 20, 1902) present an interesting discussion of this condition, and report two cases in which Dent performed a successful pyloroplasty. The condition is not a common one, and yet the authors believe that it occurs more frequently than is generally supposed, since the symptoms may be easily misinterpreted or overlooked. Up to the present time the authors have been able to find reports of over 50 cases, and in 19 of these operation was performed. Thomson stated that he has met with 8 cases in 8 years, and one of the authors of the article under discussion states that he has seen 7 cases in 5 years. Infants suffering from this condition, if untreated, die about the third or fourth month. The author's two cases are quite typical, the symptoms consisting in persistent vomiting, constipation and dilatation of the stomach with visible peristalsis. In each case the symptoms appeared when the child was but a few weeks old. Dent performed pyloroplasty, obtaining in one case an excellent and prompt result and in the second great improvement, but this patient died several months after operation from zymotic enteritis. The authors very properly sound a warning against making a diagnosis of this condition whenever an infant is afflicted with persistent vomiting and constipation. When these symptoms are persistent, however, in early infant life, stenosis of the pylorus should be thought of. Dilatation of the stomach and the presence of visible peristalsis are of the utmost value. The authors agree with other writers on this subject, that the stenosis results from a marked hypertrophy of the circular muscular fibers of the pylorus. In many specimens a longitudinal reduplication of the mucous membrane has been noted.

Regarding the treatment, a strong claim is made for pyloroplasty. In this position, however, they stand somewhat alone, as most authorities consider gastro-enterostomy the preferable operation. The claim made for pyloroplasty, and its good results in the two cases operated upon and reported in this paper, tend to show that the objections usually made to the operation exist more in theory than in practice. The experience of no one operator has been extensive in this condition, and it is difficult to determine the best operative procedure. Pyloroplasty is certainly simpler and more quickly performed than gastro-enterostomy, and probably may be looked upon as an operation carrying with it fewer dangers. Gastro-enterostomy in the hands of a surgeon accustomed to performing this operation, would probably give just as good results as pyloroplasty. Dilatation of the pylorus, Loreta's operation, or some modification of it, has been performed a number of times, but we cannot but feel that this method is much inferior to either pyloroplasty or gastro-enterostomy. Dent and Cautley show that the stenosis is not due to spasmodic contraction, since there is no transverse gaping of the wound when the incision is made through the muscle. Thomson maintains that the hyperplasia is secondary to spasms; with this view, however, the authors are not altogether prepared to agree.

This subject is one which demands the attention not only of surgeons, but of general practitioners and obstetricians, since it is into the latter's hands that these patients fall, and any relief to be obtained from operative procedure must come from early rather than from late operation.

The Topical Treatment of Specific Vaginitis.—Gonorrheal vaginitis is, and ever has been, the *bête noire* of the gynecologist. Rebellious to treatment, the pharmacopeia has been ransacked to furnish remedies to control the disease, and not with the best of success. Of all the older medicaments that have been employed there is but one that has consistently given any degree of satisfaction: Silver nitrate, when applied directly to the spots of active inflammation, has been instrumental in arresting the progress of the disease. Solutions of the strength of 10 to 15% have been largely used for this purpose. A few years ago Doederlein and other German gynecologists claimed that by the use of silver nitrate in very strong solutions they could abort an acute gonorrheal vaginitis. Under local or general anesthesia the vagina was painted from the fornices to the vestibule with the silver salt in a solution of one dram to the ounce. Owing to its severity this method has not come into general favor.

The suggestion, also made by Doederlein, that the restoration of the acid environment in the vagina would result in the cure of chronic vaginitis, has not been altogether substantiated. According to this authority the normal bacilli of the vagina secrete a lactic acid which is inimical to the growth of pathogenic germs. Accordingly, he introduced various solutions (one to 5%) of lactic acid into the diseased and alkaline vaginæ. This method has been tried by others with varying degrees of success. A 2% solution is as strong as should be applied in order to avoid a cauterizing effect. Many of the newer silver salts have been used with considerable satisfaction in recent years. Especially is this true of protargol in a 2% solution, argyrol in a 2% solution and itrol in preparations of weak strength. Under the action of these silver salts the vaginal mucosa does assume a condition much nearer the normal. Probably, however, the best results in the chronic cases of this disease have followed applications of trichloracetic acid (1% to 2%) and methylene blue (1%), especially the latter. Painting of the vagina by methylene blue from the vault to the vestibule once or twice weekly has been most prompt in arresting the disease and restoring the character of the mucous membrane. A curious feature associated with this treatment is the rapid decoloration of the painted mucosa. Although of an intense blue color at the time of treatment, within 24 hours the normal coloration will be restored.

The Distribution of Hydrophobic Virus in the Body.—There are a number of interesting problems connected with hydrophobia which claim our attention. Aside from the all important question of the causative agent, which is still unknown, we are still lacking in information on the exact mode of the dissemination of the virus. We know, for instance, that the virus is constantly found in the saliva and in the nervous system, but whether it is also present in other organs and fluids of the body has not been definitely established. Bombici detected the virus in the lachrymal, suprarenal, pancreatic and mammary glands. Cardelli failed to find it in the liver, spleen and crystalline lens. De Blasi and Travali found it in the semen. Roux and Galtier detected it in the lymphatic glands and lymph. Bardach and Rough proved that the virus may be transmitted through the placenta. This was corroborated by cases of alleged placental infection reported by La Josse, Canillac, Kolesnikoff and others, but contradicted by the experiments of Pasteur, Horsley, Celli, De Blasi and especially Zagari. Krokiewicz (*Gazeta lekarska*, No. 8, 1902) innoculated into rabbits pieces of medulla obtained on autopsy from a pregnant woman, who died of rabies, and her nine-month fetus. The rabbit inoculated with the medulla from the mother developed rabies, while the other remained well, thus showing that the virus is not transmitted through the placenta. Nor is immunity to rabies transmitted through the placenta, as shown by the experiments of Högyes. The most exhaustive work on the dissemination of hydrophobic virus has been done by Tcherevkoff. In a recently published paper (*Russky Vratch*, No. 45, 1902) he presents the results of his extensive experiments conducted since 1890. He determined the presence of the virus in the blood, spleen, submaxillary gland, liver, voluntary muscles, pancreas, bone marrow, the fluid from the lateral ventricles and cerebrospinal fluid, suprarenal gland, kidneys, lungs, testicles and various nerves. With the exception of the peripheral nervous system and the submaxillary gland, the virus could not be found in any of the other tissues.

The author has also shown that, when injected into the bloodcurrent, the virus disappears within an hour, being deposited primarily in the liver and spleen. The practical conclusions which can be drawn from these experiments are, first, that the virus is carried only by way of the nervous system, and there is, consequently, no danger if it happens to enter the circulation, and, second, that the various organs of a rabid animal, except the nervous system and salivary gland, may be handled with comparative impunity.

The Uselessness of Kernig's Sign.—In 1884, when Kernig described what is now known as his sign, *i. e.*, inability to extend the leg passively and fully when the thigh is flexed at right angles to the body, he asserted that it was pathognomonic of some form of meningitis. Afterward, from time to time, various observers noted its presence in cases of epidemic cerebrospinal meningitis and tubercular meningitis. But it was not by any means constant in either form of the disease. In 1898, Netter again discussed the regular presence of this sign in all cases of meningitis. These statements led to renewed investigations, and the results have not been at all similar. Men who have written books, Rotch, Griffith, Holt, Comby and others, state that it may or may not be present in meningitis. Some find it more often in epidemic, others in tubercular meningitis, but never constantly in either. In a recent article, Randolph (*American Medicine*, November 8, 1902) says that he has found Kernig's sign in a great number of patients with other diseases, in fully 60% of children suffering from various disorders, and most observers agree with him. In fact, many clinicians have observed that, in conditions in which there is rigidity of all the muscles, Kernig's sign is often easily elicited. But it is never found in healthy, active children. Randolph explains that, when the cerebellum is irritated, this sign is present in cases of meningitis; when it is absent, the meningitis is probably not situated near the cerebellum. But from all this there remains one simple conclusion, namely, that, as a symptom either of tubercular meningitis or of epidemic cerebrospinal meningitis, the presence of Kernig's sign, since it may or may not be present and is often elicited perfectly when there is no question of meningitis at all, is absolutely useless in diagnosis.

Insanity Among the Jews.—The racial susceptibility to disease is a well-recognized phenomenon and is nowhere so well illustrated as in the susceptibility to nervous affections. The Jews, who have given to the world famous musicians, poets, novelists, philosophers, linguists, economists, jurists, financiers and physicians, are also, as a race, more susceptible to insanity, as shown by the following statistics: Jacobs found that, while among Englishmen the number of insane is 3,050 per million, and among Scotchmen 3,400, the number among the Jews equals 3,900. Servi found one lunatic to every 391 Jews in Italy. Mayr states that to each 10,000 Christians in Germany there are 8.6 insane, while among the Jews the number reaches 16.1. In Bavaria the proportion is still greater, 9.8 among Christians and 25.2 among Jews. Rjazansky (*Vratchebnaja Gazeta*, No. 19, 1902) gives his experience of 10 years' practice in a small town, Dagd, with a population made up of 1,014 Jews and 328 Christians. The Jews comprise 190 families, and among them he observed 47 cases of nervous and mental diseases, while, on the other hand, not a single case of mental unbalance occurred among the Christians. Of course, these statistics are too insignificant to enable us to generalize, but they strikingly corroborate the more extensive observations of other authors. There is every reason to believe that the nervous strain under which the Jews have lived and still live in European countries, aided by the intensification of predisposition by close intermarriage, is accountable for the prevalence of insanity in this race.

Degeneracydom.—We think the scientific world owes it to itself to read a recent paper by Dr. E. C. Spitzka, of New York, in which that writer dissects the fallacies of Lombroso, and incidentally coins the above word. The paper, which is published in the *Medical Critic* for December, 1902, presents a remarkable arraignment of the Italian people for their propensity to assassination. So far is Dr. Spitzka from agreeing with Lombroso that Italian assassins (such as Musolino) are necessarily degenerates, that he even seems to incline to the view that assassination is one of the normal impulses of the Italian race, and that it is a habit that has arisen from historical conditions extending back as far as the fifth century before the Christian era.

Some of Dr. Spitzka's figures are, indeed, surprising. A large proportion of assassins in Europe within recent years have been Italians. Taking the proportion of all assassinations per supposed million of the population, the ratios would be:

Italy	1.03
Turkey, Greece and the Balkan States	0.94
Spain	0.80
Russia	0.42
Rest of Europe	0.33

In the period of 1801-1902 the Italians perpetrated 15 successful and 17 unsuccessful attempts at political assassination, as against 32 of the former kind and 44 of the latter kind for the rest of Europe and the United States. These figures refer only to cases in which the assassins were not insane. Considering the size of the Italian population, as compared with that of Europe and the United States, the enormous preponderance of Italy in this bad business is at once evident.

It looks as though Lombroso would have to revise his theories, or else convict his countrymen of being a race of criminal degenerates. We rather incline to Dr. Spitzka's view, and see in modern Italy the same country in which occurred the Syracusan massacres of 404 B. C., under Dionysius; the Sicilian Vespers of 1282 A. D. and a long and historic line of political assassinations. It is not degeneracy in the Italians—it is something else.

The Right to Bequeath One's Brain.—We deplore the loss which Professor Burt G. Wilder has sustained in not being able to obtain Mrs. Elizabeth Cady Stanton's brain. According to the *Medical Critic*, Mrs. Stanton had embodied the bequest in her will, but the will was not opened until some time after the testator's death, and it was then too late to secure the desired relic.

It seems that, in some States at least, the law does not recognize the right of a person to dispose of his or her own body. This was so decided in a recent case in California. The effort of scientists to obtain the brains of distinguished persons is a perfectly reasonable one. But there are many obstacles and prejudices in the way. The subject of brain morphology might be not a little advanced if a large number of such brains could be secured for study and comparison. In Philadelphia we have an Anthropometric Society, which has this very object, and which has already obtained the brains of some very distinguished persons. Organized attempts at such missionary work have been made in Europe, but without much success. In this country Professor Wilder is the most persistent and most successful single operator in this line. He deserves success, for he is one of the best-equipped morphologists in America, and a man who can be relied upon to make a proper and purely scientific use of his material. We feel privileged to say that Dr. Wilder is not discouraged, for, although he has lost the brain of Mrs. Stanton, he has assured us that "there are more on the way."

Nothing New.—As an example of careless lay writing on medical topics we commend a recent article in *Harper's Weekly*. The writer is mildly critical of Christian Science—but still he is evidently impressed with the belief that this foolish craze is something entirely new. Speaking of Mrs. Eddy, he says: "Somehow she has got hold of some important truths which the regular doctors have missed."

Of course, such an admission is just what the Christian Scientists want. And, of course, the admission is absurd. There is nothing new in Christian Science—nothing that has not been known ever since Moses set up his brazen serpent in the wilderness, or since the worship of Aesculapius was conducted at Epidauros amidst scenes of classic splendor. It is the same old scheme of trifling with religious credulity, and working a faith-cure mill—a scheme as old as the race and as hollow as a pumpkin that has gone to seed. A "Journal of Civilization" should not publish such nonsense.

Current Comment.

GERMS IN INTERSTELLAR SPACE.

That living germs may be floating about in interstellar space is suggested by T. D. A. Cockerell in a letter written from Las Vegas, N. M., to *Nature* (London, December 4). He says:

"It occurs to me that there is no reason why small living bodies (*e. g.*, spores of bacteria) should not be floating about by themselves in space. We know from recent experiments that the cold of space would not in the least destroy their germinating power, but, on the contrary, would (I presume) preserve them in a dormant state indefinitely. Now, why should not such bodies gradually settle down upon the earth, without any destructive friction? . . . We still have to account for the living bodies in space. Is there any way in which minute particles (as bacterial spores) could leave the earth (or any other planet)? They could be carried far up in atmospheric currents, and my friend Mr. Weinzirl has found bacteria in the mountain air of the arid parts of this country. Is it possible that electric currents (such as produce the aurora) could in some cases carry them far enough to permit them to escape into space? I do not know enough about electricity to judge of this possibility."

Sir Oliver Lodge, commenting on this suggestion in the same number of the paper, says:

"I suppose it not impossible that the dust of space might contain life germs of some kind. I do not think the suggested bombardment by electric corpuscles sufficient cause, though electric repulsion might sometimes act, and it has been suspected the earth may have a faint cometary tail; but no such action is needed to account for the existence of cosmic dust of any kind. Whether the advent of new diseases could be thus accounted for is a possible matter for debate."

—*The Literary Digest.*

Correspondence.

THE EGYPTIAN MEDICAL CONGRESS.

[Note by the Editor.

The following interesting letter by an eye-witness was written to a medical friend in America, and is printed by us because it gives a view of the Egyptian Medical Congress from a different standpoint from the usual professional one. The writer's name is withheld by request.]

Cairo, December 24, 1902.

The Khédive welcomed the Congress at the Opera House with a brief speech in French. Then followed short addresses in English, French, Italian, German, Hungarian and, I think, Persian. The house was full; ladies in the logas; among them Lady Cromer with the wife of Major Gorgas. The arrangements for entertaining the visitors were elaborate—especially our introduction to the Sphinx at midnight.

A special train started from the station at 8.30—followed by others—and conveyed us to Mana House. The way from this point to a spot some distance beyond the Sphinx was lighted by lines of cressets filled with flaring billets set on poles. One could flounder through the sand, and project himself over rocks and cobblestones on his own feet or on those of a donkey or camel. A bright, white light was thrown on the big pyramid—until the moon rose, giving it a vastness one does not appreciate by day. I fancy because of its increased foreshortening, which makes the breadth greater, I had been disappointed in it. Now, however, its crudity was veiled, and it was all majesty. A whole squadron of camels stood beside the path lending their uncanny shapes to the weirdness of the landscape. Beyond these, at a point where we seemed in the uncertain light about to enter some unhallowed defile, we passed between two lines of mounted bedouins in white hoods and mantels, each presenting a scimetar that glowed like his eyes, or a lance, the angry glitter of which was softened somewhat by a fluttering pennon.

It was as histrionic as being on a crusade; and, indeed, as we turned a corner beyond those lowering life guardsman of the Sphinx, we saw, apparently a long way off across the sands, a brilliantly lighted pavilion—Saladin's?—of great size, and through the deliciously soft air we could hear the reeds and subdued brasses of a military band, from one of the English regiments. From the realm of old night, and oppressed at that lonely hour by the desolation about us and the awful weight of all the centuries Napoleon piled on the Pyramids, we came abruptly upon a scene of imperial splendor. We were soon treading upon luxuriant rugs and carpets spread on the sand, with countless lamps of peculiar brilliancy in chandeliers over our heads, and in the midst of upholstered easy chairs clustered about small tables suggestive of the sherbets and choice viands preparing behind a latticed screen.

We seated ourselves in commoner chairs outside, among a throng of seven or eight hundred men and women, to watch the evolutions of Arab horsemen, a Nautch girl's dancing, and the contortions and primitive attempts to dance of a lot of fellahin—quite like our darkies. But the *pièce de resistance* of the night was the throwing of colored lights on the Sphinx. By day I could make but little of that battered face; now, under this encouraging blaze, the ancient monarch, Amenembat, began to awake. A rosy light played, like a reviving spray, upon his features, partially opened his eyes, the lids just parting. A dazzling white light roused him from coma almost to complete consciousness. It was wonderful!

We reached home about 2 A. M. I may well say *home*, for we are at a most home-like pension—Rossmore House—kept by two Scotch ladies, where we have lofty, sunny rooms and a good table, for two dollars and a quarter a day. Our windows look out on a garden full of trees and covered with green leaves, even now at Christmas. We are away from the dust of the street, and are, in short, as comfortable as possible. We shall return to the house after our voyage to Assouan, and remain here until the weather permits us to go to Athens—probably toward the end of March.

Receptions for the doctors have been given at the "Continental" and at Dr. Varonoff's, and an excursion to the Barrage, a few miles from here, was made on three of the Khédive's steamers, but the grandest entertainment of all, the ball at the Abdine Palace, had to be given up, owing to the untimely death of the mother of the Khédive's uncle. This had promised to be a rare treat, and no doubt the ladies had made great preparations. However, an afternoon reception at the palace was arranged.

I have just returned from this. About 300 were there—English, French, Italian, German, men and women, many native doctors and others from Syria, Persia, Turkey, etc. The Palace is furnished in the French style, except the dining-room, which is Egyptian. Nearly everything was in excellent taste—all, indeed, but our room. The waiters were gorgeous in scarlet bag-trousers and jackets heavily embroidered in gold, with broad golden girdles. The tables were trimmed with maiden-hair and red flowers, the names of which escape me. The guests seemed to apreciate these well-laden tables.

The Khédive, an almost white and quite simple young man of 35—in appearance—could say in English without an accent, "Doctor, I am pleased to meet you." He shook hands in the good old-fashioned way, and did not raise his fingers to the level of his clavicle and wiggle them.

Any number of papers have been read in various tongues, and I fancy all are satisfied. I am sure all are indebted to the gentlemen who have given their time to carrying the congress forward.

Cook is taking members to the Assouan and back at greatly reduced rates. He is, probably, glad to get passengers, for the fantastic cholera tales are keeping many away.

Reviews.

An Introduction to Dermatology. By Norman Walker, Assistant Physician for Diseases of the Skin to the Royal Edinburgh Infirmary. Second Edition. Revised and Enlarged. New York, William Wood & Co., 1902. Octavo, Pp. 301.

This attractive book contains much that should be interesting and instructive to the student of dermatology. The results of the latest investigations in the bacteriology and microscopical anatomy of a number of skin affections are given clearly and succinctly, and the work is an excellent addition to a library containing the current text-books since it includes much information otherwise to be found only in one or two of those which have most recently appeared. Should, however, the beginner, attracted by the title, "Introduction to Dermatology," take Dr. Walker's work as his first guide to the study of diseases of the skin, he might find himself confused and, perhaps, discouraged by the peculiar manner in which some of the topics are presented. A text-book, particularly one introductory to the subject, should be framed upon conservativ lines and should in no instance depart from such principles and views as are currently taught by the best instructors. But Dr. Walker employs a classification based upon that of Unna, in his "Histopathology of the Skin," which, however valuable in a scientific treatise, is different from the arrangement of diseases of the skin as commonly taught, and which must prove confusing in clinical study.

In his definition of some of the individual diseases, the author disposes of some serious difficulties in, what we must think, an altogether too jaunty style. For instance, the definition of eczema is a question much discussed among dermatologists at the present time. The student cannot be expected to enter into a study of this rather abstruse subject, but should be supplied with some sort of working definition, which will enable him to recognize the disease and treat it intelligently. But this is Dr. Walker's definition: "Eczema is the term commonly applied to any wet or scaly inflammation of the skin, of the cause or nature of which the observer is ignorant." This is neatly epigrammatic, but it is not informing.

Aside from these peculiarities we have nothing but praise for the volume before us. The paper and print are excellent, the photographic illustrations numerous and helpful, and the chromolithographic pictures of the various affections serve to enliven the text. In addition, there are a large number of sketches by the author giving a general idea of the microscopical aspects of the various lesions.

[A. V. H.]

Diseases of the Pancreas and Their Surgical Treatment. By A. W. Mayo Robson, F. R. C. S., Senior Surgeon, Leeds General Infirmary; Emeritus Professor of Surgery, Yorkshire College, Victoria University, England; and B. G. A. Moynihan, M. S. (Lond.), F. R. C. S., Assistant Surgeon, Leeds General Infirmary; Consulting Surgeon to the Skipton and to the Mirfield Memorial Hospitals, England. Handsome octavo volume of 293 pages, illustrated. Philadelphia and London. W. B. Saunders & Co., 1902. Cloth, $3.00 net.

This valuable contribution to abdominal surgery adds to the debt which the medical profession already owes to Mr. Mayo Robson and his associate. The monograph on the "Surgery of the Gall-Bladder and the Bile-Ducts," written by Mr. Mayo Robson some years ago, and that on the "Surgery of the Stomach," by him and Mr. Moynihan, recently published, have been of conspicuous service in aiding surgeons to solve knotty questions in the operative surgery of the abdomen. The present volume deals with another field in the upper portion of the abdominal cavity;—a field which has until recently been surgically an almost unknown land. The 3 works mentioned are a trio which surgeons of all countries will constantly use as reference hand-books. A conspicuous quality in all of them is a happy combination of scientific knowledge and practical surgery. The authors have used the results of the physiologist and pathological chemist in working out the best methods of surgical treatment for lesions of the organs under consideration.

The book on the pancreas, which is now under discussion, deals with the anatomy and experimental physiology of the pancreas, then takes up injuries and inflammations of the organ, and finally treats of pancreatic calculus, cysts and new growths. There are many valuable suggestions made, which are doubtless unfamiliar to the average surgeon. So much has been done of late in investigating the physiology and pathology of the pancreas that a perusal of this book will be found of the greatest value. It goes without saying that the literary style of the authors is excellent: this has been the characteristic of their previous publications.

The possibility of injury to the pancreas from slight blows in the epigastric region is recalled. This is because its tissue is so soft that it may be easily bruised. It is suggested by the authors that this organ may be injured unintentionally by the ordinary manipulations in operations for gall-stones. It is said that the gland heals rapidly after it has been wounded and sutured, but the statement is made that successful intervention is rarely possible, because so often there are present coincident lesions of the liver, spleen and other structures.

The routes by which access may be obtained to the pancreas for operative attack are discussed. It is stated that suppurative pancreatitis may be satisfactorily treated by first establishing the diagnosis by means of a small incision in the anterior wall of the belly, and then making a free vertical incision in the left costovertebral angle. This permits the insertion of the whole hand, if necessary, to examine the organ and makes provision for the evacuation of pus and gangrenous material.

In operations on jaundiced persons the hemorrhage is said to be particularly dangerous when the jaundice depends upon disease of the pancreas. The authors advise the use of calcium in full doses both before and after operation, as a corrective of the hemorrhagic tendency. They use 30- to 60-grain doses 3 times a day for one or two days previous to operations, and give enemata of 60 grains 3 times a day at least 3 days afterward.

These illustrations of the opinions and suggestions of the authors are given here to show the practical nature of the work. [J. B. R.]

A Text-Book of Anatomy by American Authors. Edited by Frederic Henry Gerrish, M. D., Professor of Anatomy in the Medical School of Maine, Bowdoin College. Second edition, revised and enlarged. Illustrated with 1003 engravings in black and colors. Lea Brothers & Co., Philadelphia and New York. 1902.

Two years have sufficed to exhaust the first edition of Gerrish's Anatomy, as the composite work, of which Dr. Gerrish is editor, is known, and to call for a new edition. The authors, besides the editor, are Arthur Dean Bevan, of Rush Medical College; William Keiller, of the University of Texas; James Playfair McMurrich, of the University of Michigan; George David Stewart, of the University and Bellevue Hospital Medical College; and George Woolsey, of Cornell University. The book is arranged as is usual with anatomical textbooks, the chapters treating of the elementary tissues, embryology, the bones, the articulations, the muscles, the fasciæ, the bloodvascular system; the lymphatic system, the cerebrospinal axis, the nerves, the organs of digestion, the organs of respiration, the urinary system, the ductless glands, the organs of generation, relational anatomy and practical anatomy. In the majority of anatomical text books with which the writer of this review is familiar, the fasciæ are described with the muscles. In this work a seperate chapter is devoted to these important connective tissue sheets. Whether wisely or not it is difficult to say. Evidently, in the experience of the authors, they have been impressed with the small amount of attention with which the student usually pursues this part of the subject and have decided to make it more prominent by divorcing it from the muscular descriptions. Possibly this is very wise; it would be a good plan for teachers generally to test this plan.

Another new and admirable feature of the book is the use of illustrations made from frozen sections and the use of normal skiagraphs. Frozen sections have proved of great value for teaching purposes to the writer of this review for the past 2 or 3 years, and it is a very wise plan to include such illustrations in a text-book. The illustrations generally are good, to be sure, they are mostly taken from Testut, Kocher and Braune; but they are well drawn and well reproduced.

On the whole, the book is a well-executed piece of work, and is to be commended to the student. [J. M. S.]

Laboratory of the Philadelphia Medical Journal.

In Charge of HENRY LEFFMANN, A. M., M. D.

Carbolic Soaps.

Many so-called disinfecting soaps are to be found on sale. Some of these are mere pretences, but others are attempts in good faith to incorporate germicides into the ordinary soapmass. In many cases the preparation will be necessarily a failure, for soap is incompatible with the common metallic salts, such as corrosive sublimate, zinc chloride and aluminum chloride. The organic disinfectants, such as the naphthols, phenol, formaldehyde, do not react markedly with soap and have been extensively used with it. Ordinary soaps are somewhat antiseptic, and many of the organic disinfectants are not actively germicidal, but rather retaining agents, hence many microbes, unless subjected to the action of these agents for a long time, will become active when the antiseptic is removed. It seems illogical to associate soap and germicides in one mass, for the soap is usually quickly washed off and with it, of course, the antiseptic. The same objection applies to many medicated soaps.

When phenol (carbolic acid) was first exploited as a disinfectant, it was claimed to be very efficient, but later investigations have diminished the enthusiasm. Much difference exists in the quality of the phenol used, materials sold under the title "carbolic acid," ranging all the way from a pure phenol to merely inert tar-oils. In 1885 I tested a sample of the so-called carbolic acid that the Philadelphia Board of Health was using liberally as a disinfectant, and found that it contained only traces of phenol. The same irregularity might be expected in any preparation purporting to contain carbolic acid, and it was, therefore, thought worth while to test some of the carbolic soaps. An examination made by Mr. A. H. Allen, of Sheffield, England, some years ago, showed that few such soaps, as sold in that city, contained more than 5 per cent. of phenol, and most of them much less. A fair quality of phenol is not now expensive, and, in view of the prices obtained for the articles, manufacturers can afford to put in several per cent. of it.

For the laboratory tests, samples of all the carbolic soaps well-known in the Philadelphia drug trade, were obtained and tested for phenolic bodies. Most of the samples had but a slight odor of phenol, but the test showed that a small amount was present in nearly all. In none of them does it appear that the amount is sufficient to give prompt disinfectant action and it seems, therefore, as noted above, that the effect of the phenol is best obtained by using it in solution of known strength, after the detergent action of a pure soap has been secured.

Drunkenness Cure.

While it is not intended to devote attention to the analysis of nostrums, yet the strong claims for the efficacy of a remedy for drunkenness led to a curiosity to determine what it contained. Some of these remedies, as is well known to physicians, are merely alcoholic preparations, others contain tartar emetic. The article in question sells at one dollar per box, containing twelve powders, each weighing about 9 grains. The powder gave no evidence of any of the ingredients expected. On being heated in a platinum crucible, it charred, emitted an odor of burnt sugar and finally burned away leaving but a trace of ash. No antimony nor mercury compound was present. Ammonium chloride was detected. There was no alkaloid nor alkaloidal salt. The only materials that could be found were *milk sugar* and *ammonium chloride*.

American News and Notes.

PHILADELPHIA AND PENNSYLVANIA.

University of Pennsylvania.—The bricklayers' strike has long delayed the completion of the new laboratories. The differences between the contractor and the workmen, begun almost a year ago, have just been settled, and it is expected that the buildings will now be rapidly completed. —An anonymous donor has given $10,000 to the University Hospital, to found 2 free memorial beds.—In his annual report Prevost Harrison mentions the fact that a large number of students have been availing themselves of the composite course in arts and medicine, by which they reduce the number of years required for attaining both the A. B. and M. D. degrees from 8 to 7 years. He also suggests that it might promote a higher standard of medical education if the State should appoint a board of examination to prescribe a standard of qualifications for those wishing to enter medical schools in the State.

Woman's Medical College, Philadelphia.—We are reliably informed that Dr. Anna E. Broomall, who recently resigned the position of professor of obstetrics, will finally sever all connection with the Woman's Medical College of Pennsylvania next May. The faculty of the College is prepared to consider applications for the chair of obstetrics.

The Health of Philadelphia.—During the week ending January 17, 333 cases of typhoid fever were reported with 19 deaths. Of these, 29 occurred in the Twenty-ninth ward, 24 in the Twenty-eighth ward, 23 in the Thirty-third ward and 19 in the Twenty-fourth ward, most of the cases being in the northwestern portion of the city. There were also 35 cases of smallpox and 80 cases of scarlet fever reported during the week, an increase of 2 each over the number reported during the week preceding. The number of cases of diphtheria reported showed a slight decrease. During the week the Masonic Home, containing 76 old men, was quarantined on account of the occurrence of a case of smallpox at the institution. New cases of smallpox were also reported at Duquesne, Green Creek, Warren and Bristol, Pa.

Pottsville Hospital.—The new buildings of the Pottsville Hospital were formally opened January 15. The hospital is now valued at over $100,000, and has been given an endowment of $50,000, by Mr. and Miss S. Shippen, of Philadelphia, the founders. The institution contains 75 beds, and a new surgical ward costing $25,000 has just been added. This was also the gift of the founders of the institution.

Society Meetings Next Week.—The following societies will meet next week at the College of Physicians, Philadelphia, at 8.15 P. M.: Tuesday evening, January 27, Neurological Society, and Wednesday evening, January 28, County Medical Society.

The Health of Williamsport.—The secretary of the State Board of Health of Pennsylvania reports that Williamsport continues to be the healthiest city of Pennsylvania, both as regards sanitation and low death-rate. Williamsport is also the fourth healthiest city in the United States.

A Correction.—We learn that the statements made in our issue of January 10, reporting extensive investigations undertaken by Dr. A. C. Abbott, professor of hygiene at the University of Pennsylvania, and bacteriologist to the city of Philadelphia, to show the relationship of typhoid fever to infected oysters, are incorrect. We have Dr. Abbott's authority for the fact that not a word printed in the item referred to was true.

Pennsylvania Hospital.—By the will of the late Margaret E. Lewis, almost $5000 were left to the Pennsylvania Hospital.

NEW YORK AND NEW JERSEY.

A New Treatment for Blood Poisoning.—At the last meeting of the New York County Medical Society, January 19, Dr. C. C. Barrows reported a new treatment for blood poisoning. Although Dr. Barrows experimented only upon one case, he believed that this new treatment, which consists in the intravenous injection of 500 cc. of a formalin solution (1-5000), is a specific in severe cases of septicemia. In the case which he reported, a negro woman with a temperature of 104.3° F., blood poisoning followed parturition. In spite of local surgical procedures, her temperature reached 107° F. Then it was that Dr. Barrows had a culture made from the woman's blood in which virulent streptococci were found. Though the woman was at this time almost in a state of collapse, the intravenous injection was given nevertheless. Her temperature, which was 108° at that time fell to 101° the next day. A second injection was then given, after which her blood, on examination, was found free from streptococci. This paper raised a great deal of discussion. More cases, with further corroborative confirmation, will settle the question of the efficacy of this new method of treatment. Dr. Barrows thought of using formalin because he had heard of the good effects achieved by this drug by Dr. Fleming, at Liberty, N. Y., and by Dr. Maguire, of London. Dr. Waitzfelder, of Gouverneur Hospital, believed that, in their action, both formalin and normal salt solutions were very similar. Dr. Bayner believed that the case reported by Dr. Barrows would probably terminate fatally, according to the latest symptoms observed. Dr. W. R. Pryor uses iodine in the treatment of blood poisoning due to streptococcus infection. Dr. J. Whitridge Williams, of John Hopkins University, advised the use of normal salt solution in these cases, but questioned the wisdom of injecting formalin solutions. Dr. W. M. Polk insisted that this case demonstrated the harmlessness of the formalin injections. In closing, Dr. Barrows stated that he believed that the woman would recover.

Academy of Medicine, New York.—At the annual meeting held January 16, papers were read by the retiring president, Dr. Robert F. Weir, and by his successor, Dr. Andrew H. Smith.

The Health of Atlantic City, N. J.—At the annual meeting of the Board of Health, held last week, it was reported that the city was in an excellent sanitary condition, that there were no cases of contagious diseases, and that there was less illness on the island than had been reported for a long time. The new president of the Board of Health is Dr. M. L. Somers; the secretary, Dr. Edward Guion.

College of Physicians and Surgeons, Columbia University, New York City.—Dr. L. E. LaFetra has just been appointed instructor in diseases of children and chief of clinic in that department of the College of Physicians and Surgeons.

SOUTHERN STATES.

Bubonic Plague Conference.—The national convention of delegates from the various State Boards of Health, called to consider the danger threatened by the possible introduction of the bubonic plague into the United States, was held in Washington, D. C., January 19. This convention was called by Surgeon-General Wyman, of the U. S. P. H. and M.-H. Service, and was demanded by the State Boards of Health, of Connecticut, Colorado, Texas, Louisiana, Minnesota, Maryland, Illinois, New York and Pennsylvania. Each State was represented by one delegate. There is no doubt that genuine bubonic plague has existed in San Francisco since March, 1900, 93 cases of the disease having occurred up to December 11, 1902. The epidemic has been confined to the Chinese quarters of the city, which have been rigorously quarantined. The San Francisco authorities report that the epidemic is now well under control, and will surely disappear in a few months more. On account of the rigorous quarantine against Mazatlan, Mexico, where 116 deaths from the plague have occurred since January 1, it is believed that there is no danger of introducing bubonic plague from Mexico into the United States. In his address, Surgeon-General Wyman said that 22 dead rats had been found in Chinatown, 11 of which were infected with the plague. Out of the total 93 cases, 6 occurred in white people and 4 in Japanese, the rest having been in Chinese. The following resolutions were adopted: The presence of plague in California is established beyond doubt by: (1) The investigation of Kellogg, of the San Francisco Board of Health, Ryfkogel, for the California State Board of Health, and Kinyoun, for the United States Marine-Hospital Service. (2) By the later investigations of Pillsbury for the State Board of Health, and by those of J. White, Flint, Currie, Carmichael, Blue and Glennan for the United States Marine-Hospital Service. (3) By the findings of Flexner, Barker and Novy, composing a special committee acting under Federal authority. (4) By the findings of independent and disinterested investigators (supplied with materials for autopsies made at San Francisco, and working in San Francisco, Chicago, Boston, New York, Washington, Baltimore, Philadelphia and Ann Arbor). (5) By the occurrence of a case of human plague in Ann Arbor due to an accident in the manufacture of Haffkine's prophylactic fluid with a culture of plague bacillus obtained in California. (6) By the autopsy records of ninety cases of plague, now in the possession of the United States Marine-Hospital Service, and of the San Francisco Board of Health, and published in part in the *Occidental Medical Times* of San Francisco. The presence of plague in any community where proper restrictions are not taken to prevent its spread is an injury to the best interests of that community. Such injury is in any case avoidable by the proper co-operation of all interests involved, commercial, professional and governmental. This conference regards the habitual publication of the actual facts relative to infectious disease and preventive procedures as the surest route to popular confidence, and is one of the means best adapted to minimize the injury liable to result from the presence of such diseases. The present danger to California and to the United States lies primarily in the persistence during nearly 3 years of a definite nidus of plague infection in that part of San Francisco known as Chinatown; but the gravity of this circumstance is greatly increased by the gross neglect of official duty by the State Board of Health of California, and the obstructive influence of the recent Governor of California, by the failure of the city government of San Francisco to support its city Board of Health, and by the obstacles opposed to the operations of the United States Public Health Service. The conference will consider the safety of the country sufficiently assured as soon as satisfied that a competent city Board of Health of San Francisco, and a competent State Board of Health, in co-operation with the United States Public Health Service, will proceed under definite, harmonious and effective laws and ordinances; that they are provided with ample funds, and that they are jointly and severally in the free exercise of their lawful powers. The conference expresses its conviction that the United States Public Health Service has deserved well of the State of California and of the country, and that it would go far toward the restoration of the popular confidence if the United States public health officers were admitted to the same relations with the State Board of Health as have been steadily maintained with the city Board of Health of San Francisco. Representatives of 19 different States were present. The conference will meet again in May or June next.

Tetanus in Norfolk, Va.—Between December 25 and January 8, 14 days, 17 deaths occurred from lockjaw in Norfolk, all of which followed wounds received from toy pistols. Most of these pistols were Christmas presents.

The Health of Baltimore.—During the week ending January 17, 317 cases of measles were reported. On this account a public school has been closed. One case of smallpox is reported in the eleventh district. There is also some smallpox at Cumberland, Md.—A number of smallpox cases are reported in Washington, D. C., and at Richmond and Stephens City, Va. The Hospital for Contagious Diseases at Norfolk was closed last week, and there is now no smallpox in the city.

Bryan Infirmary, Pensacola, Fla.—This institution was destroyed by fire January 14, one patient being burned to death The other patients were all rescued and were removed to St. Anthony's Hospital.

Pure Food Experiments, Washington.—The Secretary of the Department of Agriculture, who is now experimenting with food preservatives upon adults, intends to attempt similar investigations upon infants and invalids. This scientific research will probably extend through 3 or 4 years. It has been announced that the numerous infant foods upon the market will all be tested, to see how appropriate or how inappropriate these preparations are for babies.

Union Hospital, Elkton, Md.—The incorporation papers for the new Union Hospital of Cecil county at Elkton have been signed. Among the incorporators are Drs. C. M. Ellis, Howard Bratton and G. S. Dare.

Maryland State Board of Health.—At the annual meeting, held January 14, Dr. W. H. Welch, of Johns Hopkins University, was elected president. The bacteriologist and assistant bacteriologist were re-elected. The report on smallpox in the State was satisfactory, there being only 2 or 3 cases now in Maryland.

Pure Food Bill.—The Senate Committee, January 8, reported a substitute for the Pure Food Bill which recently passed the House of Representatives. The bill strikes out the provision of the former bill requiring the Agricultural Department to fix the standard for purity of food and drugs.

In Honor of Dr. John Brooks.—Dr. Brooks, who died at the National Soldiers' Home, Hampton, Va., December 3 last, was assistant surgeon of that institution, in which he spent 25 years. A memorial in his honor is now being prepared. When finished, this will be erected in the Soldiers' Home.

Diphtheria on the U. S. Training Ship Buffalo.—Because of the presence of 5 diphtheria patients on board, the training ship *Buffalo*, with 750 recruits, which reached Charleston, S. C., January 17, was held at Port Royal in quarantine, where the vessel was thoroughly disinfected the next day.

Enno Sander Prize.—The subject of the Enno Sander Prize for 1903 is The Differential Diagnosis of Typhoid Fever in Its Earliest Stages. This prize, given by the Association of Military Surgeons of the United States is open to all persons eligible to membership of that association. The Board of Award consists of Dr. Austin Flint, New York; Colonel Calvin DeWitt, U. S. A., and Dr. V. C. Vaughan, of Ann Arbor, Mich. In fixing the precedence of the essays submitted, the board will take into consideration, primarily, originality, comprehensiveness and the practicability and utility of the opinions advanced, and, secondarily, literary character. Three type-written copies of the essay, to consist of over 10,000 and not more than 20,000 words, exclusive of tables, should be sent sealed to the secretary of the association, J. E. Pilcher, Carlisle, Pa., at least one month before the next annual meeting. The essay shall contain nothing to indicate the identity of the author. Each essay should, however, be authenticated by a *nom de plume*, a copy of which shall accompany the essay in a sealed envelope containing the author's name, rank and address. The envelope containing the name of the successful competitor will be publicly opened at the next annual meeting, and the prize, a gold medal, of the value of $100, thereupon awarded. The successful essay will become the property of the Association of Military Surgeons of the United States and will appear in its publication.

MISCELLANY.

Bubonic Plague in Mexico.—According to the Public Health Reports of January 16, the first suspicious case of bubonic plague occurred at Ensenada, Mexico, about the middle of last October. It appears that there were, already at this time, some cases suspicious of bubonic plague at Mazatlan, whither the disease was probably brought direct from China, as mainly Chinese have been affected in both places. By December 8 there had already been 10 cases and 10 deaths at Ensenada. While the first case appeared in a Chinaman, the rest occurred in Mexicans. Dr. Grubbs, who made thorough investigations December 18 last, at Ensenada, found no cases at that time. Two deaths occurred, however, December 25, one in an Italian, the other in a Mexican, in which cases a provisional diagnosis of bubonic plague was made. Further investigation confirmed this diagnosis. Dr. Grubbs believes that there remains little doubt that bubonic plague has existed at Ensenada for over 3 months. The disease first appeared at Mazatlan even earlier. There are no cases of the plague, however, at Guaymas. Seven deaths with 10 new cases were reported at Mazatlan, January 12; 7 deaths also occurred the next day. On January 14, there were 7 new cases with 8 deaths; January 17, 12 deaths were reported and 8 new cases. In all there have been 116 cases of bubonic plague at Mazatlan, 107 of these having occurred since January 1; 106 houses and several vehicles have been burned. Eight fatal cases of the plague are also reported at Ahome. The deaths at Mazatlan thus far this month exceed the number of those from all diseases for the entire month at other times. It is reported that there is a lack of physicians for the new sanitary stations in Mexico. Great disappointment has been expressed at the non-arrival of the anti-plague serum which was expected on the steamer from Guaymas.

Smallpox in the United States.—Between December 27, 1902, and January 16. 1903, 2352 cases of smallpox, with 105 deaths, were reported as compared with 6680 cases, with 93 deaths, in the previous year.

Smallpox in Barbados.—Between December 5 and 20, 10 cases of smallpox occurred, with 2 deaths, this number being 16 less than that reported during the previous fortnight. This left 58 cases under treatment. The total number of cases has been 1393, with 112 deaths.

The Health of Guayaquil, Ecuador.—Between December 1 and 20, 26 deaths occurred from yellow fever; between November 23 and December 20, there were 5 deaths from smallpox, 3 within the previous week. The port has been closed to steamers from Panama and Mexican ports, on account of the prevalence of bubonic plague there.

Obituary.—Dr. William F. Farrar, at Richmond, Va., January 6, aged 72 years.—Dr. George E. Shuey, at Medora, Ind., January 8.—Dr. R. S. Markall, at Cloverdale, Cal., January 10.—Dr. Eli H. Coover, at Harrisburg, Pa., January 13.—Dr. Robert H. Goldsmith, at Baltimore, Md., January 13, aged 71 years.—Dr. Alexander J. Gordon, at Lignum, Va., January 14, aged 70 years.—Dr. John Allard Jeancon, at Newport, Ky., January 13.—Dr. James McCullough, at Watertown, N. Y., January 13, aged 48 years.—Dr. Charles H. Hedges, at Charlottesville, Va., January 12, aged 85 years.—Dr. George W. Harding, at Ahmednagar, India, January 14.—Dr. William H. Hildreth, at Newton, Mass., January 15, aged 65 years.—Dr. George F. Motter, at Taneytown, Md., January 16, aged 61 years.—Col. Isaac H. Shields, M. D., at Philadelphia, Pa., January 13, aged 64 years.—Dr. Frederick J. Bancroft, at San Diego, Cal., January 17, aged 68 years.

GREAT BRITAIN.

Royal College of Physicians, Edinburgh.—At the recent annual election, Dr. T. S. Clouston was appointed president for the ensuing year.

The Investigation of Ophthalmia in Egypt.—It has recently been announced that Sir Ernest Cassel has given the sum of $200,000 for the investigation of ophthalmia and other eye diseases among the natives in Egypt. It is intended to train native medical men in the diagnosis and treatment of diseases of the eye, for only native physicians can induce poor Egyptians to learn cleanliness.

Women Medics in England.—Medicine as a profession for women is constantly growing in popularity in London. Women now holding medical degrees in Great Britain number more than 500.

To Cure Miners' Phthisis.—The Chamber of Mines of Johannesburg has offered 3 prizes, $1500 and a gold medal, $750 and $500 respectively, for the 3 best practical suggestions and devices for the prevention of miners' phthisis. The general assumption is that it is caused by the inhalation of the fine dust thrown off during machine-drilling operations. The following points are to be taken under consideration: First, the applicability of the device or apparatus to the existing system of machine drilling; second, the practical demonstration of the device or apparatus. The judges are 2 members of the Transvaal Medical Society, 2 members of the Mine Managers' Association of the Witwatersrand, 2 members of the Mechanical Engineers' Association of the Witwatersrand, 3 consulting mining engineers to be chosen by the Chamber of Mines and 2 practical rock drillers, to be selected by the Mine Managers' Association.

CONTINENTAL EUROPE.

Instrument for Measuring Mental Fatigue.—Among the exhibits for the St. Louis Exposition, now being prepared in Germany, is an instrument called the esthesiometer which, by measuring the sensitiveness of the skin, shows the sensitiveness directly due to brain fatigue. Another instrument which will be exhibited measures the time elapsing in the reaction of the sensorium after mental exertion. The principle upon which this is based is that mental work produces fatigue of the nerve centers. Experiments show that geometry and Latin are far more exhausting than history.

A New Cure for Hay Fever.—Dr. William Dunbar, of St. Paul, Minn., now director of the Hygienic Institute in Hamburg, recently announced that a toxin prepared from rabbit serum is an effective cure for hay fever.

Post-Graduate Medical School at Turin.—The Italian Minister of Public Instruction has authorized the establishment of a post-graduate school of hygiene and medical jurisprudence at the University of Turin, intended for graduates in medicine, granting the title of sanitary officer.

Physicians Honored in Switzerland.—The newly elected President of Switzerland, Dr. Adolf Deucher, elected to that position for the third time, is a physician. Besides, the Swiss Minister to France, Dr. Lardy, is also a physician.

The History of Medicine.—A large society has been formed in Holland for the study of medical history. The foundation of this society was due to the initiative of Dr. Peypers, the editor of *Janus*.

The Centennial Celebration of the University of Jurjew, Formerly Dorpat, Russia.—On the occasion of this centennial anniversary, 58 scientific men have been elected honorary members of the University. Among these are noted the following Russians: Drs. F. W. Owsjannikow, J. M. Dogel, J. P. Pawlow, W. M. Bechterew and J. M. Setschanow. Besides, this list includes Drs. E. von Bergmann, W. H. Waldeyer, and O. Hertwig, Berlin; A. von Kölliker, Würzburg; P. Flechsig, Leipsic; C. Gegenbaur, Heidelberg; B. Naunyn, Strassburg; E. Ziegler, Freiburg; P. von Baumgarten, Tübingen; P. Brouardel and A. Cornil, Paris; Lord Kelvin and Dr. V. Horsley, London; Dr. G. Rezius, Stockholm, and Dr. Ramon y Cajal, Madrid.

Cretinism in France.—It is believed that the number of cretins and idiots in France reaches almost 125,000. In the eastern provinces alone these individuals form 32 per 1000 of the population, while as many as 111 per 1000 suffer from goiter.

University Notes.—**Amiens:** Dr. Moulonguet, professor of pathology, has been appointed director of the Medical School.—**Athens:** Dr. Veavianos has undertaken the editorship of a new journal on psychiatry, neurology and allied subjects.—**Berlin:** Dr. Julius Pagel has been appointed professor of medical history, Dr. August Wassermann, professor of experimental therapeutics, Dr. Koblanck, professor of dermatology, Dr. Ludwig Katz, professor of otology, and Dr. Georg Joachimsthal, professor of orthopedic surgery. Besides, Drs. Karl Posner, Edmund H. Meyer, Erich Bennecke, Rudolf Krause and Zinn have also been made professors.—**Berne:** Dr. Paul Dubois has been appointed professor of neurology, Dr. Paul Niehaus and Dr. Fritz Dumont professors of surgery, and Dr. E. Emmert professor of ophthalmology.—**Breslau:** Drs. Alexander Tietze and Walter Kausch have been appointed professors of surgery, and Dr. Karl Bonhœffer, professor of nervous diseases.—**Budapest:** The international prize awarded by the Craig Colony for Epileptics, in New York, has been granted Dr. Julius Donath, for his article entitled, "The Rôle of Cholin in Epilepsy."—Dr. Adolf Szili, professor of ophthalmology in the University, has been ennobled in recognition of his services to public health.—**Charkow:** Dr. Georgiewski has been appointed professor of pathology in the place of Dr. Bogdanow, who has been called to the University of Odessa.—**Cologne:** Dr. Eduard Lent has been awarded the title of professor.—**Freiburg:** Dr. Emil von Dungern has been appointed professor of hygiene.—**Graz:** It is rumored that Dr. Jadassohn, of Berne, will succeed Professor Jarisch in the chair of dermatology.—**Kiel:** Dr. von Spee has been appointed professor of anatomy and director of the Anatomical Institute and Museum.—**Moscow:** Dr. A. Vogt, for 30 years professor of general pathology, has been retired, becoming honorary professor. It is rumored that his successor will be Dr. A. Taljanzew.—Dr. Roth has been appointed professor of psychiatry and neurology, and Dr. Spisharny, professor of surgical pathology.—**Tomsk:** Dr. Tichow has been appointed professor of clinical surgery.

Death of Dr. Schede.—Dr. Max Schede, professor of surgery at the University of Bonn and director of the surgical clinic, died at Bonn, December 31, 1902, aged 58 years. He was a graduate of the University of Halle in 1866, having studied at Heidelberg, Zurich and Halle. In 1871 he became an assistant to Professor Volkmann at Halle. In 1875 he was appointed chief surgeon to the Friedrichshain Hospital, Berlin, where he remained until 1880, when he became chief surgeon to the Hamburg General Hospital at Eppendorf. In 1895 he was made professor of surgery at Bonn, where he remained until his death. He was a member of the German Surgical Association, had written text-books on surgery of the nerves, spinal cord and the pleura. He also wrote the chapter on surgery of the kidneys in the text-book edited by von Bergmann, von Bruns and Mikulicz.—Dr. O. Rapin, professor of obstetrics in the University of Lausanne, died recently, aged 56 years.—Dr. Wilhelm Pfitzner, professor of anatomy at the University of Strassburg, died January 1, in his fiftieth year.—The death is also announced of Dr. Francesco Occhini, professor of surgical anatomy and operative surgery at the University of Rome.

The Latest Literature.

BRITISH MEDICAL JOURNAL.

January 3, 1903. (No. 2192.)

1. An Address on the Future of Electrotherapeutics. EDMUND OWEN.
2. The Purvis Oration on the Simulation of Intestinal Obstruction. ANTHONY BOWLBY.
3. The Diagnosis and Treatment of Various Forms of Septic Synovitis. F. C. WALLIS.
4. A Lecture on the Use of Paraffin for Sunken Noses. STEPHEN PAGET.
5. Nomenclature of Malaria: A Suggestion. DAVID BRUCE.

2.—Bowlby gives examples of the following conditions closely simulating **intestinal obstruction**: Peritonitis, renal colic, acute pancreatitis, embolism of the superior mesenteric artery, functional constipation and enteritis. When it is decided in doubtful cases to open the abdomen, the incision should be made in the middle line below the umbilicus because most of the causes of obstruction will be found in the lower half of the abdomen. The finger first searches the right iliac fossa, as here are found the appendix, intestinal diverticula; the commonest site for volvulus; the usual site for the lodgement of an impacted gall-stone, that is the lower part of the ileum; a common place for adhesions due to caseous mesenteric glands; and the sites of inguinal, femoral and obturator herniæ. The left iliac and pelvic regions are next exposed, and, if no cause for obstruction be discovered, a coil of distended intestine is sutured to the skin and opened. [F. T. S.]

3.—Wallis publishes notes of cases of **gonorrheal, influenzal, streptococcic and pyemic synovitis** treated by incision and irrigation. In cases of synovitis not associated with rheumatic fever some septic source must be carefully looked for. If a joint becomes distended with fluid, associated with a rise of temperature, it should be opened, washed out and sewed up, unless improvement be noted in a few days. [F. T. S.]

4.—Paget has treated 26 cases of **sunken nose** by the **subcutaneous injection of paraffin.** The general results have been good and there has been no disaster. In 9 cases out of 10 the surgeon can make a very great improvement, but it cannot be done all at once. The method is full of little difficulties, demands experience and imposes grave responsibilites. There is no danger of suppuration, sloughing or poisoning. Three cases of embolism have been reported. Concerning the fate of the paraffin, that which is very hard becomes encapsulated, and the paraffin with a melting-point of from 104° to 115° is very slowly replaced by fibrous tissue. Paget uses the Pfannenstiel paraffin which melts at 115°; it is easy to inject and easy to mold, is not too hot and sets perfectly hard. [F. T. S.]

6.—Bruce says that in the **diagnosis of malaria** the name of the species or variety dealt with should be given and not merely one of the general terms. He suggests the following nomenclature: (1) Malarial fever, (a) simple or benign tertian; (b) quartan and (c) crescent tertain, estivo-autumnal fever, malignant tertian, tropical tertian or remittent fever. (2) Chronic malaria or malarial cachexia. [J. M. S.]

LANCET.

January 3, 1903.

1. Essay on the Erection of a Sanatorium for the Treatment of Tuberculosis in England. Together with a Number of Appendices and Illustrative Plates. ARTHUR LATHAM.
2. Essay for the Erection of a Sanatorium in England for the Treatment of Tuberculosis. F. J. WETHERED.
3. Essay and Plans for the Erection of a Sanatorium for Tuberculosis. EGBERT COLEBY MORLAND.

1.—The first prize for an essay on the **erection of a sanatorium for the treatment of tuberculosis in England** was awarded to Arthur Latham. A. William West, architect, was associated with him and contributed valuable suggestions. They lay particular stress on the requirements of such an institution, as absolute purity of ventilation, perfect regulation of temperature, freedom from dust and prompt removal and disinfection of excreta. They discuss, at some length, the modern treatment of tuberculosis on the following lines: (1) A life spent in the open air under conditions which give immunity from tuberculosis. (2) Complete freedom from any debilitating circumstances or anything which may lead to an exacerbation of the disease. (3) Methodical hill-climbing as an exercise when the condition of the patient renders this advisable. (4) Constant and unremitting medical supervision. (5) An abundant dietary, in which milk, fatty food and vegetables occupy an important place. (6) Various hydrotherapeutic measures. They further discuss the details of the building and point out the advantages of the "Block Plan" or several smaller buildings properly connected, over one large building. [F. J. K.]

2.—The second prize for an essay on the **erection of a sanatorium forthe treatment of tuberculosisin England** was awarded to F. J. Wethered, with whom were associated Messrs. Law and Allen, as architects. They aim to construct a building with necessary adjuncts to carry out the requirements of the open-air method of treating tuberculosis in its entirety. Certain appliances, which are new to this class of building and which are held to possess great advantages, are introduced. Their plan is as follows: A central building with two-storied segmental wings, placed in the form of a curve, in front of which are deep verandas. In front of the verandas are grass plots. The rooms for the more necessitous classes are placed in the wings, whilst those for the well-to-do patients are placed in the central block. All rooms, including the dining-room, face south. The bed-rooms are approached from within by means of corridors. Separate buildings for the kitchen, laundry, sputum-destroying laboratory and superintendent are suggested. [F. J. K.]

3.—The third prize for an essay on the **errection of a sanatorium for the treatment of tuberculosis in Enland** was awarded to E. C. Moreland, associated with S. Morland, architect. The ideal sanatorium of 10 beds proposed by them should be so arranged that each patient's room obtains a maximum of sunshine and fresh air, and yet it is so placed as to insure economy of management. They point out that the unit of their sanatorium is a room facing south, with unobstructed aspect, with a large window space and a door on the north side opening on a wide corridor in which there is a large window exactly opposite the door. These rooms occupy the whole south frontage and everything else has been made subservient to the one essential of providing a current of pure air which shall constantly flow through them. [F. J. K.]

MEDICAL RECORD.

January 17, 1903.

1. Some Questions in Heredity. A. ALEXANDER SMITH.
2. Methods of Quarantine Against Yellow Fever Adopted in Havana, Cuba, During the Year 1901. W. C. GORGAS.
3. The Surgical Treatment of Puerperal Eclampsia and the Prevention of Convulsions. DOUGLAS H. STEWART.
4. Hypertrophy of the Lymphoid Ring of the Pharynx and Its Surgical Treatment. H. HOYLE BUTTS.

5. A Case of Sepsis, Following an Attack of Osteomyelitis from a Slight Cause. SAMUEL KOHN.

1.—Smith reviews from a clinical standpoint the hereditary transmission of certain diseases. He limits his consideration to **tuberculosis, gout, rheumatism, carcinoma, bronchial asthma and diseases of the heart and bloodvessels.** [T. L. C.]

2.—Gorgas describes the methods of quarantine against yellow fever in Havana during the year 1901. Early in 1901 the members of the Army Board put forward the theory, which they had demonstrated and which Dr. Finlay had for 20 years maintained, that the mosquito was the means by which yellow fever was conveyed from patient to patient, and the only means, and that the disease was not conveyed by fabrics and articles soiled by the yellow fever patient. With the acceptance of this view, the quarantine of the city was modified. When a case was reported as yellow fever the quarantined area was at once screened at public expense with the idea of keeping affected mosquitoes in, and of keeping out all mosquitoes which had not been affected. A guard, as formerly, was placed over the quarantined area to see that the screen door was kept closed. A limited number of immunes, 6 to 8, were allowed to be assigned to the physician in charge to have access to the quarantined area. When the case terminated all the mosquitoes were killed by **fumigation with pyrethrum powder,** but no attention was given to clothing, fabrics, etc. This lightened the irksomeness of the quarantine and was a distinct advantage in getting cases reported. With our present knowledge and experience Gorgas advocates as a quarantine against yellow fever both land and maritime, that infected vessels, or vessels coming from infected ports, be carefully fumigated, so as to kill all mosquitoes in every part of the vessel. This would apply to ships on water and all cars, etc., on land. That the passage of merchandise, baggage, etc., be interfered with in no way whatever. That passengers, when sick, be quarantined and isolated; that all other passengers be allowed to pass freely; that nonimmunes from infected ports be seen once a day by a medical inspector, and, if at the end of 5 or 6 days they are well, that they be released from all surveillance. [T. L. C.]

3.—Stewart holds that albuminuria before the seventh month of pregnancy usually indicates post partum danger and in the last 2 months trouble before or during labor. He pays careful attention to the diet of such patients, forbidding meat, but allowing fish and chicken. With a full vegetable diet he has found it rarely necessary to limit the food to milk alone. He is an advocate of blood-letting in selected cases and holds that the pulse should be the guide to the quantity of blood to be abstracted, and age as to the advisability of venesection. Puerperal eclampsia is due to two causes; one, **intrarenal,** due to diseased kidney; the other, **extrarenal,** due to pressure on renal veins, inferior vena cava or ureters. Hindrance to their outlets increases the pressure within the kidneys, and the urine is not a true excretion, but a leakage containing a diminished amount of solids. This deficiency remains in the blood and becomes a circulating poison. The writer believes that with care as to diet, with fresh air, exercise, frequent small venesections, a free urethra and rectal irrigations we may eliminate the causes of eclampsia. In explaining the extrarenal causes of this condition, Stewart presents his theory that it is due to mechanical causes and is a question of intensity of pressure. The anterior abdominal muscles, the rectus especially, are more unyielding and furnish a stronger brace for the uterus to push against than these muscles are able to exert when stretched by repeated pregnancies. [T. L. C.]

MEDICAL NEWS.

January 17, 1903. (Vol. 82, No. 3.)

1. The Medical Inspection of Schools. A Problem in Preventive Medicine. LEWIS S. SOMERS.
2. The Etiology, Pathology and Symptomatology of Acute Suppuration of the Middle Ear. EDWARD BRADFORD DENCH.
3. Complications of Acute Middle Ear Suppuration. JAMES B. CLEMENS.
4. The Treatment of Acute Suppuration of the Middle Ear. WENDELL C. PHILLIPS.
5. The Etiology, Pathology and Symptomatology of Chronic Purulent Otitis Media. M. D. LEDERMAN.
6. Complications of Chronic Suppuration of the Middle Ear. ROBERT LEWIS, JR.
7. The Treatment of Chronic Suppuration of the Middle Ear. JAMES F. McKERNON.

2.—Dench enumerates the predisposing causes of this condition as follows: (1) Any condition which conduces to a chronic congestion of the upper air tract and of the tympanum; (2) the general predisposing cause, which, without any lesion of the upper air tract, may render the middle ear exceedingly susceptible to infection, may be any constitutional condition which lowers the vitality of the entire system; (3) the direct or exciting cause of the inflammation, that is, the means, by which the pathogenic bacteria are introduced into the tympanum, is through the external auditory meatus, which is the most simple avenue of introduction, and, at the same time, the most unusual. The middle ear is most commonly infected through the Eustachian tube. One of the most common etiological factors is the direct introduction of pathogenic germs through the Eustachian tube by the insufflation of water through the nares. When we have to do with a streptococcic and, in a great majority of cases with a pneumococcic, infection, the upper part of the cavity is almost always involved. [T. M. T.]

3.—Clemens says that in all obscure diseases of children repeated and careful examination of the ear should never be neglected. Out of 100 autopsies upon infants dying of various acute and chronic diseases, it was found, in the majority of cases, that middle ear disease had not been suspected, but was present in all but 9 of the infants. The author believes, therefore, that the tympanum acts as an incubator and generator, promoting toxic symptoms in localized infective diseases. [T. M. T.]

4.—Phillips, in his article on the treatment of **acute suppuration of the middle ear,** concludes as follows: (1) In acute middle ear suppuration early and free drainage is of the utmost importance; (2) patients should remain in bed until acute symptoms have passed; (3) free purgation should be resorted to; (4) microscopical examination of the pus should be made; (5) local treatment should consist in cleanliness and free drainage; (6) proper internal medication should not be ignored; (7) prolonged attempts to abort suppuration of the mastoid cells are to be condemned; (8) early operative interference in mastoid suppuration prevents the more serious complications and gives far better hearing-results; (9) in uncomplicated cases of acute suppuration of the middle ear, when properly treated, the patients always recover in from 2 days to 3 weeks; (10) the responsibilty for previous treatment must be largely assumed by the family physician. [T. M. T.]

5.—Lederman says that the majority of cases of **chronic purulent otitis media** follows an acute infection of the middle ear which has been neglected or improperly treated. Micro-organisms of a pathogenic nature are the important element in the production of this disease. Loss of hearing with an intermittent or persistent discharge is the most frequent symptom of this chronic affection. If during a purulent otitis the patient has a chill or chilly sensation, with a sudden rise of temperature, we must at once suspect an extension of the infective process and think of the presence of pyemia, sinus thrombosis, meningitis and cerebral complications. [T. M. T.]

6.—Lewis, in his article on complications, mentions: (1) Those which relate to the parts primarily involved, and among these may be mentioned the following pathological lesions: The membrana tympani is wholly or in part destroyed; a portion or all of the mucous membrane lining the tympanum has lost all its characteristics, and in its place are to be found granulation tissue and polypi; similar changes are observed in many cases in the adjacent related cavities; one or more of the ossicles are carious, or they may have been totally destroyed; or there may be a necrosis of the tympanic walls. (2) Those complications which involve still another auditory structure. (3) Those complications which involve other organs than those of audition. [T. M. T.]

7.—McKernon gives the procedures to be carried out in the dry and wet treatment of this disease. He also warns those who have cases of chronic suppuration of the middle ear, in which necrosis of the bone is found upon first examination, to inform the patient of the danger to life if this condition be allowed to exist without removal of the diseased bone. [T. M. T.]

NEW YORK MEDICAL JOURNAL.

January 17, 1903.

1. An Address on Chemical Pathology; the Field of Greatest Promise in Pathological Research. G. W. McCASKEY.
2. Anterior Transplantation of the Round Ligaments for Displacements of the Uterus. ALEXANDER HUGH FERGUSON.
3. Intestinal Indigestion and its Relation to Arterial Sclerosis and Renal Disease. LEONARD WEBER.
4. "The Mechanics of Flatfoot," Causative, Preventive, Curative. EDWARD M. THOMPSON.
5. Topical Bloodletting as a Derivative and Revulsive Remedy in Congested and Inflamed Hemorrhoidal Bloodvessels and Tumors and in other Affections. WILLIAM BODENHAMER.

1.—McCaskey presents a very able paper on **chemical pathology.** He reviews the evolution of histological research since the first efforts of Malpighi, almost 2 centuries ago. The works of Virchow and Bichat are then spoken of. Cellular pathology, he says, was only a partial pathology until the essential factor, viz., etiology, was added. He then speaks of the strides made in bacteriology and the germ theory of disease. The consideration and value of antitoxin is also spoken of. The manner in which this agent exerts its influence is fully discussed; as is also Ehrlich's theory of immunity, which, he says, is but one phase of chemical pathology. He believes that the chemical factors in pathology offers the best explanation at hand of most morbid processes, and that this field of research promises more than any other department of medical science. [P. B. B.]

2.—Ferguson has devised an operation for displacements of the uterus, which he calls **anterior transplantation of the round ligaments.** He first speaks of Beck's method of hysteropexy in order to prevent confusion of his method with that described by Beck. The technique of the operation is fully described, and it is also elaborately illustrated. The conditions or displacements to which this operation is applicable are, anterior, posterior, anterolateral, posterolateral and prolapse. These malpositions include both flexures and versions that have affected the patient's health and that have resisted intelligent and appropriate nonoperative treatment. The advantages claimed for this operation are: (1) It is easy to perform, because all the structures involved are seen as well as handled while performing it; (2) the uterus is left free in the abdominal cavity, as no stitches or bands are attached to it; (3) there is no interference with the physiological functions of the organ, and (4) it has a wider range of application than any other operation known to the writer. [P. B. B.]

3.—Weber, in considering the subject of **intestinal indigestion** and its **relation to arteriosclerosis** and **renal disease,** reports 3 interesting case-histories which he uses as a text for his paper. He first considers the etiology and says that poisons or toxins accumulate both within and without the system. He argues that if ptomaines and toxins of acute affections can cause gastro-intestinal dyspepsia and often acute nephritis, there is no reason why similar poisons chronically supplied could not produce renal changes of a like nature. In speaking of arteriosclerosis, he largely confines his talk to the treatment, calling particular attention to the value of the iodides. [P. B. B.]

4.—Thompson contributes a paper on the **mechanics of flatfoot,** or pes planus. He first defines the condition and then speaks of the etiology. He says the contributing factors are: (1) Rheumatism; (2) rachitis; (3) paralysis; (4) general muscular weakness and (5) traumatism, direct or indirect. Most important, however, in the etiology is the consideration of the anatomical changes which occur in the production of this condition. He then describes the symptoms and says that the history is so characteristic that its recital alone should attract attention to the arches of the feet, as the patient usually complains of pain in the soles of the feet. The treatment is essentially mechanical, occasionally aided, however, by surgical procedures. There are 2 methods of treatment: (1) A gradual or ambulatory method, and (2) a rapid correction under anesthesia. He also speaks of the value of braces, and says that they should be made with an understanding of the conditions they are supposed to relieve. As regards the preventive treatment, much can be done by directing the proper use of the feet. [P. B. B.]

5.—**Topical bloodletting as a derivative and revulsive** remedy, is the title of a paper contributed by Bodenhamer. He first speaks of the value of this method of treatment in the opinion of the ancients, and he thinks that the physician of to-day would be better by its more frequent employment. Leeching, he says, as a partial substitute for venesection is valuable in treating conditions of the anorectal region. In prolapsed hemorrhoids he found it highly beneficial in removing the engorgement and tumefaction. The leeches, however, should not be applied to the prolapsed, inflamed tumors, nor should they be placed in the inflammatory area surrounding them. In conclusion, the writer regrets that the practice of leeching is passing away without leaving a substitute or some such valuable, suitable and efficient remedial measures. [P. B. B.]

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

January 15, 1903. (Vol. CXLVIII, No. 3.)

1. A Synopsis of Ten Weeks' Service on the Boston Floating Hospital. ROBERT W. HASTINGS.
2. A Case of Retinal Hemorrhage in a Patient of 73. Treatment by the Faradic Current. Complete Recovery. HASKET DERBY.
3. Vesical Appearances in Renal Suppuration. EDGAR GARCEAU.
4. The Treatment of Hay Fever. LORENZO B. LOCKARD.
5. Poisoning of the Underwood Family by Wood Alcohol. E. G. HOITT.
6. Wood Alcohol Poisoning. S. W. ABBOTT.

2.—Derby reports the case of a patient with the above condition who completely recovered under treatment by the faradic current. He says the fact that local pain is often relieved is hardly appreciated at its proper value. He quotes von Reuss, who says that its principal effect is that of relieving pain, in which we are seldom disappointed. The effect is generally promptly witnessed, sometimes in a surprising manner. A case of iritis was relieved in a minute and a half, although the pain returned in a few hours. The length of the painless interval varies directly with the length of the application of the current. [T. M. T.]

3.—Garceau reports a case of **vesical appearances** in renal suppuration, with the following interesting points: (1) That a suppurating kidney may exist in the body and that the corresponding ureteral eminence in the bladder may not be at all diseased; (2) that long-continued boric acid vesical injections will and do, in these cases, reduce the intensity of the cystitis to almost *nil*. The diagnosis must be made by seeing purulent urine exuding from the corresponding ureteral orifice. [T. M. T.]

4.—Lockard's facts are: (1) To a certain degree the disease is hereditary; (2) the prevailing family tendency is in the direction of nervous affections; (3) in the majority of cases the patient is himself of a nervous temperament; (4) periodicity of attacks; (5) extreme nervousness preceding attacks and exacerbations; (6) influence of suggestion and anticipation; (7) it is a so-called "aristocratic" disease, that is, it occurs chiefly in that class subject to various neuroses. [T. M. T.]

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

January 10, 1903.

1. Tubercular Peritonitis in Early Life; with Special Reference to its Treatment by Laparotomy.
   THOMAS MORGAN ROTCH.
2. A Case of Progressive Idiopathic Atrophy of the Skin.
   A. RAVOGLI.
3. The Relation of Lupus Erythematosus in Tuberculosis.
   HENRY G. ANTHONY.
4. The Etiology of Acute Articular Rheumatism.
   GEORGE W. WEBSTER.
5. Etiology and Prophylaxis of the Cardiac Manifestations of Articular Rheumatism. JOSEPH M. PATTON.
6. Static Electricity in Treatment of Morphinism.
   A. J. PRESSEY.
7. A Note on the Chemical Diagnosis of Hypernephromas (Suprarenal Tumors) of the Kidney.
   ALFRED C. CROFTAN.
8. A Study of Sir James Paget in his Writings.
   HELEN C. PUTNAM.
9. Bloodless Operation for the Reduction of Deformities.
   ADOLF LORENZ.

1.—See **Philadelphia Medical Journal**, June 21, 1902, page 1110.

2.—Ravogli reports **a case of progressive atrophy of the skin**, which belongs to a group of cases in which the skin affection is primary. The affection was diffused. This case occurred in a girl, 18 years of age. The patient's skin was somewhat pale and anemic and rather soft; it showed white superficial scars here and there. The largest scar was found on the right side of the chest. These cicatricial areas were of a peculiar pearly-white color and seemed destitute of pigment. The atrophy of the skin had existed for 3 years and appeared to follow an attack of typhoid fever. Over the cicatricial areas the pain sensation was somewhat benumbed. The condition of the patient gradually grew worse, and death occurred on April 26, 1902. Necropsy revealed a fibrous thickening of the pia mater near the longitudinal fissure, and a gumma was found below the right frontal lobe in the orbital surface. Another gumma was found in the median line confined to the gray matter; still another in the right caudate nucleus extending back to the internal capsule. A large gumma was found in the temporosphenoidal lobe. On the base of brain the third nerve was covered with a gelatinous translucent mass. On the right surface at the junction of the pons and medulla some infiltration was present. The right sixth nerve, and the seventh and eighth nerves were also imbedded in a gelatinous mass, and on the left side a gummatous formation was found about the fifth nerve. No pathological changes were found in the spinal cord. He points out that the lesions found, especially at the base of the brain, show the interesting role of the nervous system in the nutrition of the tissues and consequently the production of the atrophy of the skin. He states that this case belongs to the class of skin atrophy resulting from nervous disease and that the name of idiopathic is best suited to the affection. [F. J. K.]

3.—Anthony discusses **the relation of lupus erythematosus to tuberculosis** and records the histories of 2 cases. The conclusions of the author are the following: (1) That discoid lupus erythematosus is a granuloma, which has no relation whatsoever to tuberculosis, but which may be accompanied with a general eruption; (2) that tuberculosis may produce symptomatic lupus erythematosus, usually with disseminated, atypical plaques; (3) that what may be shown by statistics regarding the relation of lupus erythematosus to tuberculosis depends on what is understood as evidence of tuberculosis, and also on what is included in lupus erythematosus. [F. J. K.]

4.—See **Philadelphia Medical Journal**, June 21, 1902, page 1099.

5.—See **Philadelphia Medical Journal**, June 21, 1902, page 1099.

6.—Pressey writes on **static electricity in the treatment of morphinism**. He contends that static electricity is of service in helping to keep patients in a comfortable condition while the morphine is being reduced, and that the nearer one can keep the patient in a condition of ease and comfort, the better and more rapidly will the nervous system recuperate; in other words, static electricty is a good nerve tonic. [F. J. K.]

7.—See **Philadelphia Medical Journal**, June 21, 1902, page 1119.

8.—Croftan contributes **a note on the chemical diagnosis of hypernephromata of the kidney.** In 2 previous communications this author showed that a watery extract of fresh suprarenal glands possesses the following properties: (1) When injected into the body of a dog or a rabbit it produces glycosuria. (2) It possesses the power of converting starch into dextrose and maltose, and this power of the extract is lost on boiling. (3) It causes the blue color produced by iodine in a starch solution to disappear. In this present communication he experimented with a fresh hypernephroma removed at autopsy, and his experiments were conducted with a watery extract of this tumor. Some of the watery extract was injected into the muscles of the lumbar region of a rabbit, and the urine passed by the animal 10 hours after its injection reduced Fehling's solution. A specimen of urine, passed 29 hours after, contained no sugar and was altogether normal. Some of the watery extract was added to a pure starch solution. After 24 hours it contained an appreciable quantity of dextrose. The watery extract also possesses the power to decolorize iodine starch solution. Croftan contends that in view of these results it is possible by these simple chemical tests to differentiate hypernephromata from other tumors of the kidney. [F. J. K.]

January 17, 1903.

1. Recent Progress in Laryngology, Otology and Rhinology. G. HUDSON MAKUEN.
2. Illustrative Cases of Cerebrospinal Fever.
   J. P. CROZER-GRIFFITH.

3. Epilepsy—Its Psychopathological and Medicolegal Relations. H. A. TOMLINSON.
4. Epilepsy: Its Treatment, Hygienic, Medical and Surgical. DANIEL R. BROWER.
5. Institutions for Epileptics. WILLIAM R. SPRATLING.
6. Syphilis of the Larynx. CHARLES M. ROBERTSON.
7. Wax Models of Unusual Types of Skin Diseases. J. FRANKLIN WALLIS.
8. Gastrojejunostomy with the McGaw Elastic Ligature, for the Relief of Gastroptosis. H. O. WALKER.
9. The Mortality Following Operation for Pus in the Pelvis. HUNTER ROBB.

1.—Makuen delivered the chairman's address before the Section on Laryngology and Otology at the fifty-third annual meeting of the American Medical Association. He suggests that this section should be known as the section of Laryngology, Otology and Rhinology. He then gives a detailed review of the recent progress made in this branch of medicine. [F. J. K.]

2.—See **Philadelphia Medical Journal**, June 21, 1902, page 1110.

3.—See **Philadelphia Medical Journal**, June 21, 1902, page 1118.

4.—See **Philadelphia Medical Journal**, June 21, 1902, page 1119.

5.—See **Philadelphia Medical Journal**, June 21, 1902, page 1119.

6.—Robertson discusses **syphilis of the larynx**. After outlining the symptoms of this affection he mentions that its diagnosis, if in doubt, can be corroborated by the administration of large doses of iodides, for with these marked improvement will follow after the beginning of treatment. He also outlines the local and general treatment of this disease. [F. J. K.]

7.—Wallis presents an article on **the value of wax models of unusual types of skin diseases.** Four illustrations of these models are appended, with case-records, namely: One showing dermographism, one showing a cutaneous horn on the back of the hand, one showing psoriasis and one showing an acute granuloma of the skin. [F. J. K.]

8.—Walker reports 3 **cases of gastroptosis** in women in which he performed **gastrojejunostomy** with the **McGraw elastic ligature.** In each case the result was satisfactory. He is a strong advocate of this method of making lateral anastomoses of the alimentary tract. The accompanying illustrations show the method of applying the ligature. Its advantages are the following: (1) Its simplicty, which is far greater than any other yet presented. (2) Ease and rapidity with which it can be done. (3) Less liability to sepsis than by any other method. No danger of a foreign body. (5) A larger opening can be made without liability to cicatricial contraction. [J. H. G.]

9.—Robb discusses the **mortality following operations for pus in the pelvis** and reaches the following conclusions: (1) The mortality following operations for suppurative diseases of the tubes and ovaries can be kept under 5 per cent. (2) The death-rate is largely influenced by (a), the virulence of the specific organisms present; (b), the individual resistance of the patient; (c), the time and manner of carrying out the operative technique. (3) The micro-organism most to be feared is *streptococcus pyogenes*, but it must be borne in mind that this organism varies considerably in virulence. (4) Abdominal drainage following operations for pus in the tubes and ovaries is seldom called for, as the organisms are generally dead. Drainage becomes necessary only when it has been found impossible to remove the suppurative structures, or when perforation of the bowel from the separation of dense adhesions is to be feared. Under these circumstances the best route is by the vagina. (5) The employment of sterile salt solution for irrigating the pelvic cavity will satisfactorily remove the pus or its products and the filling of the abdomen with salt solution will dilute and promote the rapid absorption of any inflammatory products that may be left behind. (6) The elevated position for 24 hours following the operation, with the abdomen filled with salt solution, tends to prevent the intestines and omentum from coming in contact with the immediate field of operation, and as a result adhesions are not so likely to form between the viscera and the incised surfaces. (7) Should symptoms of infection follow the closing of the wound in pus cases, we have, as a rule, sufficient time to reopen the abdomen and wash out the infective material that may have been left behind, or that may have been introduced at the time of the operation. (8) Operations for pus in the tubes and ovaries from the standpoint of the pus *per se* are not surrounded by more danger, as a rule, than those in which a purulent focus is not present. [J. H. G.]

AMERICAN MEDICINE.

January 17, 1903.

1. Drainage in Chronic Intestinal Catarrh: Its Importance and Technic. NORMAN BRIDGE.
2. Diphtheria Antitoxin in the Infectious or Bacterial Bronchopneumonia of Childhood. JOSEPH O'MALLEY.
3. The Etiology of Endocarditis, with Especial Reference to Bacterial Agencies. SANFORD BLUM.
4. Therapy of Otitis Media Suppurativa Chronica. LEE WALLACE DEAN.
5. The Lorenz Operation, with Report of a Case. JAMES K. YOUNG.
6. A Contribution to Pernicious Anemia. O. E. LADEMANN.

1.—In the treatment of **chronic intestinal catarrh,** Bridge states that if laxative medicines are used they should be taken in small doses; the saline laxatives agree best with some, the vegetable ones with others. For the purpose of drainage in chronic catarrh, no other measure is so generally useful as enemata properly and regularly taken, once or even twice a day. No harm will ever come to the intestines if the water is warm enough, is introduced slowly to avoid colicky peristalsis and never pushed to the point of causing pain by distension; especially is this true if normal salt solution is used. The enema should be taken with the body horizontal, and perferably on the left side at the beginning. As soon as the fluid reaches the splenic flexure it is liable to cause more discomfort and tenesmus as it rises into the transverse colon. This is a sign to the patient to turn upon his back, which usually relieves these feelings and allows the enema to flow painlessly clear to the end of the cecum. Next to the completely horizontal posture, the preferable one for taking the enema is that with the body bent far forward while seated on the closet. The best enema for daily use is plain water or normal salt solution. [T. L. C.]

2.—O'Malley reports 3 cases of **bronchopneumonia** in children treated with **antidiphtheritic serum.** He states that the fever reaction in these cases occurred by lysis in 8 to 20 hours after the use of the serum. [T. L. C.]

3.—Blum presents the following conclusions as to the **etiology of endocarditis:** (1) Congenital and infantile endocarditis may be due to defective development, to reparative processes as suggested by Parrot, and to other causes (unknown). (2) Endocarditis due to known bacterial agencies, e. g., streptococcus, staphylococcus, tubercle bacillus, pyocyaneus bacillus. (3) Endocarditis of probably bacterial origin, associated with definite disease, presumably of a bacterial nature, but of which the bacterial agents are still undiscovered, e. g., rheumatism, chorea, syphilis, exanthems, etc. (4) Endocarditis due to mechanical or chemical insults, e. g., blows, strains, noxious excretory products in the blood, alcohol, atheroma. [T. L. C.]

6.—Lademann bases his treatment of pernicious anemia on the theory of the formation and absorption of some toxic agent in the alimentary tract and advises daily irrigations of the intestinal tract. [T. L. C.]

DEUTSCHE MEDICINISCHE WOCHENSCHRIFT.

November 27, 1902.

1. On the Communicability of Bovine Tuberculosis to Man. R. KOCH.
2. Contribution to the Chemistry of Chloroform-Oxygen Narcosis. E. FALK.
3. Some Remarks on the Article of Dr. Kuckein on Two Cases of Carcinoma of the Esophagus that Presented the Picture of Aortic Aneurysm. LITTEN.
4. The Purposefulness of the Labors of the Digestive Glands. L. POPIELSKI.
5. Benign Adenoma of the Stomach from Peptic Ulcer. ALBU.
6. The Early Diagnosis of Icterus. J. BOUMA.

1.—Koch gives a general review of the work that has been done since the publication of his celebrated article on this question. He now confines himself strictly to the consideration of the communicability of animal tuberculosis to human beings, stating that discussion of the contrary proposition would carry him too far. He says that, in spite of his request to the authorities to inform him of any case of intestinal tuberculosis, possibly due to drinking the milk of tuberculous cattle, he has had no such case brought to his notice within 15 months. He draws especial attention to the very great infrequency of cases that are worthy of consideration as being possible examples of this condition. He considers all the cases of tuberculosis verrucosa cutis to be subject to the most severe criticism. He believes that, if milk causes tuberculosis, the infection should be one that occurs in groups; yet this is not the case. He also believes that there is no instance on record in which it has been shown that tuberculous meat has caused tuberculosis in a human being, in spite of the fact that there is every probability that all human beings eat living tubercle bacilli in the course of their lives. As for the effects of milk, Koch reviews the reports of Ollivier and Hüls, in particular, and decides that they do not at all demonstrate that the infection took place from milk. He insists that, in order to settle this question, cases of supposed infection from milk must be investigated post mortem, that there must be an exclusion of other sources of infection, that tuberculosis of the udder of the cattle supposedly causing the infection must be present, and that other persons who have taken the same milk must be shown to have acquired tuberculosis. [D. L. E.]

2.—Falk has made a study of the Roth-Dräger apparatus for chloroform narcosis, and has decided that this apparatus dangerously alters the chemical condition in which the chloroform reaches the patient. He has demonstrated that in a narcosis 20 minutes long the chloroform shows evident decomposition. The higher the temperature and the brighter the room in which the narcosis takes place, the more marked is this decomposition, and, if the same portion of chloroform is twice used in the apparatus, the decomposition is still greater. The apparatus, therefore, is not a suitable one for the administration of chloroform. [D. L. E.]

3.—Litten emphasizes the fact, that, nearly 10 years ago, he drew attention to the possibility of aortic aneurysm being simulated by stenosis of the esophagus. He then refers to a recent case of carcinoma of the esophagus, in which the sound introduced into the esophagus pulsated distinctly. He gives this case as further evidence of the fact that pulsation of the sound cannot be considered to be a positive sign of aortic aneurysm. He also refers to the fact that Frerichs, years ago, insisted that difficulty in swallowing is not an uncommon sign of aortic aneurysm. He has also had a case that demonstrates the fact that examination by the X-rays is not a sufficient means of diagnosing aortic aneurysm. [D. L. E.]

4.—Popielski criticises the teaching of Pawlow and his students, that the pancreas provides a secretion that varies in direct relation with the nature of the food taken. He believes that the results of Lintwarew do not demonstrate the presence of persistent changes in the gland, but that they rather show the contrary. He also insists that milk which contains no starch causes the secretion of a pancreatic juice that has in it a marked amount of diastatic ferment, even a larger quantity than is secreted after using bread. This is contrary to the Pawlow theory. Popielski believes that his own results have shown that all the changes in the pancreatic secretion under various circumstances are dependent upon the degree of irritation and its so-called amplitude. A very active irritant causes the secretion of a juice that is poor in ferment, but rich in proferment; a weakly-acting irritant causes the contrary condition. The amount of the secretion is also dependent upon the quantity of the substance ingested, viz.; upon the extent of the intestinal surface irritated. Even in regard to the secretion of saliva, the author insists that mechanical influences are of great importance. Sand, for instance, when taken into the mouth irritates the nerve-endings and causes secretion; and anything that, like sand, causes drying of the mouth also produces secretion. [D. L. E.]

5.—Albu believes that the case that he reports is probably unique, in fact that it was a benign tumor developing on the basis of an ulcer. It occurred in a man of 50 years, who had had signs of gastric ulcer for 6 years, a tumor, as large as an apple, tender and with a rough surface, which was distinctly felt, and which was thought to be a carcinoma developing at the site of the ulcer. There was marked stagnation, and the stomach was dilated. Operation was performed, and the tumor thus removed. Microscopical examination showed that it was a purely benign adenoma. [D. L. E.]

6.—Bouma refers to the recent article of Hamel (abstracted from *Deut. med. Woch.*, No. 39, 1902), and agrees that bile-pigment often circulates in the blood when the kidneys are entirely intact without appearing in the urine. He has frequently found bile-pigment in the bloodserum from patients with liver disease, when it was not present in the slightest amount in the urine. He refers to a case of hypertrophic cirrhosis of the liver, in which bilirubin was intermittently present in the urine but in which bile-pigment was constantly present in the bloodserum. Urobilin was always present in the urine. He has made a study of the tests for bile-pigment in the urine and bloodserum. When bile-pigment is present in the urine together with urobilin, the latter is difficult to demonstrate, unless present in large amount. The most satisfactory method that the author has found, in these circumstances, is to add 8 cc. of the fresh acid urine to 2 cc. of a 10% solution of calcium chloride. This mixture is then made practically neutral by adding very weak ammonia. A precipitate then appears. The clear supernatant fluid is then examined for urobilin. The sediment which contains the bile-pigment is washed with water, and the sediment subsequently obtained by centrifugation is tested with Obermayer's reagent. If bile-pigment is present a green color at once develops. The author believes that his iron-HCl test is an extremely satisfactory one, as it never carries the oxidation too far. In examining bloodserum he takes 2 cc. of serum, 6 cc. of distilled water and 1 cc. of a normal solution of neutral sodium phosphate. He then adds 1 cc. of a normal solution of barium chloride, centrifugates, shakes the sediment with water, centrifugates again and then tests this sediment with Obermayer's reagent. He believes that the reaction is quite as delicate as any of the others that are used and is extremely satisfactory. [D. L. E.]

December 4, 1902.

1. Concerning the Value of Functional Diagnosis. F. KRAUS.
2. Concerning Recovery of the Metabolic Products of Bacteria That Are Contained Within the Bacteria Themselves and Are Removed With Difficulty. E. LEVY and F. PFERSDORFF.
3. Seventy-one Attacks of Acute Psychical Disturbance in Alcoholics. G. FELDMANN.
4. Crossed Adductor Reflex in Syringomyelia and Neuritis. L. HUISMANS.
5. Casuistic Contribution Concerning the Origin of Syphilitic Gumma. G. KULISCH.

1.—Kraus gives an interesting discussion of the recent methods of studying the functions of the different organs. He particularly devotes himself to the investigation of the oxygen and CO_2 of the blood in the study of the heart and the vessels; also to the study of bloodpressure, sphygmographs and tachographs. He then discusses the investigation of the condition of the kidneys, condemning the simple investigation of the freezing-point as being a very imperfect method of determining the function of the kidneys, which is no more accurate than any of the other methods of determining any one important element of the urine. A study of the electrolytes and of the nonelectrolytes is more important; and perhaps an investigation of the excretion of an excessive amount of ingested sodium chloride would be of practical importance. The author finally discusses the excretion of the total sulphur and of the various fractions of the sulphur as an indication of metabolic conditions showing that the original idea that the neutral sulphur is an indication of tissue breakdown is not always correct; that it has been disproved that the total neutral sulphur has any direct relation to liver disease: and, finally, that it has been shown that the readily eliminable sulphur of the urine is not altered in any recognizable relation to disease of the liver. [D. L. E.]

2.—Levy and Pfersdorff have studied the metabolism products of bacteria contained in their bodies, by allowing large masses of bacteria to undergo autolysis. With the glanders bacillus they find that a milk-curdling ferment, a gelatine-dissolving ferment and a fat-splitting ferment are forced, and also that there is a poison produced that kills mice directly after it is injected, if used in sufficiently large quantities. Further experiments are in progress. [D. L. E.]

4.—The main point in the cases is contained in the title. [D. L. E.]

5.—The point of interest in Kulisch's discussion of the genesis of syphilitic gummata contained in the case-history reported is that in this patient a gumma formed at the point of injection of the salicylate of mercury. The mercury was injected in 1896, and a gumma formed 3 years afterward. When operated upon, five years after the injection, it was found still to contain remnants of the mercury originally injected. It is considered that in this patient the injection of the salicylate of mercury probably produced the gumma through causing local damage of the muscle into which it was injected, and providing, in this way, a **locus minoris resistentiæ**. The tertiary disease developed at this point because of the lessened local resistance. [D. L. E.]

WIENER KLINISCHE WOCHENSCHRIFT.

December 4, 1902. (XV. Jahrgang, No. 49.)

1. Pulmonary Surgery. EMIL ROCHELT.
2. Paratyphoid Infection. RUDOLF SCHMIDT.
3. Signs Checking Agglutination in Fresh Immune Serum. RICHARD VOLK and HENRI DE WAELE.
4. Congenital Defect of the Pectoral Muscles. MAXIMILIAN LENGSFELDER.

1.—Rochelt reviews **surgery of the lungs** during the last 25 years. He notes that various operations for wounds, neoplasms, echinococcus cysts, tuberculosis, abscesses, gangrene, bronchiectasis, foreign bodies, actinomycosis, etc., in detail. [M. O.]

2.—Schmidt reports, with full details, the case-history of a man of 33, with **pyemia due to infection with a paratyphoid bacillus.** The affection did not resemble typhoid clinically, but was typical of pyemia, originating from purulent cholecystitis, with the bacilli in the sputum, urine, gall-bladder, liver abscess and heart. There was no leukocytosis; but pleural effusion, endocarditis, embolus and abscess in the lung, nephritis, splenic tumor and cholangitic abscess were found post mortem. The bacilli were exactly like typhoid bacilli in all their peculiarities. Schmidt suggests dividing paratyphoid bacilli into those with dysenteric symptoms, those with pyemic symptoms and those with symptoms of typhoid fever. [M. O.]

3.—Volk and de Waele publish a number of unfinished experiments showing the **signs checking agglutination in fresh immune serum.** These are noted when serum of high concentration is used. Tables explain it fully. [M. O.]

4.—Lengsfelder reports the case-history of a man of 42, who has **only the hypertrophied clavicular portion of his pectoralis major muscle,** its sternocostal and abdominal portions, together with the entire pectoralis minor muscle being absolutely absent. A full review of the literature is given and excellent photographs of his patient. [M. O.]

December 11, 1902. (XV. Jahrgang, No. 50.)

1. True Hypertrophy of the Brain with Changes in the Thymus and Suprarenal Glands. GABRIEL ANTON.
2. The Radiographical Diagnosis of Renal Calculus. ROBERT KIENBOECK.
3. Osteoplastic Carcinoma. EMILIO COMMISSO.
4. A Congenital Polyp of the Pharynx. FRIEDRICH HANSZEL.

1.—Anton reports the case-history of a man of 23, who had epileptic attacks, deficient intellect, arrested development, headache, pressure in the head and vertigo. He died in an epileptic attack. The autopsy showed **great hypertrophy of the brain,** megalencephalia with slight hydrocephalus; a **very thin skull** with signs of early disturbance in the growth of the base of the skull. The **thymus gland** was very large for a man of 23, the **suprarenal capsules** were **hollow cavities,** and the myocardium showed fatty and parenchymatous degeneration. The weight of the brain was far above normal. The large thymus may have been due to abnormal origin of the arteries. The relation of the suprarenal condition to the cerebral disease is plain. As the epileptic attacks grew more frequent, this became worse. The skull bones could not withstand the growth of the brain and the increase in bloodpressure following caused myocardial degeneration. [M. O.]

2.—After reviewing the literature of **skiagraphy in nephrolithiasis,** Kienböck reports 4 cases in full, with radiographs. With a good radiograph one can be sure either of the presence or absence of renal calculi. If nothing is clear from the radiograph, more negatives should be made. With poor radiographs but little can be made out. This method of **diagnosis** is especially of value before operation. [M. O.]

3.—Commisso reports the case-history of a man of 43, with an **osteoplastic carcinoma** affecting the left eye, eyebrow and side of the nose. In 1899 he had nasal polypi which were removed twice but recurred. This tumor appeared in 1900 and grew rapidly. Death followed 3 days after operation. A full histological description of the tumor follows. [M. O.]

4.—Hanszel reports the history of a case of congenital **pharyngeal polyp,** occurring in a woman of 19. After extirpation this was found to be mainly fatty tissue, a teratoma. It rose from the salpingopalatine fold. The posterior palatine arch on the left side was absent, and the left tonsil was very small. The literature is fully quoted. [M. O.]

ZEITSCHRIFT FUER KLINISCHE MEDECIN.

Bd. XLVII., Hfte. I. u. 2.

1. On the Percentages of the Different Nitrogenous Substances in the Urine of Abnormal Human Subjects. R. v. JAKSCH.
2. Experimental Investigations Concerning Carbohydrate Acids. PAUL MAYER.
3. The Serum-Treatment of Acute and Chronic Articular Rheumatism. MENZER.
4. On the Resistance of the Red Bloodcorpuscles to Hypoisotonic Sodium-Chloride Solutions in Gastric Carcinoma. G. LANG.
5. On Spontaneous Levulosuria and Levulosemia. HEINRICH ROSIN and LUDWIG LABAND.

1.—Von Jaksch contributes a study of a series of cases in which he determined the nitrogen of phosphotungstic acid precipitate (including creatinin, ammonia, purin bodies, etc.), the urea nitrogen, and the amido-acid nitrogen. As a general result of his work, it may be stated that in none of the cases studied did there seem to be any noticeable change in the nitrogen of the precipitate; **in nephritis there was no evidence of any imperfection in the breaking down of nitrogenous substances,** the abnormal conditions in that disease consisting solely in more or less marked urea-retention. It was a noteworthy fact, however, that, **in hypertrophic cirrhosis of the liver, phosphorus-poisoning, and leukemia, there was a decided increase in the amido-acid nitrogen,** this amounting to in the neighborhood of 40 per cent. **The same was true in a case of diabetes insipidus and in typhoid fever.** The conditions in the latter diseases are interesting, because they **indicate that nitrogen-metabolism is qualitatively imperfect** in these disorders. This was to be anticipated in all the cases, except diabetes insipidus, in which it is a new and interesting fact that may lead to some further knowledge of this obscure disorder. It is also **important in connection with cirrhosis of the liver,** as it may lead to a more definite knowledge of liver diseases, and to greater accuracy in the diagnosis of these conditions. [D. L. E.]

2.—Mayer contributes a long article, in which he presents experimental evidence in favor of his belief that **glycuronic acid comes from glucose and is a stage in the oxidation of the latter.** He thinks that he has provided evidence that Emil Fischer and Piloty are wrong in believing that glucose is not directly oxidized into glycuronic acid, and that the oxidation takes place only after pairing and the formation of glycuronic compounds have occurred. The author thinks that **the glycuronic acid is afterward oxidized into oxalic acid.** Similar conclusions were obtained from his study of gluconic acid; and from the latter studies he believes, also, that **the animal organism has no tendency to produce pentoses from hexoses in the process of oxidation.** In a final section, devoted to the question of incomplete oxidation of sugar, Mayer repeats his previous statement that the oxidation of sugars is carried out through a glycuronic acid and oxalic acid stage, and presents further experiments to demonstrate the correctness of his view. He concludes with the statement that, if glycuronic acid compounds are found in excessive amounts in the urine for a considerable period, without other discoverable cause, the subject should be considered **to be in danger of acquiring diabetes.** He expresses himself, however, with much more reserve than in his earlier papers. [D. L. E.]

3.—Considered editorially.

4.—Lang directs attention to the fact that, in icterus, and in infections, particularly, it has been found that the red bloodcorpuscles have an increased resistance to hypoisotonic salt-solutions. He has investigated the conditions in gastric carcinoma, and finds that **there is a distinct increase in the resistance of the corpuscles** in this disease. He believes that this fact **may be of importance in the early diagnosis of gastric carcinoma,** as an increased resistance is not to be anticipated and was not present, in other confusing gastric diseases in which the resistance was determined. The resistance of the red corpuscles was found increased in about 95 per cent. of all the cases of gastric carcinoma examined. The author is inclined to believe that the resistance is increased by the production of toxic, and particularly, of hemolytic substances, and by their absorption. As a result of the destruction of some red corpuscles, the organism endeavors, he thinks, to increase the resistance of the corpuscles to the hemolytic poison. He considers that the question is at least worthy of further investigation. He determines the number of corpuscles, using a 0.9 per cent. salt solution in counting them. He then mixes the blood, in a portion of 1: 200, with a 0.4 per cent. and with a 0.3 per cent. salt solution, and counts the number of corpuscles remaining. In this way he finds the percentage that resists these hypoisotonic solutions. [D. L. E.]

5.—Rosin and Laband direct attention to the fact that it has commonly been taught that levulose rarely appears in the urine in diabetes. They have, however, carried out **a series of studies in cases of diabetes,** with Seliwanoff's reaction, and have **found appreciable quantities of levulose in a large proportion of the cases.** They have also confirmed this result by Neuberg's method. They have, further, attempted to find **levulose in the bloodserum** of diabetics, and have succeeded in demonstrating considerable quantities. They report a case of **spontaneous persistent levulosuria** in a woman of 51. Her general symptoms were practically those of diabetes. The urine contained only levulose; but **the excretion of levulose did not seem to be influenced by the ingestion of that substance.** This, apparently, was a peculiar disturbance of the carbohydrate metabolism that was not influenced by alimentary conditions of various kinds. The authors demonstrated the presence of a considerable amount of levulose in the bloodserum. The patient was decidedly improved when last seen. [D. L. E.]

BOLNITCHNAIA GAZETA BOTKINA.

August 14, 1902. (Vol. XIII, No. 33.)

1. The Identity of Pepsin and Chymosin. I. P. PAVLOFF and S. V. PARASCHUK.
2. Some Data from the Hospital Statistics of St. Petersburg. A. A. LIPSKY.
3. Albumosuria (Peptonuria) as a Clinical Symptom. A. SVOJECHOTOFF.
4. Through Germany. V. KASCHKADAMOFF.

1.—Pavloff took up the suggestion of Kuraeff as to the possible identity of the lab and digesting ferments, and with the assistance of Paraschuk investigated the **pepsin and lab ferment** of the dog's stomach. They established by a number of carefully conducted experiments the interesting fact that pepsin and the so-called chymosin are **one and the same substance,** the curdling and digestion being the properties of the same ferment. This double action of pepsin is similar to the action of oleopsin, which, on the one hand, decomposes fats into fatty acids and glycerine and, on the other, produces them synthetically, as in the mammary glands and other tissues. It is possible that the presence of pepsin and trypsin within the tissues of the body is in some way related to synthetic metabolism. [A. R.]

3.—Svojechotoff presents the following conclusions from his extensive clinical observations: (1) The test for albumoses is important from a clinical standpoint and deserves attention only as an indication of the presence in the body of a suppurative focus (pyogenic albumosuria). (2) Although we know that albumoses (or Brücke's peptone) are formed in the majority of cases only in the presence of a large number of puscells, we are, nevertheless, unable to decide positively by chemical methods which of the albuminoid bodies gives the biuret reaction in suppuration, and we can only suppose with more or less probability that the activity of some forms of bacteria is concerned in the formation of albumoses. (3) If there is a suspicion that suppuration exists in the organism, a positive reaction for albumoses points with certainty to an accumulation of pus. A negative result, on the other hand, does not exclude the so-called cold abscesses or chronic (nonfebrile) empyema. (4) We cannot, in the present state of our knowledge, assert positively that the reaction may not occur in other diseases or in healthy individuals; but this possibility need not be seriously considered from a clinical standpoint. (5) In all cases of fevers in which the cause remains obscure, it is well to test 2-3 times for albumoses. A positive result may lead to an operation, which renders the prognosis worse; a negative result may, at times, aid in establishing a correct diagnosis. (6) Of all the known methods of determining albumoses in urine, that of Hofmeister is the best. [A. R.]

MEDIZINSKOIE OBOZRENIE.

Vol. LVIII., No. 15.

1. On the Casuistics of Gunshot Wounds of the Skull. PL. TICHOFF.
2. On the Casuistics of a Splintered Fracture of the Vault of the Skull Complicated by Extrusion of Brain Matter. P. ZSHEGALKIN.
3. A New Method of Correcting the Destroyed Nasal Septum. P. I. KUSMIN.
4. On the Casuistics of Atypical Forms of Psoriasis. A. I. LJANTZ.
5. Lichen Planus of the Mucous Membranes. M. A. TCHLENOFF.

1.—Tichoff reports 2 cases of severe **gunshot injuries to the brain**. In the first patient the injury resulted in the complete loss of eyesight. The left eye was entirely destroyed, while the right suffered from injury to the optic nerve, the bulb having remained intact. In the second patient there followed, as the result of injury in the region of the third frontal and upper and lower thirds of the anterior central convolutions, paralysis of the facial nerve and upper extremity, disturbance of articulation and weakening of the memory. The author advises trepanation in every case of gunshot wound of the skull. [A. R.]

2.—Zshegalkin reports a case of **fracture of the vault of the skull complicated** by **fracture of the base** and loss of considerable brain substance. The patient made a good recovery. [A. R.]

3.—Kusmin describes his operation for the formation of **artificial septum, which is as follows.** Two vertical incisions are made at the middle of the upper lip up to its free border. The upper ends of the incisions are joined by a horizontal incision on a level with the lower border of the nostrils. The flap is raised and attached by 2 or 3 stitches to the tip of the nose at the place where the septum should be, and secured by a bandage. At the end of 8 or 10 days the flap is completely severed from its attachments to the lip and secured by stitches in the proper place, while the edges of the wound in the lip are brought together by sutures. The results, he claims, are all that could be desired. [A. R.]

4.—Ljantz describes an atypical case of **psoriasis**, the patient presenting on his forearm ulcers closely resembling rupia. [A. R.]

5.—Tchlenoff reports a case of **lichen planus** involving also the mucous membrane of the hard palate. He gives the clinical picture, pathological anatomy, differential diagnosis, etiology and treatment of this affection and presents the following conclusions: (1) Lichen planus of the mucous membranes is most frequently confined to the mucous membrane of the mouth, but may occur in other locations (throat, rectum, urethra). (2) Lichen planus of the mucous membrane of the mouth is met with quite frequently in conjunction with lichen planus of the skin, the latter usually developing first, but occasionally the former may develop primarily, and, in rare cases, may remain without involvement of the skin. (3) The clinical picture is so characteristic that the diagnosis, after a careful study of the case, presents no difficulties. (4) The pathological anatomy has so far not been worked up. (5) The etiology and pathogenesis are as yet but little understood. (6) The prognosis is, as a rule, favorable. (7) The treatment consists mainly in prolonged and energetic use of arsenic. [A. R]

THE DUBLIN JOURNAL OF MEDICAL SCIENCE.

December, 1902. (Third Series, No. 372.)

1. Unreduced Subclavicular Dislocation of the Head of the Humerus. EDWARD H. BENNETT.
2. The Prophylactic Treatment of Enteric Fever by Inoculation. WALTER C. STEVENSON.
3. Errors in Diagnosis, Avoidable and Unavoidable. ALFRED PENNY.
4. Mouth-Washes and the Integrity of the Teeth. W H. TRICK.

2.—Stevenson believes that **inoculation** does not absolutely prevent the disease; but statistics show that the percentage of cases among those who have been treated is very considerably less than among those who have not, though all are equally exposed. [T. M. T.]

3.—Penny states that **avoidable errors in diagnosis** may arise from the following: (1) A positive lack of knowledge on the part of the practitioner of the particular complaint the patient is suffering from; (2) a hasty and insufficient examination of the patient, when a more prolonged and careful examination would reveal the true state of affairs; (3) directing too much attention to symptoms and too little attention to physical signs, and *vice versa*; (4) neglecting to use the different instruments of precision; (5) failing to come to the point; (6) diagnosticating the disease, but not the patient. [T. M. T.]

4.—Trick says that an ideal **mouth-wash** must be nonpoisonous and nonirritating; it must be neutral in reaction; it must be deodorizing, refreshing and antiseptic. Odol has been found to check the process of decomposition and fermentation in the buccal cavity for a longer time than does the use of poisonous and injurious agents, such as corrosive sublimate. [T. M. T.]

THE EDINBURGH MEDICAL JOURNAL.

December, 1902. (New Series, Vol. XII, No. 6.)

1. Inaugural Address Delivered Before the Royal Medical Society. Sir HALLIDAY CROOM.
2. Injurious Renal Mobility (Nephrospasis) in Relation to Gynecology, Founded on the Examination of One Hundred Consecutive Patients. W. F. VICTOR BONNEY.
3. On Three Cases of Perforating Typhoid Ulcer Successfully Operated Upon. FRANCIS J. SHEPHERD.
4. The Treatment of Cancer by Phototherapy. DAWSON TURNER.
5. The Large Intestine Regarded as a Siphon. R. W. LEFTWICH.
6. The Study of Fertilization With Reference to the Occurrence of Ectopic Pregnancy. JAMES OLIVER.
7. Cataphoresis in the Treatment of Gout, Rheumatism and Rheumatoid Arthritis. CHARLES BEGG.
8. A New Danger to Beer Drinkers From Lead Poisoning. FRANK OGSTON.

2.—Bonney believes that the term **nephrospasis** should be used in describing those cases in which the normal supports of the kidney are so weakened that the organ comes to hang by its pedicle. He mentions 3 classes of abdominal renal mobility: (1) Those cases in which the condition is solely one of exaggerated diaphragmatic movement, expiratory return is present and inward rotation absent. These cases give rise to no symptoms; (2) those cases in which the diaphragmatic attachments of the perinephritic structures are relaxed or gone, with consequent failure of expiratory return, but as the perinephritic and retroperitoneal fat still continues to support the organ from below, inward rotation is not present. These cases give rise to no, or only very slight, symptoms, but are the first step toward injurious renal malady, into which they may eventually pass; (3) those cases in which, from loss of both its upper and lower supports, the kidney comes to drag directly upon its pedicle, as evidenced by inward rotation as well as absence of expiratory return. These cases are always accompanied with symptoms, and it is to them that the expression "injurious renal mobility" peculiarly belongs. [T. M. T.]

3.—Shepherd gives the important points in **operation for perforation of typhoid ulcer:** (1) Early operation, in fact, as soon as it is positively known that perforation has taken place; (2) rapid operation, and not too much devotion to so-called toilet of the peritoneum; (3) important at the time of operation is to see that there are no other ulcerations likely to perforate. General anesthesia is advised in place of local anesthésia. [T. M. T.]

4.—Turner mentions important facts in regard to this treatment. **External cancer before ulceration** may be treated either by the Finsen light or by the X-rays. The author prefers the Finsen light. **After ulceration** the Röntgen rays should be used. **For internal cancer** the Röntgen rays only can be used. The clinical results of the treatment are: (1) To remove or diminish the pain; (2) to loosen adhesions and to cause the disappearance of the contracting and tightening feeling; (3) to cause an ulcerating sloughing surface to take on a healthy and healing aspect, and to diminish in size through the growth of epithelium from the edges; (4) to dissipate and remove cancerous and sarcomatous tumors. [T. M. T.]

6.—Oliver believes that whatever delays the descent of the ovum to the uterus, either before or after fecundation, tends to facilitate the occurrence of ectopic gestation. For this reason impairment of the sensitivity, or more or less marked paresis of the Fallopian tube, will prove to be a potent factor at work in the production of this disorder. Occasionally shock, fear and mental anxiety by their paralyzing action may bring about this untoward result. The methods adopted for the prevention of conception, it is more than likely, will be found still more powerful influences acting in this direction. [T. M. T.]

7.—Begg highly praises the efficiency of **cataphoresis** in the above conditions. In **rheumatic arthritis,** in addition to the soothing and massage effects, there is a probability of the alkali also being useful; the method can be helpful in any stage. In regard to **gout,** we do not expect to remove extensive and old chalky deposits, but any deposit, however slight, forms a nucleus for the precipitation of fresh insoluble material; and, although this may be continually going on to a slight extent, it must be copiously and rapidly precipitated with each fresh attack of inflammation, and this is the time when we can do good, both by soothing the pain and by the action of the positive electricity, checking the inflammatory process, while all the time it is driving a stream of potassium bicarbonate into the tissues of the joints. [T. M. T.]

8.—Ogston, in his article on a **new danger to beer drinkers from lead poisoning,** says that lead contamination appears as follows: In most hotels the beer is kept in barrels in underground cellars, and from these a pipe from 10 to 15 feet in length, made of lead, conducts the beer to the tap at the bar. It is well known that a fluid containing acid, under pressure, will hold lead in solution, although at the ordinary pressure it precipitates it as a carbonate. Where then, a length of piping is employed, the beer, charged with carbonic acid, or, rather, overcharged with it, dissolves the lead, and the first draw-off after standing over night would contain enough lead to make it dangerous. [T. M. T.]

THE SCOTTISH MEDICAL AND SURGICAL JOURNAL.

December, 1902. (Vol. XI, No. 6.)

1. Presidential Address. J. RITCHIE.
2. Eclampsia With Rapid Delivery by Means of Bossi's Dilator. A. R. SIMPSON.
3. Life Insurance Examination, and the Relations of the Medical Examiner to the Company. CARSTAIRS DOUGLAS.
4. Traumatic Keratitis in the Newborn. R. JARDINE.

2.—Simpson recommends Bossi's dilator in cases in which delivery is urgent and the uterus is inactive, the os and cervix being still so narrow that the instrument with the shields on the point cannot be passed. The claim for this dilator is that it not merely acts as a mechanical dilator, but is a stimulant to uterine action. [T. M. T.]

3.—Douglas, in his article on **life insurance examination, and the relations of the medical examiner to the life insurance company,** refers especially to: (1) The heart and lungs, which should receive in all cases a most careful examination. The patient, in every instance, should be stripped to the waist. The expansion should never be less than 2 inches, better 3. Phthisis in one member of a family does not now bar him from insurance when other things are satisfactory. In regard to an **organic mitral lesion,** it is now recognized that the applicant may be admitted, provided that (a) the condition has existed for a few years at least, (b) compensation being good, (c) the other organs healthy and (d) the age not over 33 or 35. (2) The author considers the condition of the nervous system of considerable importance. Whenever one has the slightest suspicion, test the patellar reflex. Look out for tabes dorsalis and fundus oculi. If there is purulent discharge from the ear, the case should always be postponed. If the applicant has had syphilis, he should only be accepted if 3 to 5 years have elapsed and he can prove that the treatment has been thorough. (3) Patients with **glycosuria** should not be rejected, but should be postponed, say 3 or 6 months. (4) At the present time albuminuria does not lead to a positive rejection. It is known there exists a functional, cyclical or postural albuminuria in those who are quite healthy in every other respect. If albuminuria is present without casts, it is better to postpone the case for 6 months. [T. M. T.]

LA RIFORMA MEDICA.

November 21, 22 and 23, 1902.

1. A Case of Hematic Cyst of the Spleen. E. GIULIANO.

1.—Apropos of a case which came under his observation, Giuliano discusses the etiology, diagnosis, prognosis and treatment of hematic cyst of the spleen, as follows: In the etiology, predisposing and determining influences take part. All morbid conditions, congenital or acquired, may be considered as predisposing causes. Of the influences which determine the development of hematic cyst, malaria is the most prominent. Its diagnosis is beset with many difficulties, and can only be made with certainty upon exploratory puncture. The prognosis is that of cysts in general, save that in the majority of hematic cysts of the spleen the wall is extremely thin, and in consequence there is great danger of its rupture. Treatment is entirely surgical; puncture and evacuation of the sac being, in theory, the ideal operation, as it would be were it not for the danger of escape of fluid from the wound into the peritoneal cavity. Splenotomy with cauterization should be given the preference, splenectomy being the last resort. [R. L. F.]

November 26, 1902.

1. The Supposed Trypsinogenous Function of the Spleen. T. SILVESTRI.

1.—Through animal experimentation, Silvestri has sought to determine whether the power of the splenic blood to restore the activity of the pancreas toward albuminous substances depends upon an internal secretion in the spleen or upon the large amount of blood present in it during the turgidity of digestion. The results of his work are thus given: (*a*) In the blood of normal animals, as well as in that of animals from which the spleen has been removed, there is present, 5 or 6 hours after meals, a certain principle which is capable of restoring the activity of the pancreas toward albuminous substances. (*b*) This principle is always found in greatest quantity in the trunk of the splenic vein. (*c*) In animals subjected to splenectomy there is no difference between the blood of the crural vein and that of the gastro-epiploic vein. (*d*) Generous feeding with food in which albuminous substances predominate excites the production of this principle in the greatest quantity; especially if a period of fasting has preceded the feeding. (*e*) It is certain that the spleen continuously contributes this principle to the circulation, but its largest contribution occurs 5 or 6 hours after meals. (*f*) The Spleen is, however, not the only organ which contributes this principle, as it is found in large quantities in the blood of animals subjected to splenectomy, even in the first days after the operation. The nature of this principle is discussed by the author, but no definite conclusion is reached. [R. L. F.]

November 27, 1902.

1. A Case of Fibro-Liomyoma of the Stomach. G. ZIRONI.

1.—Zironi contributes the description and microscopical analysis of a remarkable tumor of this nature. Arising from the lesser curvature of the stomach, it attained a size equal to that of the fetal head; and extended upward between the 2 layers of the gastro-hepatic epiploon and impinged upon the left lobe of the liver. [R. L. F.]

November 28, 1902.

1. Contribution to the Study of Primary Anasarca. P. BACIALLI.

1.—Bacialli reports a case of what he believes to be primary anasarca, due to cold and psychic disturbance, and advances the theory that the 2 influences acted as a stimulus which induced functional change in the central and peripheral nervous system, the effect of which was double: (1) Upon the small vessels, causing hyperemia and serous infiltration; (2) upon the renal circulation, inducing almost entire urinary suppression. [R. L. F.]

November 29, 1902.

1. Upon the Invulnerability of Epileptics. V. TIRELLI.
2. The Treatment of Tubercular Cutaneous Ulcers. G. SILVA.

1.—In view of the rarity of suppuration of wounds, even under the most unfavorable circumstances, in epileptics, Tirelli supposes the existence of a special condition in such patients by which the blood or tissues are endowed with an antipyogenic property. Proof of this theory has been sought by the author through animal experimentation; with the result that when staphylococcus cultures which had been previously treated with epileptic bloodserum before being placed in the thermostat, and which had shown impeded development when compared with control cultures treated with normal bloodserum, were injected endovenously into animals, they survived longer than those injected with the control cultures. A further series of experiments was carried out to determine whether successive subcutaneous or intraperitoneal injections would render an animal more resistant to staphylococcic injections; and whether the serum of animals subjected to such injections of epileptic serum, possessed therapeutic properties toward experimental staphylococcic infection. The first question was undetermined, owing to the accidental death of the animal experimented upon; the second may, however, be considered as, in a measure, answered affirmatively; as animals treated with the serum of the animal subjected to successive injections of epileptic serum withstood the effect of staphylococcic infection twice as long as those which were not so treated. [R. L. F.]

2.—Silva reports 10 cases of tubercular ulcers successfully treated with balsam of Peru which had failed to yield to other treatment. The remedy was applied to the lesion with a brush, after which a gauze bandage was made to envelope the part. [R. L. F.]

IL POLICLINICO (SEZIONE CHIRURGICA).

October, 1902. (Year IX, fasc. 11.)

1. Radiography in Biliary Calculus. G. COEN.
2. A Modification of Suprapubic Cystotomy. P. FERRARESI.

1.—Coen contributes a description of 3 cases of vesicular calculi in which the result of radioscopical examination was entirely negative, though subsequent operation revealed the presence of calculi, both of the cholesterin variety and those composed largely of biliary pigment; neither could a radiographic image be obtained of calculi placed in the gall-bladder of an infant cadaver, though an ordinary pebble used for the same experimental purpose was clearly outlined. [R. L. F.]

2.—A modification of the method of incision and suture in suprapubic cystotomy, for which he claims the advantages of more rapidly closing the wound after operation and a better chance of healing by first intention, is thus described by Ferraresi: When the bladder-wall is reached, a suspensory suture is inserted at the top and bottom of the anterior wall, and then, instead of cutting directly through to the cavity, a small vertical ellipse is cut through the muscular wall alone; leaving the submucosa exposed and intact. A row of silk or catgut sutures is then inserted in the submucosa upon either side of the ellipse, in such a manner that, along the margin of the ellipse upon both sides, there is a row of sutures, one end of which is held in the submucosa by a knot, the opposite end being free. The incision is now made between these 2 rows of sutures through submucosa and mucosa into the bladder. After the object of the operation is accomplished (removal of calculi, tumors, etc.), the wound can then be rapidly and effectually closed by first tying together the free ends of the sutures, which have been placed opposite one another in the submucosa, and then suturing the muscular layer. A third row of sutures then unites the prevesical connective tissue, these being so inserted that they include, superficially, the muscular layer. [R. L. F.]

November, 1902. (Year IX, fasc. 12.)

1. Bacterial Intoxication and Fatty Degeneration of the Organs. O. TORRI.
2. Contribution to the Study of Cyclic Vomiting in Children. F. VALAGUSSA.
3. Upon the Diagnosis of Sub- and Supracardiac Cancer of the Cardia. P. GALENGA.

1.—Torri draws the following conclusions from his study of this subject: (1) In poisoning from fungi the classical fatty degeneration is seen in the liver, kidney and heart. (2) In bacterial intoxication the liver is most frequently affected by fatty degeneration; less frequently are the kidneys so affected, and the heart rarely. (3) Complete fatty degeneration resulting from bacterial intoxication is rarely seen in the liver; the lesion being almost invariably located at the periphery and in the center of the acini. (4) Fatty degeneration of the kidney from poisoning and bacterial intoxication is usually seen in the convoluted tubules. There is no strict relation between fatty degeneration and segmentation of the cardiac fibers either in poisoning from fungi or in bacterial intoxication. (6) Fatty degeneration depends directly upon the action of bacterial or other poisons upon the cellular elements. [R. L. F.]

2.—Valagussa finds that recurrent vomiting occurs in children in whom the uric acid diathesis is a constant factor, and that the malady is a manifestation of pathological metabolism, and should be considered distinctly apart from gastro-intestinal disease. Such vomiting occurs at irregular intervals, but its frequency and duration are noticeably influenced by treatment. The affection is not a separate pathological entity, but belongs to a complex syndrome of which vomiting is the principal symptom. The pathogenesis of such recurrent vomiting is in relation to acid intoxication of the organism induced by some unknown poison developed in uricemic subjects. The syndrome should be considered as the equivalent of a gouty attack in children who inherit the arthritic predisposition. [R. L. F.]

3.—Helpful diagnostic points relating to cancer of the cardiac end of the stomach are presented by Galenga as follows: Subcardiac cancer arises usually in the lesser curvature of the stomach and has the following characteristics: Inconstant alimentary regurgitation without blood, variable in frequency and intensity and sometimes taking on the character of true vomiting. Pain lacking or slight. Palpation may reveal the tumor in the left hypochondrium. Examination with the sound aids the diagnosis as to location, though not invariably, as the measurement from the dental arch to the obstruction may be as great in supracardial cancer with a deviated esophagus as in subcardial cancer. Of more importance than measurement is the fact that when the tumor is located just below the cardia, the passage of the sound does not cause pain, hemorrhage or detachment of neoplastic particles, as occurs in supracardial cancer. Moreover, in supracardial cancer it is possible to introduce a small rigid sound past the friable tumor, while in the subcardial variety, the normal cardiac sphincter impedes the passage of the sound. The duration of supracardial cancer is shorter and its course more grave from the fact that inanition sets in earlier, owing to the greater severity of dysphagia. [R. L. F.]

November 22, 1902. (Year IX, fasc. 4.)

1. Surgical Treatment of Splanchnoptosis. E. CURTI.
2. A Case of Grave Puerperal Septicemia Cured with Endovenous Injections of Mercuric Bichloride. T. SILVESTRI.

1.—In a case of splanchnoptosis in a woman, Curti found such an extreme relaxation of the abdominal wall that it could be picked up in great folds when the patient was in the supine position. In the belief that the discomfort experienced was largely due to the entire absence of support to the viscera from the parietes, he, after removing a cystic ovary and anchoring the uterus to the parietes, secured support for the remaining organs by ingeniously narrowing the abdominal wall by overlapping the recti muscles and suturing them in this position. The postoperative course of the case is said to have been excellent. [R. L. F.]

2.—Silvestri describes a case of puerperal septicemia successfully treated with endovenous injections of corrosive sublimate into the median basilic vein; beginning with 5 mg. and decreasing 1 mg. daily for 3 days till but 2 mg. were used. He believes that such injections should be essayed in all septic pyemic cases, and that 5 mg. doses are devoid of all danger of toxic effects. [R. L. F.]

LA PRESSE MEDICALE.

November 22, 1902. (Vol. II, No. 94.)

1. Internal Pseudostrangulation of Neuropathic Origin. DEBOVE.
2. Suturing the Levator Ani Muscles in Perineorrhaphy. P. DUVAL and R. PROUST.
3. Cryogenine in the Fever of Tuberculosis. F. DUMAREST.

1.—Debove reports the case of a man of 36, nervous, one of twins, both of whom not only looked exactly alike, but were both exceptionally neurotic. He had just had an attack of influenza, with marked constipation. Then he complained of sudden colicky pain, and absolute constipation, lasting 4 days. After moving his bowels, all the signs of **acute intestinal strangulation** were observed. His abdomen was immense, with great pain, borborygmus, constipation, not even flatus passing per rectum, and complete retention of urine. This lasted 4 days, yet his general condition was excellent. The history showed previous attacks similar to this one, with recovery in a day. Convalescence was rapid. The attack of **internal pseudostrangulation was of purely neuropathic origin.** [M. O.]

2.—Duval and Proust give in detail **the technique for suturing the levator ani muscles** in performing **perineorrhaphy,** illustrating the operative stages by 4 diagrams. [M. O.]

3.—**Cryogenine,** metabenzaminosemicarbazide, is given **in phthisis,** in doses of from 3 to 20 grains, **for diminishing the fever.** This falls inside of 2 hours after administering the drug. Then small doses will keep the temperature down. It is innocuous and effective. It is best given in capsule. [M. O.]

November 26, 1902. (Vol. II, No. 95.)

1. The New Academy of Medicine, Paris. E. DE LAVARENNE.
2. The Work of the Digestive Glands. MARCEL LABBE.

1.—The new building of the **Paris Academy of Medicine,** which was opened November 25, is described in detail, with a brief history of the society. The president is Dr. Riche; the secretary Dr. Jaccoud. [M. O.]

2.—**The action of the digestive juices** was studied by Pawlow through fistulæ. The work accomplished by the gastric and pancreatic juices is described, in a review of the French translation of Pawlow's work by Pachon and Sabrazès. A full résumé of the physiology of digestion follows. [M. O.]

JOURNAL DES PRATICIENS.

November 22, 1902. (16me. Année, No. 47.)

1. The External Treatment of Pruritus. LEREDDE.
2. The Hygienic Principles of Diet. HENRI HUCHARD.

1.—**Pruritus** is a common symptom, due either to an external or internal cause. It is noted with scabies, pediculosis, etc.; with dyspepsia, diabetes, gout, intoxications, etc.; with folliculitis, impetigo, lichen, eczema, urticaria, etc. It is a nervous phenomenon of toxic origin. In the treatment Leredde advises wearing linen next to the skin, dusting powders, ointments, pastes, moist, warm applications, gelatine and salt water. Baths of alkaline or sulphur waters are contra-indicated, especially if an acute dermatitis exists. Warm douches may be allowed. As anesthetics he uses acetic acid, carbolic acid, chloral, cocaine, menthol, methyl salicylate, etc.; as curative agents he adds ichthyol, tumenol, resorcin, naphthol, etc. Besides, static or galvanic electricity may be given. Finally sacrification or the cautery may be necessary. [M. O.]

2.—Will be abstracted when concluded.

November 29, 1902. (16me. Année, No. 48.)

1. Ichthyol in the Treatment of Bronchitis. H. DE BRUN.
2. The Hygienic Principles of Diet. HENRI HUCHARD.
3. An Old Empyema. MERKLEN.

1.—A girl of 13, with **chronic bronchitis,** of 6 years' duration, following pertussis, accompanied with dyspnea, bloody expectoration and spasmodic, violent coughing, failed to improve on any treatment, including morphine, potassium iodide, creosote, belladona, ipecac, sodium benzoate, bromoform, etc. She grew worse and had an attack of hemoptysis. Then **powdered ichthyol** was given, 15 grains a day. The effect was marvelous. Cough and expectoration both disappeared rapidly and she quickly recovered; nor has the bronchitis recurred since. [M. O.]

2.—Huchard discribes the intoxication which follows **the ingestion of much meat.** Too much meat may cause gout, rheumatism, diabetes, nephritis, gastric, cardiac and vascular disturbances, migraine, asthma, neuralgia, skin diseases, dental affections, neurasthenia and other nervous diseases. Dyspnea may also result. The most normal food should be vegetables, milk, eggs, fresh cheese and a little meat. Their nutritive value is given in full. The whiter bread is, the less nutritious it is. Besides, too much meat prevents brain work. Mixed vegetable diet favors long life, while pure meat diet tends toward early death. Morally and esthetically, human beings are better off without much meat. [M. O.]

3.—Merklen reports the case-history of a man of 22, tubercular, with an **empyema** of years' duration. The diagnosis in this case was extremely difficult, on account of the tubercular lesion. The prognosis is most unfavorable. Operation was not advised because of the patient's poor general health. [M. O.]

Special Article.

TROPICAL DISEASES.

INTRODUCTORY LECTURE IN A COURSE ON TROPICAL DISEASES, ETC.,

By CAPTAIN CHARLES F. KIEFFER,

Assistant Surgeon, U. S. Army.

Gentlemen:—In beginning this brief course of lectures on tropical diseases I wish to register my appreciation of the great compliment paid to my corps and to myself by the Faculty and Trustees of Jefferson College in inviting me to appear before you. More than that, it is a great pleasure to me to come back to my alma mater; to show her that her talent, so liberally bestowed, has not been entirely wasted, and to repay her, in some small measure, the very great debt I owe her. You will find in coming years that such visits to your old school will be among your chiefest pleasures. I am well aware that to some of you she may now seem more like a stern "she-wolf" than a beloved mother, but in after-years you will learn that from that very sternness you have drawn that which will be of great value to you. Furthermore, I believe that this effort, limited, unpretentious, offered to you with much hesitation, is the first attempt at systematic teaching in this country. Need I explain to you the very great value of the subject? The United States is in large portion subtropical, some localities even tropical. Its colonies are wholly tropical. You will constantly encounter difficult and perplexing cases in, or coming from, these regions. The field is a very wide one. The opportunities for study and original investigation are greater than in any other in medicine. In outlining this course, on account of the briefness of time, and to avoid unnecessary repetitions, I have omitted malaria, yellow fever, dengue, typhoid, cholera and plague. These subjects are taught in all your systematic lectures, and, while there is much that is special and of interest that might be said of them, time will not permit ingesting them into your crowded course. I shall consider systematically dysentery, hill diarrhea, epidemic gangrenous rectitis, abscess of the liver, filariasis and the diseases caused by it, intestinal parasites, beriberi, the special tropical fevers, the special tropical skin diseases, frambesia, tropical granulomata and hygiene. I shall have, from time to time, cases of some of these diseases to show you, but the clinical material is rare and difficult to come by.

I must ask you to bear with me in these lectures. During some years I have been a hard-working army surgeon. I have been doing things and have had little experience in telling about them. Particularly must I ask your indulgence in this first lecture, which must of necessity be largely discursive. There are many fundamental facts to establish, much dead wood to be cleared away.

Tropical medicine and practice, in the first place, fall under two great headings: Disease in the native and disease in the Anglo-Saxon settler. On the one hand, the consideration of practice among the native population: on the other, the consideration of special affections of the colonist. These bring us very real differences. The native is, as a rule, underbred and underfed. He lives principally on poor and bulky nitrogenous food. Some of this is due to religious teaching, such as the doctrine that condemns the Hindu to a farinaceous diet. The rest is due to poverty. A large part of the tropical, particularly the Oriental, world is constantly living on the verge of starvation. The factor of safety in stored-up food-supply is usually at the vanishing-point. Consequently we see, in times of comparative plenty, increase of juvenile marriages, a rising birth-rate, a falling death-rate and a consequent tremendous increase of the unfit population. Then come the succeeding years of scarcity and want and the inevitable reckoning. This poor fruit of a poor tree is swept away. In times of stress and want, times of national calamity and depression, war and famine, the mortality-bill of disease becomes appalling. Why? Simply because the resistance of a large proportion of the population is *nil*. Contrast this, on the other hand, with the colonist. He not only comes of more sturdy, if not of more frugal, stock, but, individually, he is more apt to be robust in body and mind. They are not our weaklings who go adventuring in foreign lands to pluck fortune and fame or seek adventure. They are our vigorous youths, the exponents of our national "strenuous" life, with all it means. They have the native at a tremendous disadvantage, even conceding that the climate lies against them. In short, gentlemen, it is the world-contest, now on, between rice and bread, in which the decadent rice-eater is inevitably overcome by the better-nourished bread-eater. Then, too, these men do not, as a rule, spend their whole life in these countries, but only the years of their greatest strength and activity; when they have "made their stake" they go home.

The diseases peculiar to the tropics are very few. Nearly every disease met with may have its representative in this climate. *Per contra*, practically every disease of your practice here is found in the tropics. The influence of sustained high temperature, usually with great humidity, brings curious changes in clinical types that justify us in speaking of them distinctly. Some diseases undergo very strange intensifications, and others equally inexplicable attenuations. For instance, measles. In tropical practice this is very frequently a disease of the greatest gravity; in truth, many of the Pacific islands have been decimated by this disease, which, attacking child and adult, has been attended by an excessive mortality. On the other hand, scarlet fever is, as a rule, a mild disease and may even be quite trivial. Diphtheria, too, is mild and very rare, although it occurs commonly enough in subtropical regions. Leprosy is now, to all intents and purposes, a tropical disease; yet, once it spread over the civilized world. But this is so because the dwellers in temperate zones took vigorous measures against it and stamped it out, whereas, in most tropical countries, it runs as unchecked as in the days of Abraham.

The etiological factors that specially obtain in diseases peculiar to the tropics are as follows:

Heat: the intensity of the solar ray. This causes various sun exanthemata, sunstroke and prickly heat, but these differ only in degree from similar affections in temperate zones.

Infections. These take place just as do infections anywhere, only that we must add the factor of depression, of debility, that obtains in hot climates. Then there are a few infections peculiar to the tropics, such as tinea imbricata and dhobie itch. It has been shown that scarlet fever is a mild disease in warm countries, probably due to the fact that the continued high temperature diminishes the virulence of the organism. The tinæ of the tropics, on the other hand, perish at a moderately low temperature, just as would a tropical orchid exposed to our streets to-day. Consequently these tinæ are essentially tropical.

Diseases conveyed by parasitic hosts, of which there is a large representation in medicine. Now, these diseases depend on three factors, as you know, the germ, the intermediate host and the final host, or man. Now, it will be very apparent that, if this intermediate host be absent, the disease disappears. If the intermediate host, however, be a tropical species, then the disease is tropical. For instance, tsetse-fly disease is distinctly located in the tsetse-fly belt, and it is peculiar to that location, for the reason that only there is the chain complete for its propagation. The Texas cattle fever and its tick are familiar instances. Filariasis and certain mosquitoes capable of conveying them to man will occur to you. If conditions are unfavorable to either parasitic host or germ, these diseases do not exist. Then, if the conditions required are purely tropical, the disease is tropical. You will recall yellow fever and the well-known phenomenon of its disappearance after a heavy frost. Here the conditions are fatal to the conveying mosquito, the stegomyia, and the disease disappears.

Then we have certain diseases of animals that are sometimes conveyed to man as accidental infections or *vice versa.* Now, if these be tropical animals, the liability to the appearance in man of these diseases will be limited to the tropics. Of this class the tropical ringworms are excellent examples.

Organisms that, before entering the human body, pass a cycle of life as a free organism (rhabditic forms) furnish another group. Such of these organisms as require continued heat and moisture while in their free form may be properly conceived of as tropical forms. For instance, the ankylostomum is a tropical and, possibly, subtropical worm, although it exists in temperate climates as a special variety.

In warm climates we see many alterations in clinical types of common diseases that must be noticed. Tuberculosis in the native, for instance, is a very slow process. You will see cases of pulmonary tuberculosis that persist 10 to 15 years. On the other hand, when this disease attacks the Anglo-Saxon, the progress is extremely rapid, almost malignant. Syphilis seems to be a much milder process, and in some people destructive tertiary lesions are very rare. Here, again, the newcomer suffers more, destructive lesions being quite common. Even in the early stages venereal sores tend to become phagedenic.

When studying ground so very new, there are many errors to guard against. For instance, in the Philippines harelip is very common. So, too, epithelioma of the penis seems to be quite common. I have, however, come to the conclusion that this is more apparent than real. Harelip and carcinomata are almost never operated upon. Either because the natives are opposed to surgical procedures or because, in many districts, there have been no surgeons to perform these operations. You, consequently, have several generations of these diseases swelling the list. I omitted to say that epitheliomata also seem to tend to chronicity. So, too, you may notice that smallpox is invariably a disease of children. Adults are almost never attacked. I remember, living in a village in which one of the head-men was attacked by virulent smallpox, and the whole village was ready to stampede. I was assured that such a thing was unheard of in the memory of the oldest inhabitant. But this, again, is easily explained. Practically everybody has smallpox in childhood, and the survivors are, of course, immune. Then I must say a word with regard to the difficulties you encounter in pursuing pathological and bacteriological investigations. When I tell you that many times we used a refrigerator for an incubator, you will understand one of the difficulties of bacteriological technique in a country in which gelatine keeps liquid most of the time from the heat. The tropical zone is one vast incubator in which the conditions of moisture and heat are perfect for the riotous growth of an enormous bacterial flora, the classification and identification of which have only begun.

In discussing the etiology of tropical diseases I must call your particular attention to a source of confusion and error that is constantly obtruding itself. I refer to the "overlay" of filariasis which exists everywhere and greatly mystifies the etiological picture. I have examined small communities in which 70% of the population had blood-worms of some variety. You must also bear in mind the very general dispersion of the fecal infections. Nor is this difficult to understand; in China or Japan the man who wishes to be neighborly, instead of using the public latrine, will patronize his friend's soiljar. His friend, in turn, sells it to the night soil merchant; he to the farmer. The farmer irrigates his growing succulent radishes, celery and cabbage with a diluted mixture of the night-soil, and the chances are that our friend of the first part has his neighborly kindness returned to him with interest in the form of a typhoid fever, perhaps a dysentery acquired from the vegetables.

What are the elements of resistance or immunity in warm climates? Speaking broadly, the problem of immunity is the same as anywhere. There are some few special facts to which I wish to call your attention. Quite apart from the physiological resistance we must also recognize the fact that there is a latent instinct that warns man, just as instinct warns animals, as to what is beneficial and what is noxious. You may call it subconscious knowledge, if you will. In China, for instance, where every one would expect enteric to run wild, we find comparatively little, because the race has adopted the one effective remedy, sterilization of the water-supply. Practically all of the water is drunk in the form of tea. We observe the same in Japan, only here there is an additional safeguard in the national custom of removing the shoes before entering a dwelling, thereby eliminating all the fecal contamination that might be brought in from the streets and roads. In the tropics malaria must be regarded as a place disease, and many of these fever spots are very sharply defined. The Philippine natives could always tell you of the places in their districts where "la perniciosa" reigned, and I never found their information at fault. I recall one particular little place that gave nothing, either in appearance of its verdure or formation, to distinguish it from the surrounding country, and yet here was a particularly virulent spot of, perhaps, one mile in diameter. I accompanied a company of infantry, about 106 men, that camped here one night and, in from three to seven days, at least one hundred of these men were suffering from a virulent estivo-autumnal infection. These facts represent the accumulated knowledge of a people and, even if this knowledge be not formulated and the people the lowliest savages, you will find that it is worthy of your respectful consideration and investigation. In many instances you will find it will outweigh your books and your laboratory methods. You may perhaps recall that, many centuries ago, peasants of malarial districts throughout the world suspected the mosquito, and scientific medicine has only just recognized it. So you see the concept of a peasant finally worsted the pseudoscientific humoral and miasmtaic and other polysyllabic theories.

Having discussed with you, in a rapid manner, the tropical phases of infection and immunity, we will now turn to what must be a closely allied subject—acclimatization. In your studies of hygiene you were taught that there were four principal factors concerned in what we call climate: (1) Latitude, or distance from the equator; (2) altitude, elevation above the sea; (3) distance from the sea; (4) the force and direction of the prevailing winds. These are the factors to be studied in considering acclimatization. How do they affect a man going from one climate into another? The theory of acclimatization is that there is an initial period of deterioration followed by substitution and relative immunity, thence forward to the allied climatic conditions and their tendency to produce disease. Many authorities claim there is no such process going on. I grant you that, as a purely physiological problem, it has not been demonstrated, but, practically, we find that it does happen. I cite you the well-known immunity that prolonged residence in the endemic belt confers and the equally well-established loss of that immunity, when once acquired, through absence from the region. You may say this is an immunization due to fractional dosage by mosquitoes, that it is a specific protection. All acclimatization comes in some such way. There is no use splitting hairs over a word. Call it "adjustment"—anything, if you will—the fact remains that, if not an absolute physiological change, there is a re-adjustment of manners, morals, habits, mode of life, food-supply, that effects a reasonable compensatory change in the organism to which we commonly apply the term "acclimatization." The English authors commonly lay down the rule that 20° above the annual mean is the limit of acclimatization; when the change is greater than this, a race does not propagate itself and dies out with the third generation.

For the purposes of our present study, heat is the factor of climate that demands our attention. The extreme degrees of solar heat are of great interest to us. Water has been boiled in a temperate climate by exposure under glass to the midsummer sun. But our studies will best be guided by ordinary shade observations. The highest authentic observation of shaded heat in the tropics that I know is 123° F., at Jacobabad, in India. We must remember the influence of the direct rays of the sun, the influence of atmospheric heat and the chemical influence of the ray, even on cloudy days. The effects of tropical sun-rays are the same as you observe here in temperate zones, only very greatly magnified. I can do nothing better than quote one of the best observers in tropical countries, whose grasp of pathological problems is sometimes very surprising —I mean Kipling:

> "But the worst o' your foes is the sun over'ead;
> You must wear your 'elmet for all that is said.
> If 'e finds you uncovered 'e'll knock you down dead,
> An' you'll die like a fool of a soldier."

I will not further discuss the effects of direct heat, they are sufficiently obvious. I shall pass on to the consideration of the physiological effects of long-continued heat.

(1) Careful observation has shown that permanent increase of external heat is followed by a rise of bodily temperature of 1-20° F. for every degree F. of external heat above the mean annual norm.

(2) The respiratory function is diminished. Not only are the respiratory movements decreased by from one to three excursions per minute, but they are more shallow. The spirometer shows a diminution of 8% to 10%. To this you must add the rarefaction of the air and its consequent comparative poverty of oxygen. With this change in respiratory movement we find that the lung eliminates less water and less CO_2.

(3) Circulation is depressed but slightly. The heart shows a diminution of two to three beats per minute.

(4) Digestion, appetite and assimilation are depressed and capricious. The bile does not seem to be increased, although its coloring-matter may be increased. In other words, there is an usual amount of intense bile excreted.

(5) The skin functions are increased probably 25%, taking up the work of the lungs and kidneys. This hyperactivity of the skin is responsible for the troublesome prickly heat, the exhausting night-sweats of the newcomer, which, however, he soon re-adjusts, and the chronic skin-pigmentation of the long-time resident.

(6) The nervous system seems to be distinctly depressed, even to the point of insanity and the occasional outbreaks of furor, termed by the native "amok," or running amok.

In my next lecture I shall take up the consideration of tropical dysentery.

Original Articles.

AN EARLY CASE OF OSTEITIS DEFORMANS.

By J. C. WILSON, M. D.,
of Philadelphia.
Professor of Medicine in the Jefferson Medical College.

The case of osteitis deformans which I reported in the **Philadelphia Medical Journal**, February 15, 1902, was the eleventh case reported in North America. Since that date the following cases have been reported:

1. A case by O. A. Fliesburg, *Northwestern Lancet*, April 1, 1902.

2. A case by M. Howard Fussell, **Philadelphia Medical Journal**, June 21, 1902.

3. The case studied by Morton Prince and subsequently by Reginald H. Fitz (*American Journal of the Medical Sciences*, November, 1902).

The investigations of these observers treat especially of the relations existing between hyperostosis cranii and osteitis deformans. Prince summarizes his conclusions as follows:

(*a*) We have no ground for differentiating hyperostosis cranii from osteitis deformans.

(*b*) Hyperostosis cranii and osteitis deformans are probably trophic disorders.

(*c*) Various clinical and pathological facts seem to indicate that they are at least allied disorders and perhaps only different manifestations of one and the same disease.

(*d*) The osteo-arthritic changes so commonly found in osteitis deformans are probably manifestations of the disease and not complications.

(*e*) The results of autopsies thus far made do not at all exclude the nervous system as the seat of the trophic derangement, but the changes that have been found in the spinal cord and peripheral nerves and analogy with other known lesions, like those of tabes and syringomyelia, suggest a neuropathic origin similar to that of the myopathies.

(*f*) In future cases the nervous system should be exhaustively studied.

Fitz concludes that hyperostosis is a condition which may affect few or many bones early or late in life and with inconstant symptoms, that the evidence in favor of the recognition of an independent disease—diffuse cranial hyperostosis—is insufficient, since the symptoms assigned to this affection are inconstant and may occur in osteitis deformans.

This phase of the subject, namely the relationship between hyperostosis cranii and osteitis deformans, appears to be settled, and the former condition must now be regarded as a manifestation more or less constant of the latter.

4. Case 2 of Prince's series. In this case the cranium was conspicuously enlarged, the hypertrophy of the bones being more marked on either side of the parieto-occipital region, the frontal bone also prominent and the head giving the impression of being too large for the face. There was rigidity of the cervicodorsal spine, as though ankylosed, the long bones were small, as if atrophic, but not abnormally bent. Concerning this case the author raises the question as to whether, in the absence of any fundamental criterion, it should be classified with hyperostosis and not as an incomplete case of osteitis deformans. The hypertrophy of the cranium without involvement of the long bones gives a striking resemblance to hyperostosis cranii, while the kyphosis and apparent ankylosis of the spine, the generally impaired nutrition and the arteriosclerosis are at least suggestive of osteitis deformans.

5. Case 3 of Prince's series, which was reported by Edes in the *American Journal of the Medical Sciences* July, 1896, under the title of Hyperostosis Cranii. Upon recent re-examination Prince finds that this case has developed into one of Paget's disease. Since 1896 the hypertrophic process in the head has greatly increased and the long bones are affected. There is kyphosis in the lower dorsal region with deformity of the sternum. It is of particular interest that some of the phalanges of the fingers are bent and the tarsal bones of one foot appear to be thickened. In this case there are very striking nervous abnormalities, myasthenia and unsteady gait, exaggeration of the knee jerks, etc.

To the foregoing list I am able to add the following case observed in private practice, which increases the list of reported cases in this country to seventeen:

Mrs. X., 50 years of age, consulted me on October 3, 1902, concerning persistent pain and tenderness in the right thigh. The patient is a widow. Her husband died several years ago of pulmonary tuberculosis. She is the mother of five children in good health. She herself is the daughter of first cousins and has always been delicate and neurasthenic. The menopause occurred at the age of forty-six. She has had much trouble from cough and catarrh of the upper air passages, but is not tuberculous. During the summer of 1902, while boarding in the country, she had a sudden illness, which she regarded as trifling, though there was general swelling of her extremities and body, which passed away in a few days. She did not have fever and did not consult a physician. Shortly afterward she began to suffer from pain in the right thigh, especially in the lower third, and had difficulty in walking. The pain was worse at night and kept her from sleeping. The general swelling subsided, but the thigh, especially at its lower third, remained greatly swollen and tender.

Upon examination the thigh was swollen and so tender as to make the examination difficult. Six inches above the lower edge of the patella the circumference of the right thigh was 14¾ inches; that of the left 13½ inches. The length of the right thigh was 31⅛ inches; that of the left 32 inches. The temperature, in a series of observations extending over several days, was normal. The pulse-rate was 88 to 92 and the respiration 18 to 20. The patient was obliged, by reason of pain upon movement, to remain in bed. There were no special nervous symptoms. The knee jerks were slightly plus; station and gait, except in so far as the latter was influenced by pain, were not impaired. No changes were observed in other bones, and there was no other local pain. There was in particular no enlargement of the skull or other evidence of cranial hyperostosis. The ordinary functions were not impaired except sleep, which was disturbed by pain in the thigh. The urine was normal. The patient was much concerned about herself and very anxious and apprehensive.

Upon examination there was evident thickening of the lower part of the femur and a prominent forward bulging. Whether the condition was due to periostitis, osteosarcoma or osteitis deformans could not be determined by ordinary clinical methods. An X-ray examination, made at the German Hospital by Mr. Wilbert, revealed the condition of the bone represented by the accompanying plates.

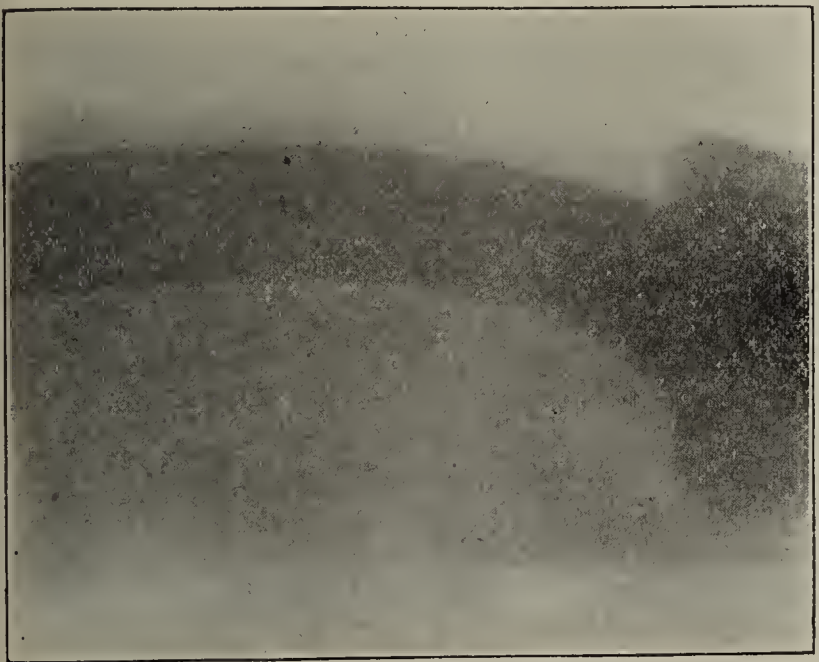

Figure 1.—Skiagram showing curvature of femur, enlargement of lower end of shaft and thickening of condyles. At the upper side is the shadow of the patella and outer condyle; at the lower edge the inner condyle.

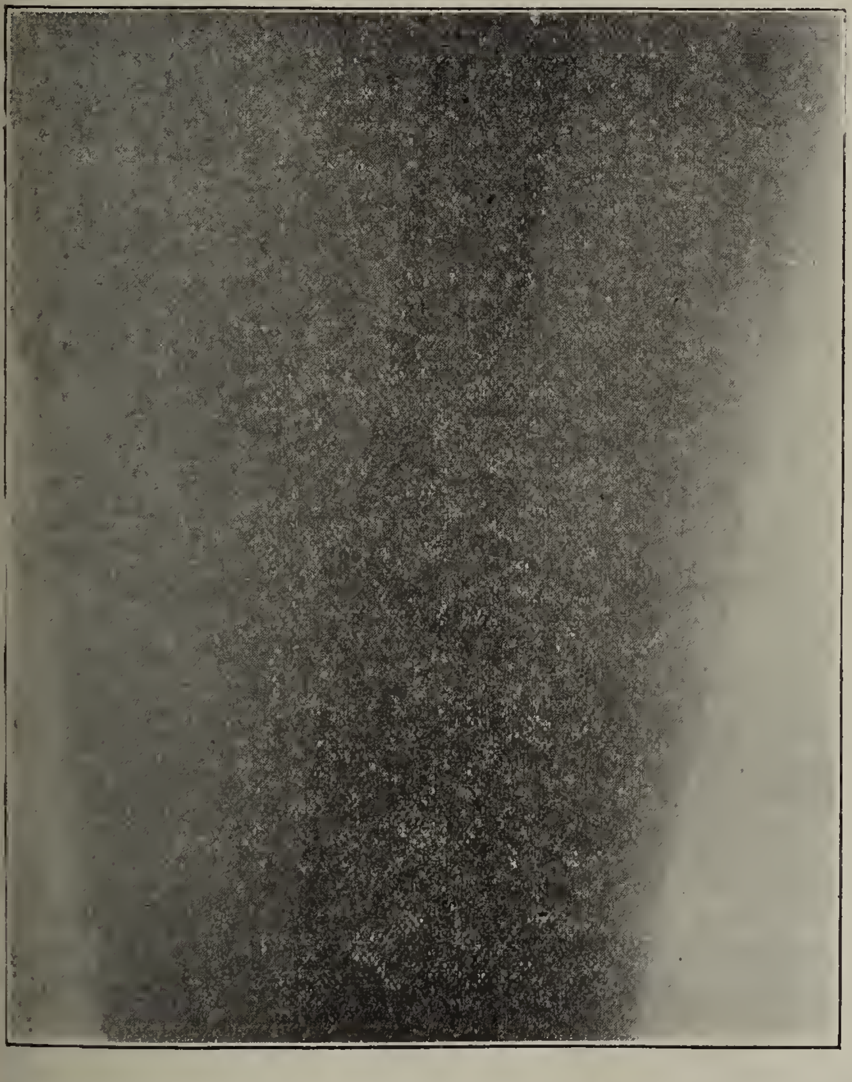

Figure 2.—Skiagram from behind, showing slightly irregular thickening of lower third of shaft.

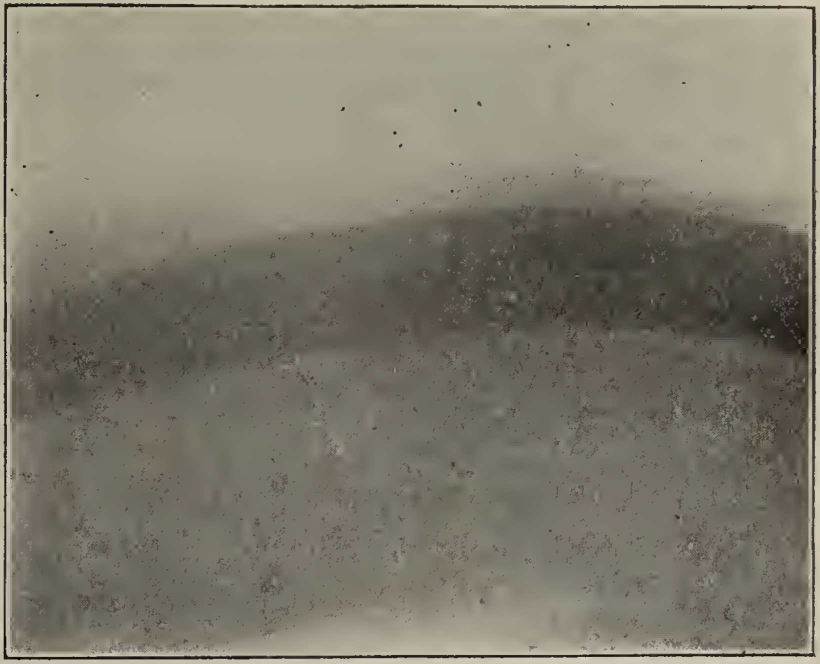

Figure 3.—Skiagram showing anterior curvature of shaft.

The other femur and the bones of the skeleton in general were painless and without deformity.

All writers upon osteitis deformans dwell upon the fact that the process may at first involve several bones or a single bone. Joucheray (*Paris Thesis*, 1893, De l'Ostéite Deformante), distinguishes two varieties of osteitis deformans, first, a painful and, second, a painless variety. In the former, which, according to this and other observers, is the more common, the osseous lesions are more rapidly developed, while in the latter they develop more slowly.

The case which I report is of interest, since it has been of rapid development and involved at the time of observation a single bone and was attended with great and persistent pain. The patient is now wintering in the South, and writes to me that the pain persists and is worse at night, that it now is felt also at the lower end of the left femur and that she is obliged to use a rolling-chair.

This case is made a matter of record in order that, if the opportunity should occur, its future course may be noted as a contribution to the clinical history of this strange disease.

SIX YEARS OF MEDICAL JOURNALISM. A RETROSPECT.

By JAMES C. JOHNSTON, A. B., M. D.,
of New York.
Recently Acting Editor of the Journal of Cutaneous and Genito-Urinary Diseases.

Happiness, they say, is accomplishment. Mine in this connection lies in the fact that I have accomplished my term of service and am free to sit down and write, while they are fresh in my mind, the reflections born of the experiences of those six years. It is not an unusually long period, as these things go, for journalism is, like eczema, a blood disease and can rarely be cured in a lifetime. I had served an apprenticeship of four years under Dr. J. A. Fordyce before Dr. Swinburne and I assumed the management, as well as the ownership, of the *Journal*, so, perhaps in view of the dual role, if not the experience, I may be excused for the rashness of getting into cold type with reminiscences. Of our troubles as publishers, struggles with printers, photo-engravers, lithographers, papermakers, post-office authorities and, especially, with nonpaying debtors, of whom we met some two thousand, I shall have nothing to say. The experience is valuable, but only to the individual; what I have to present relates to the editorship and, I have faint hopes, will tend to promote a better understanding between authors and readers, on the one hand, and the editorial staff, on the other. If a bias in favor of the latter is discovered, it will be forgiven on the ground that

> "Each in his separate star,
> Must paint the thing as he sees it
> For the God of things as they are."

The god is the public, the only tribunal from which there is no appeal. Its judgments should be moderated on that account alone.

The worst of the many evils with which the medical profession has to centend is one of which all our national experience has taught us the folly, decentralization. It is evident throughout. Its business is worse handled than any other. Instead of trusts, in which overproduction is restrained, in which wages can be fixed and maintained, and in which the incompetent and superfluous are eliminated, it is every man for himself and the devil and his colleagues for the hindmost. This is true of its material for investigation and of the journals it supports, as well as actual practice.

Our exchange list numbers more than one hundred and twenty, the total varying from time to time, owing to untimely deaths and summary removal when a contemporary was caught in too barefaced a theft from the Journal's abstracts. Of these, the large majority, seventy-odd, are American. No imagination, however fertile, can conceive a use for so many. That some of them serve no purpose is amply testified by their contents. The whole of one man's time would be necessary to review them in the most superficial manner. We are 125,000, but it would be enough for us if we had only a few weeklies and monthlies, and a periodical devoted to each specialty for the work which is too technical for the general reader. Their capacity would be limited and it would be possible for them to accept only what is really valuable. The reader would be saved the sifting process he goes through at present, authors would be compelled to be sure that they have something to say and that it be said in the tersest manner, and the journals themselves would be adequately supported. Such a beautiful Utopia, as the late Senator Ingalls said of purity in politics, is an iridescent dream. Being a practical people, we will have none of it, and the gentleman from the backwoods or the metropolis with an experience of two cases will go on piling up statistics of the result of treatment to the end of time. Worst of all, his work goes to leaven the lump, and all the world gains mental indigestion, nothing more. We struggled against the flood of literature for a year, but self-preservation drove us with consuming regret to file about fifty periodicals in the waste basket, their wrappers still intact. Things are getting to a pretty pass when not every hamlet, but every medical society in that hamlet, is of its dignity and importance impelled to acquire an organ. A crumb of comfort lies in the fact that the American mote has an exact counterpart in the beam in the European eye. Two journals are published regularly in Great Britain which contain only the burning words o their editors. The pertinence of these remarks lies in the explanation they give of the character of much of our literature, as well as of the fact that few men read anything nowadays out of their special lines, and in them the work of those whose names they know.

Original Articles.

Two motives, in the main, lead a man to present his views to the public. They are that he wishes to add a mite to the sum total of knowledge, or that he wishes to gain a reputation, vulgarly speaking, to advertise himself in the only way legitimately open to him. Both are entirely worthy, but both are subject to perversion. In the first case he may not be able to judge of the value of his own work; he may be so young that enthusiasm betrays hin into error (this type of youth has been known to last for fifty years), or his experience may not be sufficient to justify a hearing at all. It does not matter that his work has been supervised by elder men; it must stand on its own merits. I have known not a few instances in which publication has been preached as the gospel of living by those who should know better. Few workers' activities are perennial like Virchow's, and it is not too much to say that medical men do their best work before fifty. This is the point at which the editor should appear as counselor and friend and advise a postponement or a touch here, an amplification, verification or condensation there. His efforts are often taken amiss, and the manuscript is withdrawn by the indignant author for publication elsewhere. It is the ideal editor I am speaking of, certainly not myself, a person of judicial temperament and something near to omniscience, who has the courage of conviction. The letters the editor gets are pretty scurrilous at times. My experience is that nothing occasions an author more annoyance than the return of his article, but when the thing is hopeless it must be done. Let me say that the editor gathers no great pleasure from the proceeding; in fact, it is the most difficult thing he does. The pape may have been read before the Medical Society and received with the courteous comment tha means so little, "this painstaking and erudite contribution to our knowledge." You know the phrase. Just the same, back it goes, and the editor is arraigned for a numskull who can't see beyond his nose.

When the work is good and is accepted, the troubles are by no means at an end. Few of us can write our beautiful mother tongue. In most instances not a particle of attention is given to style, sometimes not even the spelling is correct. The sentences are lame, they convey no meaning, an they are jumbled without an effort at continuity of thought. People have no time to dig for nuggets in this age. Unjustifiable conclusions are drawn from the data presented, and good workers sometimes require twenty years to eliminate the error.

It is curious to see how mistakes of this sort are clung to, as to our dearest hopes. Authors are incorrectly quoted, and references, often not looked up, are given in the same way. Does the man who writes naevus, nevus, like you to tell him that it is Latin, not English, he is using? His enthusiasm at your kindness is not noticeable to the unaided eye. Lastly, and this is most distressing of all, there is a good fellow, doing his level best, with almost no equipment to keep up with the procession, who reads truly astounding things into banal findings. The "hysterical pseudo-scientist" is a creature whose opportunities should enable him to know better, and who may be, but rarely is, dealt with without compunction.

Verbosity is inexcusable. Commend me to a man who clips his phrases until not a word can be spared without obscuring his meaning. Circumnavigation of the circumambient is still a favorite pastime of medical authors. There is no necessity for excusing a publication if it contains its own excuse. I have known a thousand words to be too few for apologies. (There is no doubt that twice ten thousand would be too few sometimes.)

There is something to be said on the author's side in this connection. It is not fair to make him conform to a style of spelling with which he is not familiar and for which, perhaps, he has sovereign contempt. He cannot be expected to remember that sulphur is spelled with an "f" in one journal and thyroid with a central "e" in another, but he may be expected to do his spelling one way. It is not fair to make him say "I think" for "it seems to me," if the latter seems better to him, and he has the perfect right to style himself "the author." His pet phrases should not be cut, unless they are ambiguous. By no law, human or divine, is an editor empowered to make hash of the manuscript or bibliography. It should be sent to the author in order that the injected sentences may not stultify him completely. I know half a dozen editors who thrive on the rows they start in this fashion.

A reference may be given in only one way, author's name, journal not abbreviated out of easy recognition, volume *and year*, page. Within these limits, the writer may and should be allowed to write his bibliography as he pleases.

There are instances of manuscripts having been held unpublished for two years, good material, too, in order that the editor's school, pupils or colleagues may have first place. In the meantime the story becomes stale or has been forestalled. There is no redress, but it is a cruel wrong. On the other side, writers should remember that an editor does the best he can with a limited space and may be compelled to delay publication for three or four months.

A nice editorial discrimination is required in the case of a man who writes for reputation. If he has something worth hearing, by all means let him have his opportunity, no matter what his reputation for advertising. If he dashes madly into print with the result of a Bottini operation before the knife is cold, or because he has found a few cell inclusions and thinks they prove parasitism as the cause of cancer, plead with him as a brother. If he will not listen, pass him on to another editor. His feelings cannot be hurt. His next dash will be wilder, if possible. Killing is altogether too good for the man whose object is to puff a proprietary preparation under the guise of a contribution to science. A meaner man than the one who married on Christmas a girl whose birthday was the twenty-fifth of December is he who sends his article to all the journals he knows of at once, and prays for an immediate hearing. Fortunately, the game can never be played but once, even when the culprit is a genius like the one who recently secured admission to twenty journals, with no returns as yet from the mountain counties. It is possible for an editor to joke about these things when his race is run, not before.

Perhaps the worst of the lot is the thief (no need to mince matters), who steals another's work, his cases, his methods, even his photographs. The editor knows nothing of the matter until he hears from the victim; of course, the harm is done, for the article is printed. He makes what amends he can, knowing himself innocent, but the wrong seems without redress. No one pays any attention to the owner's claims after the fact. They are laid to jealousy and dismissed. Subvarieties of this genus are those who carefully compound articles from quotations, minus the marks or plus them, as the case may be, and those who polish old jewels of wisdom and offer them as new. These two are not insidious like the first, and may be dealt with gently and firmly.

A word as to titles. Let the author remember the unfortunate whose evil state forces him to make the volume's index and, remembering, not make his title a synopsis of his communication. It is enough to tell a reader whether the subject attracts him. If one or two words will do, so much the better; but it is entirely possible for the caption to be misleading when the error is on the side of brevity.

Book Reviews.

There is one desideratum in a book review, and that is to tell the truth about the book. When it comes to the editor's desk, he does one of two things with it—he reviews it himself, if he has time, or he sends it to some one he thinks fitted for the task. If he selects the latter course, he does so in fear and trepidation. Time goes on and no review materializes. After a few months the publishers politely request to know if there is any likelihood of a notice ever appearing. After several notes, interviews and telephone conversations, the review is sent. It is evidently written from the preface, is perfectly perfunctory and winds up with: "This work deserves a place in every library." It goes in and the editor hates himself.

Occasionally he gets a surprise and the reviewer makes his comments in fine style. The author is never pleased, but that is beside the issue. His feelings and his publisher's cannot be considered. Good friends are lost that way, but duty points to the good of the reader. The best reviewer is one who not only knows the subject, but has written on it, if possible a book. His justice is then tempered with mercy, and he writes with authority as well as infinite sympathy. What he says may go a long way if he signs the review, a good practice in most instances. The average critic thinks his work done when he has picked all the flaws he can find. If there are mistakes, misprints or omissions, by all means let them be pointed out, because these points are helps in preparing a new edition, but it is not possible that any work on medicine is wholly composed of error. Destructive criticism is about the easiest of literary pyrotechnics and, while it may be a choice spectacle, there is left nothing but acrid smoke. Indiscriminate praise is no better. Any man who reads a review (there are not many) wants to know why the book excites admiration. When the work is a monograph on one topic, a good plan, instead of reviewing it in the ordinary sense, is to give the gist of its contents with a comment or two. One sort of book may be treated with any amount of contumely the critic chooses to heap upon it, the one which presents nothing to think about on a subject already worn threadbare. Patience is short these days.

Correspondence.

There is no cordial liking in newspaper offices for unsigned letters. Anonymity is the coward's cloak. The writer is, in plain English, afraid to let his identity be known, and for good reasons. His object is almost invariably a personal attack. If the editor knows him and can vouch for him, he may publish the letter in case its object is to right a wrong. Why reputable journals publish, as they have in my knowledge, bitter personal assaults, unsigned, or, indeed, at all, passes my comprehension.

There is a place for correspondence in medical publications, and that is to present minutiæ not worthy of expansion into original communications.

Society Proceedings.

Generally, after the medical stenographer has taken his notes, they are sent to the debaters for correction. This practice affords a double opportunity of correcting the mistakes of both, so that what appears is fortunately, in rare cases only, what has been said. Few physicians have silver tongues; but it would be a pity, indeed, if the experience gained from "the speaker's 9,000 cases of dandruff, in private practice," should be lost to the dear public. It is this pure altruistic motive which leads societies to pay stenographers ten dollars an evening. Symposiums are rehashes; set debates are as futile a pastime as making bouquets of dandelions, and in extemporaneous ones, if you know your man, you can generally predict what he will say, even the stories he will tell. From all this may be gathered that society proceedings, in my opinion, are useless. They are—except to the editor who fills space with them.

The case is proved by the exceptions. The transactions of clinical societies are vastly useful if the cases are presented with proper histories. In this way we may escape the reporter's deductions, in which we have not the remotest interest, and at the same time get the benefit of the case. I am not so familiar with other lines, but there is just one dermatological society in the world which reports its cases properly, and that one is in Paris.

The rest are useless, even to the trained observers who can read between the lines. I have been more abused for the transactions my journal published than for any other feature. I accepted it in proper spirit, knowing that it was deserved and the pruning-knife had been used too little.

Abstracts.

As a race we are said to take our pleasures sadly, everything else in tablet form The habit, the latter that is, is growing. Things are pretty nearly at a pass where no one with anything to do has time to read literature in any line but his own, and often not in that. That *rara avis* in metropolitan communities, the general practitioner, is in even worse case. The editor knows what is expected of him, and knows, too, the cost and result. How many appreciate the labor that has gone to make the finished product lying in their desks once a week or a month? No more than count the cost of lighthouse building or powdermaking. The parallel is not perfect, but the toil is the same. I served my time, five years, in the making of abstracts, and there is nothing, except the index, for which I have greater loathing. Some one must do it. The question is, who? We must abstract from Russian, Polish and Scandinavian tongues, if we can, must be able to winnow wheat from chaff, make it readable and compress the work of ten years into not more than 500 words. It is not too much to say that every abstract properly done represents from two to three hours' time. Count up the years contained in the single issue of the **Philadelphia Medical Journal** of December 13. If an article is worthless, it can be dismissed in two lines, but the mind that weighs it should be judicial. "Nothing new" is a sad commentary on an "original" article. My idea is that an abstract should merely indicate the trend of the author's observation, not attempt to give the whole substance, unless it is an epoch-making production. If the reader is really interested, he will study the original for himself; if not, he will get all he will ever remember. Journals are not published to encourage laziness. The chief reason for my notion of the abstract is that, with all the good intention possible, the reviewer often misrepresents the author through misunderstanding or carelessness. The error is copied, carried into books and embalmed for a generation. This is the reason why many writers of late have taken to making their own abstracts. The polyglot genius with medical training who can weigh evidence and sum it up, does exist. There are several of him in my ken, but, so far as my experience goes, he works when he lists, sometimes for glory, sometimes for the love of it, and sometimes for money or the journals. Whatever the motive, the reader is his debtor, but his word should not be taken as gospel. Quite as useful as the man who pursues original lines of investigation is he who presents an able critical summary of the results of that work. Small thanks he ever gets for it.

The Publisher's Department.

One word and I am done. I am not of those who hold that medical literature is on so high a plane that there must be absolute divorce between it and the advertising which makes its existence possible. The journals subsidized from one source or another are in a fortunate position, for they are not compelled to carry advertising. The rest are. They could no more live without it than could the lay periodicals; moreover, there is no discernable sense in their attempting to do so. Having accepted it, the management may offer a *douceur* to the advertiser, not under any circumstances to publish his matter in the regular reading pages, but to give him space for "write-ups" in a publisher's department the character of which is plainly indicated. The subscriber may read or not, as he chooses, but the obligation has been discharged. Close supervision is absolutely necessary, for advertisers having the inch make a practice of demanding the ell. If the matter is new, and tests of the preparations well done, so much the better. In case they are not, they must at least be abstracts from recent publications, not mere puffs. This department is a regular feature in many of our best general magazines, and it is merely a matter of business, to be viewed in no other light, but the advertiser should not expect, as he does, to get the notice for nothing. He would not do so if he did not know himself to be dealing with a class notoriously not business men.

I have not touched upon the department of news, for presenting that is a function of the medical newspaper and not of the special journal. The same I hold to be true of editorial writing. It may not be entirely well to tell professional secrets, but there are many difficulties in the making of a magazine which its subscribers seem not to appreciate. I shall have accomplished my object if there comes that better understanding between them and the gentlemen in editorial chairs of which I have spoken. I am not a reformer. Medicine and its literature are too old to be remodeled now, but the paths of both parties in this case may easily be made much smoother.

SPONTANEOUS RUPTURE OF THE HEART, WITH A REPORT OF SEVEN CASES.

By ARTHUR S. HAMILTON, M. D.,
of Independence, Iowa.
Assistant Physician to the Independence State Hospital.

Etiology.—Spontaneous rupture rarely, if ever, occurs in a healthy human heart. Some cases of this kind were reported by early observers, but none has been put on record since the general use of the microscope has enabled us to make accurate diagnoses. It is interesting to note that it is said to have occurred in the hearts of animals hunted to death.[1]

As in other diseased conditions, there are both predisposing and exciting causes; the predisposing cause being a pathological condition of the heart, and the exciting cause some mental or physical strain. The principal predisposing cause is some pathological condition of the coronary arteries, resulting in various changes in the cardiac muscle, such as fatty degeneration, infarcts and acute and chronic myocarditis. Fatty degeneration is particularly common, and in the 100 cases collected by Quain[2] it was present 77 times. Less common causes are aneurysm of the coronary arteries, neoplasms of the heart, valvular disease, stenosis of the main arterial trunks and, very rarely, cysts. Segmentation of the heart muscle has also been found occasionally, but its significance has not yet been determined. By some it is thought to occur during the death agony or post mortem. It was present in case No. 7 of our series.*

Most writers seem to believe that some acute, exciting cause of the rupture can generally be demonstrated. Osler[3] says that "the accident usually takes place during exertion or excitement." Nevertheless, it is true that many cases have occurred when the individual was at complete rest, even asleep, and in not one of our cases was there any previous exertion or excitement of any kind, so far as known, to bring on the attack. If it be true that some apparent strain is usually present to account for the accident, it would seem that such history would be particularly common in cases of heart rupture occurring in the insane. This, however, does not appear to be the case. I have met with but few such instances in my reading. Johnson[4] reports one case which occurred during an epileptic seizure, and Dr. John Bruce[5] records a case occurring during an attack of excitement. Beadles[6] speaks of an old man who died from rupture of the heart one hundred and forty-six hours after engaging in football kicking. On the other hand, a number of cases have been recorded as occurring among the insane when the patient was perfectly quiet at the time of the accident. Dr. Arthur F. Mickle[7] has called particular attention to this point, and Beadles, in the report mentioned above, reports several other cases in which no history of special exertion is given. In two subsequent reports[8] on the same subject, he makes no mention of any unusual exertion antedating the rupture. Great mental or bodily exertion, however, has often been assigned as a cause, and cases have been ascribed to running, dancing, lifting, straining at stool, vomiting, coughing, coitus and delivery of a child. Intense mental distress is also said to have caused the accident.

It occurs usually in individuals past sixty, though A. W. Hoisholt[9] records a case in a man of forty, who had been much addicted to the use of alcohol, and Green[10] reports a case of thrombosis causing a rupture of the right ventricle in an infant of nine and one-half months. It is more common in men than in women.

Pathological Anatomy.—The rupture may be either partial or complete. In complete rupture there is a solution of continuity of the entire wall at some point. In partial rupture there may be simply destruction of the papillary muscle, of some of the trabeculæ or of some of the fibers of the heart wall. Cases of complete rupture have been reported in which the tear extended the entire length of the ventricle, but ordinarily it measures only from 5 to 15 mm. in length. Usually the internal orifice is larger than the external, but occasionally the opposite is the case. Both openings usually present a very irregular, jagged appearance, and often, to a superficial observer, they appear like a simple contusion. Rarely the opening resembles an incised wound, as in Dr. Bruce's[5] patient, in whom it was described as being like a knife-cut. In No. 1 of our cases the wound is described as having more the appearance of an incised than of a contused wound. Not infrequently a clot will be found projecting from the external opening, and at times this clot can be followed through to the internal opening. The course which the blood pursues in its passage through the heart wall is a very tortuous one, since the muscles are rarely torn squarely across in large bundles, but are rather dissected apart by the burrowing blood. On this account the external and internal openings are rarely directly opposite. In the auricle there may be simply a separation of the fibers of the muscle and no actual rupture. In case No. 5 of our series the internal opening was in the left ventricle and the external in the right, showing that the blood had burrowed past the septum ventriculorum, the sinus being about 25 mm in length. Sometimes there is only one point of exit on the surface of the heart, but not infrequently the sinuous canal divides and presents several openings peripherally. Barclay and Paget[11] report several openings occurring in the right ventricle, and Andral[12] has described a case in which there were five distinct points of rupture in the heart. Often extravasation and clotting of blood can be seen under the pericardium about the rupture.

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*Since writing the above my attention has been called by Dr. A. P. Ohlmacher to an article in the Journal of Medical Research, vol. II., No. 4, by W. H. Buhlig, who shows quite conclusively that, in many cases, at least, the fragmentation and segmentation reported present may be accounted for by the condition of the knife edge, the direction of section and other minor factors.

The most common seat of rupture is in the wall of the left ventricle, on the anterior surface, a little above the apex and a little to the left of the septum. It is at this point, for some reason, that the conditions predisposing to rupture, such as fatty degeneration, myocarditis, infarcts and aneurysm, are most often found. The relative order of frequency with which the different parts of the heart are ruptured is as follows[13]: Left ventricle, right ventricle, right auricle, septum ventriculorum and left auricle. In 55 cases collected by Ellaume[14] the wall of the left ventricle was affected 43 times, of the right ventricle 7 times, of the right auricle 3 times and of the left auricle twice. In 24 cases collected by Barth[15] the laceration was each time in the left ventricle. In our cases the rupture occurred 5 times in the left ventricle, three times on the anterior surface, once on the posterior surface and once at a point not mentioned. In a sixth case it began on the posterior surface of the right ventricle. In a seventh case it occurred in the right auricle.

In patients in whom death occurs quickly the escape of the blood from the rupture is probably very rapid, but in others there seems to be a gradual oozing, and in these it may be hours or even days before death occurs. The blood usually escapes into the pericardium, but when there are adhesions between the heart and the pericardial sac, the blood may escape into the pleura, or even into the large arterial trunks. Usually when the chest cavity is opened the pericardial sac is found distended with blood, giving to it a bluish-black color. Several pounds of blood have been found in cases of very great distension, but at times the quantity is small, the amount of fluid being less than is often found in cases of pericardial effusion.

On microscopical examination of the heart muscle the most common condition found is fatty degeneration. Some of the fibers will retain a healthy appearance, while others, closely adjacent, will present a partial or complete loss of striation and a deposit of fat granules. Sometimes these granules are very small, but in other instances they have gathered into relatively large drops. They may be spread uniformly throughout the cell, be gathered at the ends of the cell or at the poles of the nuclei. In cases of infarct, myocarditis, segmentation or other pathological states, the characteristic microscopical condition is found to be present.

Symptoms.—Death from rupture of the heart usually occurs suddenly and unexpectedly, and often without diagnostic signs. Sometimes the patient falls with only a cry or groan and is gone. Death may even come during sleep and on examination nothing may be found to show that any struggle has taken place. In Quain's[2] 100 cases death occurred without preliminary symptoms 71 times. DaCosta[16] says: "Now, in spite of the care with which the physical signs of this mishap (spontaneous rupture of the heart) have been detailed, we know nothing positive about them; for death usually takes place far too rapidly to permit of any observation."

In the rather infrequent instances in which life is prolonged for a time the patient may be seized with intense pain in the region of the precordia together with shortness of breath. He not infrequently uses the expression that something has given way in his heart. The pulse becomes small, feeble and finally imperceptible. At times it is irregular. The face is pale and covered with cold perspiration. There is a sense of impending death. Vomiting and even diarrhea may come on, and with the continuation of the hemorrhage there supervene dizziness, spots before the eyes and fainting attacks, ended by death. Examination of the heart will show a very weak apex beat, which finally becomes imperceptible. A very important sign, if it can be demonstrated, is a gradually increasing area of dulness over the pericardium, due to the continued hemorrhage.

In still another class of cases the symptoms at the outset are less severe. There is at first great pain, but this gradually grows less. The heart-beat is increased in rapidity, but no increase in cardiac dulness can be made out, and in a little time the patient appears to improve greatly and may even feel altogether well. After a lapse of a few hours or days, however, the symptoms return in a more violent form, and death occurs very shortly. In this last class there has possibly been a small laceration at the outset, which has become filled with clot, stopping the hemorrhage. Later the rupture is enlarged and a profuse hemorrhage occurs.

In many patients death doubtless occurs directly from pressure on the heart, due to the excessive and rapidly occurring hemorrhage. In other patients, in whom the hemorrhage is not great enough to account for this, death is possibly due to cerebral anemia or to so-called shock.

Diagnosis.—Even in the most favorable cases of total rupture, accurate diagnosis is difficult. If the patient survive long enough to permit of examination, the presence of an overwhelming pain in the heart, together with signs of heart failure and internal hemorrhage and an increased area of dulness over the region of the pericardium, might enable us to make a satisfactory diagnosis. In none of our patients was the cause of death ascertained previous to the post mortem examination. In cases of partial rupture, if the break occur in the papillary muscle so as to interfere with the action of the chordæ tendineæ, the sudden development of valvular insufficiency may enable a diagnosis to be made if the condition of the heart was accurately known previously. This latter lesion also is likely to be accompanied with great pain.

Prognosis.—In every case the prognosis is highly unfavorable. Healing probably never occurs, and death is but a question of time. This usually occurs immediately, but it may be delayed for several days. Eichhorst[17] speaks of a man who died on the seventeenth day, and Barth[15] of one who died on the tenth day. One of our patients lived five days after the onset of acute symptoms. Osler[3] mentions a patient who died in thirteen hours after pain first set in, but in the meantime had been able to walk up a rather steep hill.

Treatment.—Treatment is of no avail, except to alleviate the pain and possibly to prolong life for a short time. The patient should be put completely at rest, with an ice-bag over the heart. Morphine should be given freely to relieve pain. In some cases stimulants may be advisable, but in administering these it must be remembered that any increased intracardiac pressure is likely to cause renewed hemorrhage. Digitalis might do some good by slowing the heart.

REPORT OF CASES.

The following seven cases, which I report in detail, represent all of those known to have died of spontaneous rupture of the heart out of a total of 1,693 deaths occurring among the patients at the Hospital for the Insane, at Independence, Iowa, since its founding. The diagnoses were all verified by post mortem examination. In the first 1,134 deaths, however, post mortem examinations were not always held, and some cases on this account may have escaped recognition. In the last 559 deaths post mortem examinations have been made in practically every instance, and in this number two of the seven cases were found.

Case 1 occurred in the immediate service of Dr. Hill and was reported by him in the *Medical Record* of April 24, 1880. The notes in Cases 3, 4 and 5 are very meager. Ther is no record of the physician who had immediate charge of these patients. Case 6 occurred in the service of Dr. Boody, and to him I am indebted for the notes. Case 7 occurred in my own service.

CASE 1.—Hospital No. 250; female; 51 years old, height 5 ft. 3 in.; weight 200 lbs.; no history of alcoholism or venereal disease; case of dementia præcox; had been insane for 28 years and an inmate of the hospital for 19 years. She had not been ill for some time preceding her death and was supposed to be in good health. She was demented, incoherent, irritable and inclined to violence unless kept by herself. On this account she spent much of her time in her own room, where she did considerable sewing and knitting, but no heavy work. She was in the habit of getting into her bed during the day and sewing there, but this was not supposed to be due to poor health or weakness. On the morning of March 3, she ate heartily, put her room in order, washed a few garments for herself and then got into bed. When Dr. Hill made his rounds at 9 A. M., she was mending socks. She was apparently well. At 12 M., she was found dead. Her head was bowed upon her knees; her hands and face were purple; her mouth was open and her eyes closed; her right hand was in her lap, holding her work; the left hand hung at her side. There was no sign of any struggle, and she had made little or no noise, otherwise she would have been heard. Death must have occurred very suddenly. No diagnosis was made. A post mortem examination was held four hours after death. Nothing unusual was found in the brain except that the vessels in its membranes were full of blood. The lungs were in good condition. There were no adhesions. The pericardium was distended with blood and was adherent at several places to the heart. There was no unusual deposit of fat about the heart and no dilatation of the cavities, which contained but little blood. When emptied, the heart weighed 384 grams. The heart muscle seemed quite normal in appearance, except at one point, and the proportionate thickness of the walls was normal. The valves were in good order. The left ventricle was ruptured in front near the septum and about half way between the auriculoventricular groove and the apex. The aperture was 8 mm. in length and was more like an incised than a lacerated wound. A few small clots were found beneath the pericardium near the rupture. On the inner side of the ventricular wall, corresponding to the seat of rupture, there was a circumscribed spot of myocarditis. The wall was not thin at this point, but the muscle was disorganized and through this disorganized portion the fissure extended. No microscopical examination of the heart muscle was made.

CASE 2.—Hospital No. 1108; 67 years old, case of alcoholic insanity; had been insane for 19 years and at this hospital for 7 years. Nothing further known of previous history. He was admitted July 25, 1878, was moderately demented and at times cross and irritable. He did practically no work but was able to get out of doors up to a short time previous to his death. At different times during the seven years he had a number of abscesses. On the 19th. day of January, 1883, he had an apoplectiform seizure. He gradually recovered from this and in two months was able to be out of doors again. There was little, if any, paralysis following. In November of 1884 he began to fail rapidly; went to bed and was never able to get up again. January 9, 1885, he seemed quite weak, but not more so than for several days past. He ate breakfast and dinner as usual, but would take no supper. At 8.00 P. M. he died suddenly and rather unexpectedly. He had not complained of any pain previously. The post mortem examination was made the next day. The membranes of the brain were much thickened and the dura was firmly adherent to the calvarium. There was an area of necrosis in the right lenticular nucleus about the size of a bean. The bloodvessels were markedly atheromatous. The lungs were quite healthy in appearance, except that the left was adherent to the chest wall by very firm adhesions. The pericardium was filled with firmly clotted blood. The heart was soft and flabby and showed evidences of fatty degeneration. When the clots were removed, a rupture was found in the wall of the left ventricle on the anterior surface. The rupture had occurred within a necrotic area, a short distance from which was another similar area.

CASE 3.—Hospital No. 4864; female; 63 years old; case of senile dementia. Little was known of her early history.

She was a farmer's wife and had worked rather hard previous to admission; had often had headache and for this had frequently taken morphine. She was admitted in December and in the March preceding had had an attack of grippe. She had been insane three years and at the time of her death had been at the hospital three months and thirteen days. At her admission there was no note of her physical condition, except that she was rather feeble. She continued to complain about her head. She had been in bed one week previous to her death, which occurred suddenly on the 10th. of March, 1891. At the post mortem examination a rupture of the right auricle, due to aneurysm of the wall of that part, was found. There are no further notes.

CASE 4.—Hospital No. 1188: female; 81 years old: case of senile dementia; previous history meager. She had been at the hospital thirteen years. During this time had done considerable sewing and knitting, but had had no other employment. When first admitted she was described as being feeble, though she suffered from no special trouble. For a time she improved in general health. Six years after admission she was again spoken of as being feeble. During the next seven years she had several minor ailments, such as colds and dysentery. On the 9th. of December, 1891, she seemed as well as usual in the morning, but at noon complained of pain in the cardiac region. She was put to bed, and died at 2.30 P. M. The autopsy showed rupture of the left ventricle. There is no further record of the clinical symptoms or autopsy findings.

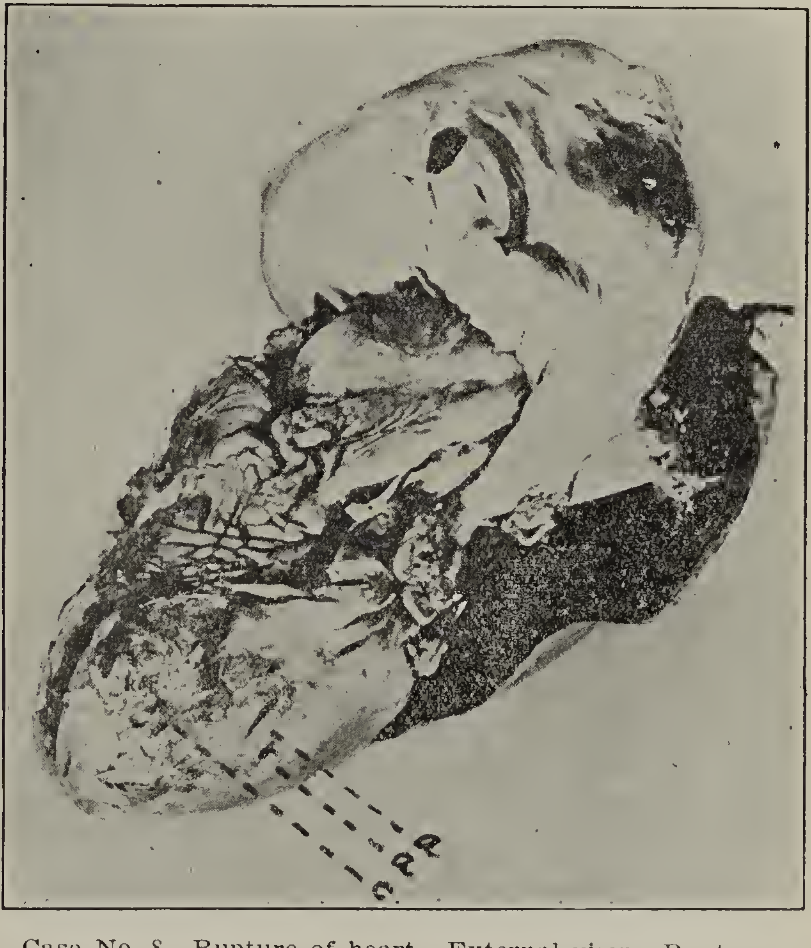
CASE 5.—Hospital No. 3068: male: 81 years old: case of senile dementia; very little previous history obtainable. He had been insane eleven years and in the hospital eight years. Before admission he had used whiskey rather freely. No record of syphilis. At first he was irritable and at times abusive and violent. The last two years he had been feeble and much demented: had done no work at any time. On the evening of June 11, 1893, he complained of pain in his left side and had an irregular pulse. No other clinical history is given. He died suddenly at 11.10 P. M. The post mortem examination was made the next morning. He was a well-nourished man. There was an old united fracture of the eighth and ninth ribs on the right side. The lungs were in good condition, except for a few old adhesions in the pleuræ. The pericardium contained 355 cc. of fluid blood besides about 175 cc. of firm clot. The left side of the heart was somewhat hypertrophied. On the extreme upper and posterior surface of the right ventricle was a dark area about 18 mm. in diameter. At one edge of this area there was a small opening 6 mm. in diameter, through which a clot of blood protruded. On dissection this clot was found to extend downward and toward the left into the wall of the left ventricle, always lying near the outer surface. At a point a little above the center of the left ventricle and in its posterior part the clot turned abruptly and entered the chamber of the left ventricle through a tear in the muscle 6 mm. in diameter. The blood had evidently torn a passage-way almost completely through the posterior wall of the left ventricle, but, being deflected by something from its direct course, just as it was about to emerge on the outer surface, it had passed on toward the right ventricle. The heart was empty. The aorta contained organized clot. The liver was small, light-colored and friable. It had a very rough surface like that of the "hob-nail" liver. The kidneys showed chronic interstitial nephritis.

CASE 6.—Hospital No. 6767: male; 87 years old; case of senile dementia; a farmer by occupation; had been a hard worker, but had enjoyed good health. No history of alcoholism or venereal disease. For ten years he had shown signs of insanity; had been at the hospital one year. He was quite thin, weighing only 122 lbs. Height 5 ft. 4½ in. At the time of admission to the institution, one year before his death, his heart and lungs were considered normal. His pulse was noted at that time as "full, strong and regular." Six months later his heart was again examined and found to be in good condition. The urine examination was negative. June 7, 1897, he was seized with "a severe pain in the upper part of his body." His pulse intermitted every third, fourth or fifth beat. He had no fever. The next day his pain was very much less, but his pulse was still intermittent. He continued to improve, and on the 10th. was free from pain and his pulse was very much better. He was still kept in bed. On the morning of the 12th., as Dr. Boody was making his rounds, the patient got out of bed, said he was feeling very well and asked to be permitted to remain up. On being given the desired permission he seemed much pleased, laughed and attempted to execute a little dance. He apparently felt quite well until about 3 P. M., at which time he was sitting in the bathroom, cleaning his teeth. He suddenly gave a short cry and fell over. The attendant went to his assistance at once, but he was apparently already dead, and no attempts at resuscitation produced any effect. The post mortem examination was made the next day at 9 A. M. The lungs were normal, except that they were firmly adherent to the chest wall. There were large deposits of fat in the mediastinal space. The pericardium was filled with clotted blood. On the posterior surface of the left ventricle near the apex there was a ragged tear, including several openings, one larger than the others. The greatest diameter of all the tears together did not exceed 20 mm. There was a post mortem clot lying just beneath the pericardium and around the laceration. From the largest opening a small ante mortem clot protruded and this clot could be traced into the ventricle. The muscle was soft, flabby and readily torn, and at several points there were small hemorrhagic areas. There was slight atheroma of the aorta, a calcareous deposit at the base of the aortic semilunar valves and the mitral valve leaflets were thickened and sclerotic. The heart weighed 425 grams. The abdominal aorta was filled throughout its length with calcareous plates. The kidneys showed chronic interstitial nephritis. It would appear in this case that the ante mortem clot found in the rupture had been deposited there at the time of the onset of the first symptoms. The clot as it formed had closed the opening in the ventricle so that no more blood could escape. A subsequent further rupture and hemorrhage caused death. A microscopical examination of a portion of the heart wall from the region of the wound showed rupture of some of the muscular fibers and quite extensive extravasation of blood among nearly all the fibers. Many of the corpuscles showed signs of disintegration. In addition some of the fibers presented the ordinary signs of fatty degeneration of quite an advanced grade. In these fibers the striations and nuclei could scarcely be seen, and the cells seemed to contain only granular material and fat globules. The fat globules were quite small and were generally located at one end of the cell.

CASE 7.—Hospital No. 1343: male; 67 years old: case of alcoholic insanity; a farmer by occupation: had been a hard worker in early and middle life and had used considerable liquor: no history of syphilis; had been at the hospital 21 years. During this time his health had been unusually good and he had rarely had even the ordinary minor ailments. For some time previous to his death his work had been to sweep the basement of one of the cottages once a day. This work he usually did in the morning and he did it on the morning of the day of his death, July 30, 1900. So far as known, he engaged in no other physical exercise that day. After eating his supper in the evening he had complained of a pain in his chest. He said it was due to poison having been placed in his food at supper, but, as this was a common delusion of his, little attention was paid to his statement. When I made my rounds at 7 P. M., he was still complaining of pain and I examined him. The pain he located directly in the center of the chest and said it was of a burning character. He still attributed it to poison. His pulse was full and regular and normal in rate. The heart sounds were not very loud, but they showed no other abnormality that I could detect. There was very little to indicate that he was suffering from pain, except his statement to this effect. He was walking about the room. At eight o'clock he went to bed, as was the rule in his building. At 8.30 I was called to his ward for another purpose and again saw him. He said that he felt much better, but still had a little pain in his chest. At this time his pulse was somewhat intermittent and, though I suspected there was something more serious troubling him than I had at first supposed, I was still unable to make a diagnosis. A little time after I saw him he got out of bed and passed urine, after which he lay down and seemed to be resting well for one hour. He then got up and sat on the side of the bed and complained of shortness of breath. His nurse did not think him very ill. At about three minutes after ten, while sitting on the side of the bed, he suddenly uttered a loud groan and fell backward. He showed no sign of consciousness after this and his pulse was imperceptible. When I saw him, ten minutes later, he was dead. I was still unable to make a diagnosis as to the cause of his death. The post mortem examination was made the next day at 10.20 A. M. His body was well-nourished, but not very fat. The vessels of the meninges of the brain were all engorged. Both lungs were adherent to the chest wall, were considerably injected and moderately edematous. Both kidneys showed chronic interstitial nephritis. The apex of the heart was on a level with the fifth interspace, slightly inside of the midclavicular line. On opening the pericardial sac a large quantity of reddish fluid escaped. Inside the sac, and chiefly in the region of the auricles, was a large post mortem clot, weighing 205 grams. The heart was large and flabby, and was covered externally by a large quantity of fat, which was more abundant over the right ventricle than over the left, and still more abundant over the auricles than the ventricles. The coronary arteries seemed quite healthy in appearance. On the anterior surface of the left ventricle, about 4 cm. above the apex and about 2 cm. to the left of the septum, there was a lacerated area in the heart muscle. It extended 3 cm. in a vertical direction and about 1 cm. in a horizontal direction. In the center of this area there was a complete opening into the ventricular chamber. On opening the left ventricle the laceration was found to begin well down toward the apex and was marked internally by the rupture of numerous interlacing columnæ carneæ. The ventricle contained a post mortem clot weighing 20 grams, deposited about the region of the rupture. The tricuspid opening admitted four fingers readily and the mitral admitted two. The tricuspid and mitral valve leaflets were slightly thickened. There was a slight degree of atheroma in the aorta. The heart muscle was very friable and was easily reduced to a soft mass. The muscular wall of the left ventricle also contained a large quantity of fat. Weight of heart, 430 grams. A microscopical examination of some muscle from the seat of the rupture was made. It showed a condition of fatty degeneration very similar to that of the muscle in Case 5. In addition segmentation of the heart muscle was present. This was not found in all of the muscle taken out for examination, but extended over large fields and included all the fibers in the field, not being absent from some fibers and present in others, as was true of the fatty degeneration.

Since this article, as it appears above, was placed in the printers' hands, I have been able to add still another to the list of cases. For permission to use the notes my thanks are due to Dr. Joseph C. Ohlmacher and Dr. J. H. McGready who made the post mortem examination. Dr. Ohlmacher also made the microscopical study.

CASE 8.—Male, 80 years old: nothing is known of his antecedents or his early life. Of late years he has been a peddler of patent medicine and during this time he has used beer in moderate quantities. Considering his age, he was thought to be unusually strong and hearty. He occupied a couple of rooms in a house and lived by himself. One week preceding his death he returned from a trip to a neighboring town, where he had been to sell medicine. During the week he did not go out on account of a pain and feeling of soreness in the region of his heart. The character or severity of this pain could not be learned. So far as known he had not undergone any unusual exertion previous to his death. On the 7th. of November he had gotten his customary bowl of milk from another family in the house in which he lived. He returned with this to his room and had evidently begun to eat his supper of bread and milk when his death occurred. When found at 7 P. M., he was sitting at the table, leaning back in his chair with his head fallen backward. There was nothing to indicate that any struggle had occurred, and death must have been very sudden. The post mortem examination was made the same day at 10.45 P. M. The following is an abstract of the notes: The body was that of a well-developed and well-nourished male, well past middle age. The trunk was still warm. The pupils were equal and somewhat contracted. There was some masticated bread still in his mouth, but none was found in his throat, esophagus or stomach and none had been spilled upon his lips. The chest was narrow and its anteroposterior diameter was much increased. There was slight posterior lividity. Some of the superficial veins stood out prominently and were apparently filled with blood. The radial arteries were hard. There were no significant scars or other external markings. The diaphragm extended to the fourth interspace on the left and to the sixth interspace on the right. The lungs were contracted and both pleural cavities were free from fluid and adhesions. The heart with the pericardial sac was seen to occupy a large part of the middle portion of the chest and was entirely uncovered by the lungs. The sac was much distended, and fluctuated under palpation. The apex of the heart was felt at the sixth rib and about 2 cm. to the left of the midclavicular line. On cutting through the inferior vena cava, a large amount of dark fluid blood escaped. When the pericardial sac was opened it contained about 300 cc. of firmly clotted dark blood, which almost entirely surrounded the heart, being most abundant at the base. It formed a mold of the vessels in this region. The heart was somewhat enlarged and presented a rather pale, yellowish surface with a moderate amount of subepicardial fat and rather tortuous bloodvessels. Two linear tears were seen in the left ventricular wall anteriorly. They were about 5 mm. from each other. One was 12.5 mm. long, the other 8 mm. long. They were both 5 cm. above the extreme apex of the heart and about 3 cm. from the interventricular septum. They extended upward toward the right and downward toward the left at an angle of about 80° with the vertical. No bloodclot of any kind was noted in the external orifice of the tears. About them was an area of fibrinous deposit which had a diameter of about 3 cm. and extended downward and to the right more than to the left. Another similar area of fibrinous exudate was seen on the inner surface of the parietal pericardium, corresponding in position to the rupture, but there were no adhesions between the two surfaces. On examining the interior of heart, it was found that the rupture had begun directly behind the anterior papillary muscle, destroying about half the attachment of this muscle at its base. A



Case No. 8.—Rupture of heart. External view. Ruptures at a. Area of fibrinous deposit at c.

probe passed carefully from the outside through the larger tear showed that the blood had pursued a tortuous course in its passage through the heart muscle. The smaller tear communicated with the larger about midway in the wall. All the chambers of the heart were firmly contracted. The heart muscle was pale and cut with decreased resistance. It seemed to be slightly greasy. There was no blood in the heart except a small mixed clot about the internal orifice of the tear. The aortic valve was incompetent to the water test and its leaflets were somewhat thickened and contracted and contained calcareous material. The aorta showed slight atheroma and the coronary arteries were somewhat sclerotic. There was slight congestion and edema of the lungs. A piece of muscle was taken from the left ventricular wall a short distance below the tear. Part of it was carried through celloidin and stained with hematoxylin and eosin. Another part was taken directly from formalin, fixed to the block with celloidin and sectioned and stained with Sudan III. Still a third part was fixed in Flemming's solution and embedded in paraffin. Portions of the partially ruptured papillary muscles were carried through in the same way. The celloidin sections stained with hematoxylin and eosin showed pale areas throughout the muscle-cells, which stained poorly and showed marked so-called fragmentation and segmentation, probably due to the microtome knife. Sections stained with Sudan III showed considerable fatty degeneration. Paraffin sections of the Flemming preparations showed a fair amount of fatty degeneration present, but no fragmentation or segmentation. There was slight exudate in the alveoli of the lungs, and in the kidneys chronic interstitial and parenchymatous nephritis was found. The spleen, liver, pancreas and adrenals were all normal except for very moderate congestion and interstitial changes.

The presence of an exudate on the surface of the heart and the corresponding portion of the pericardium would seem to indicate an attempt on the part of nature to repair an injury to the heart muscle which had probably had its beginning at least a week before the patient's death. It is not at all improbable that the two surfaces were adherent before the outpouring of the blood forced them apart.

1. Hamilton's Text-Book of Pathology, Vol. 1, page 587.
2. Lumleian Lectures, Lancet, 1872, 1.
3. Pepper's System of Medicine, Vol. 3, page 617.
4. Anomalies and Curiosities of Medicine, Gould and Pyle, page 625.
5. Journal of Mental Science, Vol. 38, page 85.
6. Tr. Path. Soc., London, 1892-3, XLIV, pages 18-23.
7. Edinburgh Medical Journal, Feb., 1884.
8. Tr. Path. Soc., London, 1874-5, page 36, and Tr. Path. Soc., London, 1898-9, pages, 49-51.
9. Occidental Medical Times, October 15, 1899.
10. British Medical Journal, June 1, 1895.
11. Quoted by Eichhorst, Diseases of the Circulatory and Respiratory Apparatus, page 65.
12. Quoted by Eichhorst, Ibid.
13. Eichhorst, Ibid, page 65.
14. Essai sur les Ruptures du Coeur, Paris, 1857.
15. Archiv Générales, 1871.
16. Medical Diagnosis, page 487.

The Treatment of Jaundice.—Mechanical jaundice generally needs surgical treatment, as do many cases of infectious jaundice. On the other hand, Weil's disease, Mathieu's hepatic typhoid fever and simple catarrhal jaundice often tend to spontaneous recovery. The cause of the jaundice must first be found and treated. The bile-ducts must be kept permeable, the kidneys kept in order, and the pigment and toxins in the blood must be eliminated. Diet is important, cold enemata, sodium salicylate, alkaline baths, mineral waters, massage, faradic or galvanic electricity are of service. When ascites occurs, tapping may become necessary. Intestinal antiseptics, bitters, diuretics, diaphoretics and inhalations of oxygen are also of use. Of the diuretics, sodium and lithium benzoate are the best. The treatment of the various complications of the conditions causing jaundice follows in the interesting article by Edgard Hirtz in *La Médecine Moderne* (September 3, 1902). Some case-histories are reported. [M. O.]

ATMOSPHERIC PRESSURE AND EPIDEMIC INFLUENZA IN PHILADELPHIA.[1]

By HOWARD S. ANDERS. A. M., M. D.,
of Philadelphia.

Doubtless the prevalence and direct spread of epidemics of influenza are effected principally by personal contact, unavoidable in the multitudinous social, commercial and industrial pursuits of a work-a-day, holy-day and holiday world. Nevertheless, the suddenness and simultaneousness of attack of large numbers of people of all sorts and conditions, and of average good health, naturally constrain to research whether, as Goodhart intimates (in Allbutt's "System of Medicine"), there may not be undiscovered, yet probable "subtle influences" in the atmosphere that make for the epidemicity of influenza. Furthermore, one who has lived, practised and observed through the eleven winters of influenza, including the great initial pandemic of 1889-1890, must have entertained some surmises at least that the recurrent peculiarities of meteorological states may have operated either to inaugurate or aggravate the multiplication and virulence of the bacilli of Pfeiffer; or to develop or increase human susceptibility to the bacillary invasions and toxins.

Without any prejudices or speculative theories for or against this idea, but simply as a working hypothesis, I began an inductive study of the subject, which issued in a paper read before the American Climatological Association, in New York, in 1899, on "The Relation of Local Meteorological Conditions to the Influenza Epidemic in Philadelphia, Winter of 1898-99." Comparative data for the three preceding winters only were analysed.

The first seriatim study of a single meteorological phenomenon for a longer period of time was given in the article prepared for the 1901 meeting at Niagara Falls, "The Relation of Sunshine to the Prevalence of Influenza." So far, based upon figures representing monthly averages, only tentative conclusions could be arrived at, summarized virtually in the term "nonequability": Alternating exacerbations of unusually sudden, somewhat brief, frequent, extreme and rapid weather changes being associated with successive volleys of influenzal attacks. As to sunshine, it was found that for the ten years from 1890 to 1899, inclusive, "as compared with the possible hours of sunshine the daily average number of hours or percentage of sunshine is but a trifle over one-half for the months when influenza has been prevalent." However, in a comparison with the data for the preceding nonepidemic years (1880-89, inclusive), although a moderate or normal state of clearness or cloudiness was contradistinct to the more marked extremes of the epidemic years—absence of equability, again—at the same time the evidence did not justify the positive inference that there existed a direct causal relation between the absence of sunshine and the intensity and widespread influence of *la Grippe*, as Ruhemann, of Berlin, has suggested.

That atmospheric pressure has been thought of, as a possible contributory factor at least, in the environmental conditions affecting influenzal outbreaks, a historical study of the epidemiology of the disease will show. For instance, indirect references have been made by Short, in England, in 1557; by Sydenham, in 1675; by Gluge (monograph, "Die Influenza oder Grippe," Minden, 1837), in gleanings from 1775 to 1833; and later, more directly in the *Württemberg. Correspond.-Bl.* of 1858-59 (from "Die Influenza-Epidemie," by J. Wolff, Stuttgart, 1892); by the distinguished German meteorologist Assmann, 1890; Masson, in 1891, and Dignat, in 1898, both in France. The three last-named observers offer evidence of unusually high barometric maximums during the epidemics of 1889-97, inclusive.

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[1] Read by title at the annual meeting of the American Climatological Association, Los Angeles, Cal., 1902.

In a general way it may be said at the outset that a careful survey of the morbidity and mortality of grip cases shows the incidences of epidemic attacks to have been almost invariably during those months recording normally the highest barometric pressures, i. e., December, January and February. According to Hirsch and Finkler (*Twentieth Century Practice of Medicine*, Vol. XV, Article "Influenza"), 14.38 per cent. of all the known epidemics occurred in the month of January; 10.86 in February; 8.94 in March; and steadily decreasing to August, with only 4.47 per cent.; beginning at 8.96 per cent. in November, and increasing to 11.82 per cent. in December.

According to Buchan's barometric charts of the world, based upon the corrected mean annual and monthly values, the isobaric lines (observations continued for a number of years) for January show a marked increase in the pressure over the northern continents, especially the Eur-Asian continent—the breeding-place or starting area of pandemics of influenza. Writes Professor Davis, of Harvard, in his "Elementary Meteorology," p. 92: "It has been calculated that the mean pressure over the whole earth for the year is 29.89 inches. The mean pressure for the northern hemisphere for January is 29.99; for July, 29.87; and for the southern hemisphere, 29.79 and 29.91. It appears from this that there is a much greater difference between the quantity of air over the two hemispheres in January than in July; and that the change is due to the shifting of an amount of air corresponding to a pressure of 0.12 inch over a hemisphere, or a weight of about 32,000,000 tons of air, from one side of the equator to the other every half-year." Whether any periodical or irregular variability of these enormous movements of air alone, or in particular association with other meteorological phenomena, exert any etiological influences in the propagation of grip epidemics must, in the present state of our knowledge, remain a matter of conjecture merely.

Approaching this question from the limited observations of Philadelphia data (and I take grateful pleasure here in witnessing to the very kind helpfulness of Mr. T. F. Townsend, local forecast official, in obtaining suggestions as well as tabulated figures), Table No. 1 was compiled to show the mean monthly barometric pressures for the usual epidemic months, October to May, for twelve years preceding and the twelve years since and including the pandemic of 1889-90.

(1) A comparative inspection and analysis of the figures of these two groups of years, twelve of sporadic or nonepidemic years, and twelve of the epidemicity of influenza, fail to justify any generalization—the means show nothing distinctive whatsoever. Although the barometric variations are matters of but a few tenths of an inch day by day, it is more reasonable to infer that the daily measurements will show a relation, if any exists, between atmospheric pressure and influenza, instead of the balanced data of the monthly means. Indeed, as may be noticed, the total means for the two groups of years and months of usual incidence are practically the same—29.95 inches. It is quite inconceivable that the slight difference in some of the readings tabulated can really signify anything positive. Taking even the seasons of greatest mortality, as the years 1891, 1892, 1894, 1895 and 1899, the differences of a few hundredths of an inch are comparatively unnoteworthy.

TABLE NO. I.

Mean Monthly Barometric Pressures (Inches).

Non-Epidemic Years.	Jan.	Febr.	March	April	May	Oct.	Nov.	Dec.
1877	——	——	——	——	——	29.93	30.00	30.05
1878	29.95	29.85	29.85	29.71	29.82	29.93	29.87	29.90
1879	29.95	29.96	29.98	29.81	29.96	30.04	30.03	30.06
1880	30.06	29.99	29.94	29.90	29.94	30.00	30.13	29.92
1881	30.03	30.06	29.63	29.77	29.92	30.03	30.07	30.04
1882	30.04	30 03	29.99	29.92	29.90	29.98	30.05	30.01
1883	30.08	30.15	29 87	29.91	29.86	30.05	30.05	30.00
1884	30.02	29.97	29.91	29.75	29.84	30.03	29.97	30.05
1885	30 00	29.86	29.92	29.91	29.84	29.90	29.83	29.91
1886	29.92	29.95	29.81	29.99	29.81	30.06	29.91	30.02
1887	29.94	30.10	29.85	29.89	29.93	29.93	29.96	30.01
1888	30.07	29.98	29.95	30.00	29.88	29.87	30.02	29.96
1889	29.94	30.05	29.80	29.86	29.86	——	——	——
Means	30.00	29.99	29.87	29 87	29.88	29.98	29.99	29.99
Epidemic Years.								
1889	——	——	——	——	——	29.93	29.97	30.06
1890	30.11	30.00	29.94	30.01	29.87	29.80	29.97	29.96
1891	29.94	29.98	29.98	29.89	29.92	29.97	30 07	30.08
1892	29.94	30.03	29.90	29.96	29.87	29.91	29.96	29.96
1893	29.86	30.02	29.95	29.93	29.79	30.00	30.01	30.03
1894	30.05	30.02	29.99	29.92	29.83	29.89	30.00	30.03
1895	29.95	29.88	29.89	29.91	29.95	29.94	30.06	30.02
1896	30.07	29.79	29 88	30.02	29.91	29.94	30.10	30.07
1897	30.07	29.97	29.96	29.99	29.85	30.03	29.94	29.97
1898	29.91	29.98	30.10	29.85	29.83	30.01	29.97	29.95
1899	30.05	29.93	29.84	29.96	29.93	30.09	29.85	29.98
1900	29.96	29.91	29.90	29.90	29.85	30.06	29.93	29.98
1901	29.90	29.82	29.81	29.83	29.76	——	——	——
Means	29.98	29.94	29.93	29.97	29.87	29.96	29.99	30.01

TABLE NO. II.

Barometric means, monthly maxima and minima.

Years.	Jan.	Feb.	March	April	May	Oct.	Nov.	Dec.
1878-89	30.75	30.83	30.63	30.55	30.39	30.69	30.70	30.81
1890-1901	30.49	30.52	30.44	30.37	30.24	30.39	30.50	30.52
1878-89	28.57	28.97	28.94	29.09	29.33	29.08	28.84	28.67
1890-1901	29.23	29.23	29.25	29.39	29.46	29.43	29-35	29.27

(2) A study of the mean maximums and minimums for the same groups of months and years shows *uniformly* lower maximums and higher mini-

mums of recorded means (monthly) for the epidemic, as compared with the nonepidemic group of years. Nevertheless, as pointed out by both Assmann and Dignat, an abnormal increase in the barometric pressure (highest maximums) occurs decidedly at the times of greatest influenzal morbidity; *e. g.*, as observed also in my first paper (*loc. cit.*), at the time of the sharpest onset of the epidemic of January, 1899, the pressure recorded was at the extremely high point of 30.907 inches.

(3) In the same manner, we find that the monthly means of the greatest ranges of barometric record (between highest and lowest points) manifest nothing characteristic. Thus:

TABLE NO. III.

Monthly means, greatest barometric ranges (inches).

Years.	Jan.	Feb.	March	April	May	Oct.	Nov.	Dec.
1878-89	1.27	1.27	1.18	1.01	0.79	0.98	1.14	1.24
1890-1901	1.26	1.29	1.19	0.88	0.77	0.95	1.15	1.24

However, I have noticed in the Weather Bureau records that the greater monthly absolute range was a marked feature of severe influenzal periods as compared with mild or sporadic years, the difference amounting to as much as .4 inch higher for the epidemic months.

(4) Lastly, as intimated before, the following table with its means of more detailed observations corroborates the suggestion that any relation between meteorological conditions and the prevalence of influenza that may exist will probably be found in the sudden, frequent, rapid and extreme variations and alternations of the phenomena occurring on certain days, just before or simultaneous with the influenzal outbursts, and not in data of the means of large groups of monthly and annual recordings.

TABLE NO. IV.

Average greatest 12-hour changes.

Years.	Jan.	Feb.	March	April	May	Oct.	Nov.	Dec.
1879-89	.45	.45	.42	.32	.22	.32	.39	.45
1890-1900	.685	.562	.474	.39	.28	.40	.44	.56

Thus, as in the case of the investigation of sunshine percentage, the behavior of atmospheric pressure in relation to epidemic influenza is characteristic in the marked lack of equability; in the absolute daily (sometimes, almost hourly) extremes, and not in the monthly or yearly averages or means.

LEGAL TESTS OF RESPONSIBILITY.

By RICHARD WEBB, ESQ.,

of Portland, Maine.

In the administration of the criminal law there are two presumptions which enter into every case. First, there is the presumption of innocence, that is, that no accused person shall be declared guilty until the contrary is shown by evidence sufficient to convince every juryman beyond a reasonable doubt; and second, the presumption of responsibility, that is, that the accused knew the nature of his act, whether it was right or wrong, and, having such knowledge, voluntarily committed it. The first presumption is a burden resting upon the government. The specific crime charged in the indictment and the defendant's connection therewith must be positively and affirmatively proved, and, unless sufficient evidence is produced satisfactorily to establish these facts, the respondent must be discharged. He need say nothing, he need explain nothing, he need prove nothing, and whatever may be the suspicion aroused against him, whatever may be the probabilities of his guilt—unless the evidence satisfies the standard which the law has established—he goes forth a free man The second presumption is a burden resting upon the defendant. His commission of crime having been proved, his responsibility therefor is presumed. He cannot be heard to say that he did not know his act was illegal, for were this the rule every one accused of crime would plead ignorance of the law; neither can he set up that, although he knew his act was wrong, he was unable to restrain himself, for this would make mere weakness of will a defence and could be easily established in the majority of criminal cases. The only safe rule, therefore, is that the defendant is presumed to know the law and to be able to govern himself as the law directs.

But both these presumptions of law may be overcome by evidence. The presumption of innocence is overcome by satisfactory evidence of guilt, and the presumption of responsibility by evidence that the defendent did not have, as a matter of fact, the intelligence necessary to enable him to distinguish between right and wrong, or that he acted under duress. A child of tender years cannot be presumed to know that it is criminal to light a fire in his play-room, and, if the house burn down, it were only a barbarous code that would punish him for arson. A bank cashier with a burglar's revolver at his head cannot be said to be a free agent in surrendering the combination to the vault, and no court would punish him for thus saving his life, even at the expense of the riches of the bank. But, nevertheless, the presumption of responsibility is founded in wisdom and is for the protection of society, and before it is set aside it should clearly appear that the person who caused the fire was a child and the cashier who aided the burglars was not in fact in collusion with them.

Now if a person of mature years is proved to have committed an act which the law regards as criminal, and it is made to appear that he is really as ignorant as a child and as helpless as a man under duress, it is obvious that he should be treated with the same leniency. Such a person is *non compos mentis*, or insane, and cannot be held to the same degree of responsibility as others. But the evidence by means of which it is sought to avoid responsibility should be clear and convincing, and the alleged incapacity of the accused should be subjected to some definite and predetermined test.

It is for the purpose of dealing justly with these cases in which insanity is pleaded in defence that the courts have attempted to fix upon some proper test of responsibility, and no single test has yet been discovered that has proved wholly satisfactory to the courts themselves or to the members of the medical profession specially qualified in diseases of the mind. In many cases there can be no difficulty, either because the accused is so unmistakably insane as to be entitled to acquittal on that ground whatever be the test, or so unquestionably sane that no doubt whatever can exist as to his responsibility. But there is the debatable borderline between the sane and the insane, and there is often great difficulty in determining on which side of it a person is to be placed. If all insane persons were exactly alike; if there were one disease known as insanity, as there is one disease known as typhoid fever, if any one case of insanity resembled every other case to the same extent that one case of typhoid fever is similar to all, I apprehend there would be no difficulty in the courts in dealing with the subject. Insanity being pleaded in defence, the sole question would be as to the truth of the plea, and in the same way as would happen were the question at issue whether the defendant was suffering from typhoid fever, the best evidence would be the testimony of recognized experts in the disease who had previously examined the alleged patient. But no one knows better than the alienists themselves the impossibility of defining insanity within such narrow limits.

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*Read before the Maine Medical Association, June 4, 1902.

Insanity is not *a* disease of the mind, it is the generic term for several mental diseases which have been variously classified and re-classified in accordance with the changing views of the medical profession. It manifests itself in a variety of ways and shows a variety of symptoms. In many instances the ordinary observer can detect it, in many others it can be discovered only by the expert, and in still others the line between sanity and insanity is so difficult to draw that the best of experts may disagree upon it. Were certain of the prophets of the Old Testament insane? Has the sanity of Swedenborg, Ibsen or Tolstoi ever been called in question? Was Napoleon of unsound mind during the latter part of his career? To what extent can a man be eccentric and still preserve his reason? Does not an overcultivated genius often seem unbalanced? Is not a spendthrift, a confirmed gambler, a reckless speculator very near the edge? Indeed, is not the fact that a man is a criminal an indication that his mental processes are morbid?

The first difficulty encountered, then, arises from the lack of sufficient knowledge of the disease and from the impossibility that such knowledge will ever be attained. As Judge Ladd well says in State vs. Jones, 50 N. H., 393: "No one but the Creator of all things can look in upon the chaos of a disordered mind and determine with certainty whether its powers are so much prostrated, enfeebled or deranged that the unhappy sufferer has ceased to be an accountable being. Still the court and jury must determine that question, approximately, as best they can in each individual case."

"The labors of writers on insanity," says Bishop in his work on Criminal Law, "have been exhausted in the attempts to find some test of ready application to determine when a person is to be deemed insane and when not, in reference to his responsibility for crime. And judges, less informed on this subject than on most other subjects of legal science, have struggled under the inherent embarrassments of the question itself, under the influence of erroneous notions in the community, and under the failure of counsel and witnesses in particular cases to present the real points of inquiry. The result has been that instructions given in reference to particular facts appearing in the case before them have seemed to casual observers to be very discordant, while to scientific inquirers after the facts of insanity they have seemed very absurd." (I, Bishop's Criminal Law, Sec. 474.)

It has sometimes been assumed by members of the medical profession that the courts have undertaken to set up a test of insanity, and it has been objected that it is for science, and not for the courts, to determine such questions; and, moreover, that whatever test for insanity the courts may adopt would be unscientific, because there is no test that will apply in every insane case. The courts will not presume to say that a case is, or is not, Asiatic cholera, or smallpox, or typhoid fever, according to whether certain symptoms are present or absent, but very properly leave such questions to persons skilled in the diagnoses of such diseases. Why, then, it is urged, will courts undertake to say that a certain case is, or is not, insanity, basing their decision upon whether the symptoms present conform to a certain test which the courts have themselves established for determining the existence of this disease? Do not the courts, in passing upon the question of insanity, follow a course different from that followed upon every other technical subject brought before them, and should not their proper course be to leave such questions wholly to science, where they properly belong? "The falseness of the legal position will at once appear," says Maudsley, "if we suppose a case of poisoning instead of a case of mental derangement; what would be thought of a judge who, when medical evidence of poisoning was given, should instruct the jury, as a principle of law, that they must be governed in their verdict by the presence or absence of a particular symptom?" (Maudsley, Responsibility in Mental Disease, p. 107.)

But these objections are based upon a false assumption. The courts have not sought for a test by which the presence or absence of disease can be positively determined, and the law is not open to the criticism of defining in rigid terms what shall be considered disease and what shall be considered health. Whether a person is sane or insane is a question of fact to be determined by the jury from the evidence given them, and upon this issue the testimony of recognized experts in mental diseases is of great value and entitled to great weight. But, insanity being proved, the further question arises: Is the respondent nevertheless responsible? For insanity in itself is not a sufficient defence, unless it appears that the alleged crime was the direct outcome of the diseased condition of the mind, or that, but for the insanity of the defendant, the crime would not have been committed. In his charge to the jury in Guiteau's case Judge Cox said: "A man does not become irresponsible by the mere fact of being partially insane. Such a man does not take leave of his passions by becoming insane, and he may retain as much control over them as in health.

He may commit offences, too, with which his infirmity has nothing to do. He may be sane as to his crime, understand its nature and be governed by the same motives in regard to it as other people, while on some other subjects, having no relation to it whatever, he may be subject to some delusion. In a reported case a defendant was convicted of cheating by false pretences, but was not saved from punishment by his insane delusion that he was the lawful son of a well-known prince. It must appear, therefore, that the crime charged was the product of delusion or other morbid condition, and connected with it as effect with cause, and not the result of sane, reasonable or natural motives which the party may be capable of, notwithstanding his circumscribed disorder." (Guiteau's case, 10 Fed. Rep., 166.)

Thus, there is a double issue presented in every case. First, the issue of insanity and secondly, the issue of responsibility; and, the jury having found from evidence that the defendant was insane, they are obliged to consider the further question of responsibility. It is for the purpose of assisting the jury to reach a just conclusion upon this second issue that a test has been adopted, and the test, therefore, cannot be properly said to be a test of insanity, for it is really a test of responsibility.

Now there is excellent authority to sustain the proposition that there can be no accurate test of insanity which will hold good for all cases. Bishop says: "The test of insanity has never been found, not because those who have searched for it have not been diligent, but because it does not exist." (I, Bishop's Criminal Law, Sec. 381.) Ray, in speaking of insanity, says: "The fact of its existence is never established by any single diagnostic symptom, but by the whole body of symptoms, no particular one of which is present in every case." (Ray, Insanity, Sec. 24.) Therefore, it has been urged, there should be no test of responsibility, but the question of responsibility, being one of fact, should be determined by the jury like other facts, and each case should be decided solely and entirely upon its merits without being hampered by any arbitrary rule of law. In State vs. Jones, *supra.*, Judge Ladd says: "Whether the defendant had a mental disease seems to be as much a question of fact as whether he had a bodily disease; and whether the killing of his wife was the product of that disease was also as clearly a matter of fact as whether thirst and a quickened pulse are the products of fever."

But the difficulty with this scheme is that it contemplates referring a difficult and complicated question to men who are not specially qualified to solve it. If the defendant's responsibility could be determined by men who are familiar with the inherent nature of insanity and who combined with their knowledge of mental diseases a just regard of the duty they owe to society at large, on the one hand, and the duty they owe to the prisoner, on the other, this plan might be desirable and feasible, but it can hardly be expected that ordinary juries, no member of which knows anything whatever of the subtle difficulties of psychological medicine, would intuitively decide in every instance the proper measure of responsibility to justify conviction or acquittal. In some cases they would be far too severe, in others far too lenient. Experience under our system of trial by jury has shown that justice is promoted by judicial instruction and direction to the jury prior to their deliberations, and it would seem that in no case is such instruction and direction more needed than when the question of responsibility is raised by evidence tending to prove the defendant to be insane. At all events, the courts have almost invariably considered it their duty to give juries special instructions in regard to insanity and in regard to what shall be considered a proper test of responsibility.

It is upon this question of what shall be considered a proper test that there has arisen the greatest conflict of opinion. Without going into the history of the law upon this subject, and without even enumerating the various tests that have from time to time obtained in English and American jurisprudence, it may be said that to-day the courts, as a whole, recognizes two tests, the "right and wrong" test and the "irresistible impulse" test, and the principal difference of opinion arises over the use of the latter. All courts give juries the "right and wrong" test, while some courts give them the "irresistible impulse" test in addition.

The argument in favor of "irresistible impulse" would appear to rest upon this proposition, that, since responsibility is predicated upon the presumed existence of both intelligence and will, if either intelligence or will be absent, the conclusion of responsibility should fail. It is a fact, as proved by abundant medical testimony, that insane persons have frequently sufficient intelligence as to right and wrong to meet the test of the courts, and yet have not the power to control their actions. In the learned treatise of Drs. Bucknill and Tuke on "Psychological Medicine" it is observed: "As has again and again been shown, the unconsciousness of right and wrong is one thing, and the powerlessness through cerebral defect or disease is another. To confound them in an asylum would have the effect of transferring a considerable number of the inmates thence to the treadmill or the gallows." It is a familiar legal principle that criminality depends upon volition. If, then, a man is not a free agent, he ought not to be convicted of a criminal act.

But this argument proves too much, for if the impulse under which a man acts be really irresistible, that is, if his will be not really under his control, and he is impelled to act by influences which he has not the power to resist, he has ceased to be a free agent, whether the weakness of will arises from mental disease or otherwise. Under an ideal system of jurisprudence it would be the law to excuse those who are actually unable to resist their evil impulses, for this would be ideal justice, and it is by this rule that we all of us hope and expect to be judged when our transgressions shall be finally passed upon by the Supreme Arbiter of mankind. But such a rule is obviously impossible under human conditions, for human law must inflict punishment in proportion to the nature of the offence and not to the actual moral responsibility of the individual. All who have had the slightest familiarity with the criminal classes know the pathetic fact to be that our jails and prisons are filled with inmates who owe their incarceration to their weakness of will, to their actual inability to resist temptation, but it has never been thought feasible to permit a man to plead in justification of an admitted crime that he could not help committing it.

With some notable exceptions, therefore, the courts have very generally held that the test of responsibility for criminal acts, when insanity is asserted, is the capacity of the accused to distinguish between right and wrong at the time and with respect to the act which is the subject of inquiry, and have rejected the doctrine of "irresistible impulse." But while this "right and wrong" test, in the opinion of the courts, meets the requirements of the proper enforcement of the criminal law better than any other test which has been suggested, it has not met with like approval from many physicians specially qualified in the study and treatment of diseases of the mind. In this conflict of opinion between the leaders of the two professions of law and medicine it is hardly to be expected that a humble practitioner of either profession will be able so to argue either side as to convince the other; but, as to-day I hold a brief for the courts, I may be permitted to state some of the reasons which induce the judges to hold to their opinion.

The conflicting views of physicians among themselves on many subjects have led the courts to view medical theories with suspicion, and cause them to hesitate before abandoning established rules. There is a tendency among a few physicians to brand almost any crime as an act of insanity, and such a tendency is in harmony with the views of certain philosophers of ancient times, who argued that all crime is the product of insanity; but while there is no objection to physicians holding such views, it would be a dangerous and absurd doctrine to embody into our law. The few physicians who go to the length of saying that responsible criminals who are sane in mind, but rascals at heart, are entitled to acquittal on the ground of insanity, materially lessen the value which judges give to medical testimony. Mr. Justice Curtis, in U. S. vs. McGlue, 1 Curtis C. C., 1, says: "It is an important as well as a deeply interesting study, and it finds its place in that science which ministers to diseases of the mind . . . But the law is not a medical nor a metaphysical science. Its search is for those practical rules which may be administered without inhumanity for the security of civil society by protecting it from crime, and therefore it inquires not into the peculiar constitution of the mind of the accused, or what weakness or even disorders he was afflicted with, but simply whether he was capable of having, and did have, a criminal intent."

On the other hand, there is good medical authority sustaining the views of the courts. The London *Lancet* of December 12, 1881, says: "It is high time that the nonsense talked and written about irresponsibility should be exposed and ended. If the supreme triumph of medical psychology is to be sought in the attempt to prove that men are mere machines, and that the wrong they do is not their doing, but the outcome of disease, the sooner this branch of science is discountenanced by the common sense of the profession, the better will it be for the credit and influence of our cloth. If a man is not acting under a recognizable and formulated delirium when he commits a crime, he is clearly responsible and ought to be so held, unless he is unquestionably, and on grounds other than those arising out of, or associated with, his crime, shown to be insane." In the recent opinion of Judge Whitehouse, in State vs. Knight, 95 Maine, 467, in which many authorities upon this subject are most learnedly reviewed, quotations are inserted from Browne's "Medical Jurisprudence of Insanity," and Dr. Fisher's "Medical Aspects of Insanity in its Relations to Medical Jurisprudence," to the effect that irresistible impulse in and of itself is properly held by the courts to be no defence, or, as Becker in his "Mental Unsoundness in its Legal Relations" says on pages 421-422: "Evidence of the loss of control of the will, or morbid impulse, does not constitute a defence, except when it demonstrates mental unsoundness of such a character as to destroy the power of distinguishing right and wrong as to the particular act."

Judges feel also that they are the guardians of the public safety, and that it is their duty to protect society from criminals and wrongdoers. The interests of society require them to be stern, since sternness is found necessary for the repression of crime. They, therefore, are inclined to look with great suspicion upon the defence of insanity, since, when it is offered, it is invariably in the case of offenders caught red-handed and of whose commission of the offence there can be no possible doubt. This defence is almost invariably resorted to when no other way of escaping punishment is open to the accused; and the doctrine of "irresistible impulse" offers an opportunity for ingenious counsel, assisted by skilled experts, to inject into the general defence of insanity, especially in capital cases, the theory of some mysterious pressure impelling the accused to the commission of the act, the consequences of which he anticipates but cannot avoid.

The majority of criminals are persons of weak will, sometimes congenital, often made so from vice and indulgence in evil passions, and the extent to which such persons can control their actions in all the varying impulses raised by passion, fear, avarice or religious frenzy is a delicate determination. Frequently, to reach a proper conclusion, expert medical testimony is required, and such testimony frequently "leads to bewilder and dazzles to betray." When an expert is called on to determine whether the mind is diseased to such an extent as to make the person an irresponsible being, the task is much more difficult. Especially is this true when an opinion must be formed and based upon a hypothetical question alone. In such case the opinion must of necessity be mere theory. This is not the fault of the profession, but because more than human intelligence is required to solve the problem. (Flannagan vs. People, 52 N Y., 467.)

In Flannagan vs. People, *supra*, the court says: "The vagueness and uncertainty of the inquiry which would be opened, and the manifest danger of introducing the limitation claimed into the rule of responsibility in cases of crime, may well cause courts to pause before assenting to it. Indulgence in evil passions weakens the restraining powers of the will and conscience, and the rule suggested would be a cover for the commission of crime and its justification. The doctrine that a criminal act may be excused upon the notion of an irresistible impulse to commit it, when the offender has the ability to discover his legal and moral duty in respect to it, has no place in the law. Rolfe, B. in Rogers vs. Allunt, where in the trial of an indictment for poisoning the defendant was alleged to have acted under some moral influence which he could not resist, said: 'Every crime was committed under influences of such a description, and the object of the law was to compel people to control these influences.' "

In People vs. Coleman, 1 N. Y. Crim. Rep., 3, Judge Davis charged the jury as follows: "No imaginary inspiration to do a personal or private wrong, under a delusion or a belief that some great public benefit will flow from it, when the nature of the act done and its probable consequences, and that it is in itself wrong, are known to the actor, can amount to that insanity which in law disarms the act of criminality. Under such notions of legal insanity life, property and rights, both public and private, would be altogether insecure, and every man who, by brooding over his wrongs, real or imaginary, shall work himself up to an irresistible impulse to avenge himself, or his friend, or his party, can with impunity become a self-elected judge, jury and executioner in his own case, for the redress of his own injuries or the imaginary wrongs of his friends, his party, or his country. But, happily, that is not the law, and whenever such ideas of insanity are applied to a given case as the law (as too often they have been), crime escapes punishment, not through the legal insanity of the accused but through the emotional insanity of the courts and juries."

"It is undoubtedly true," says Judge Whitehouse, in State vs. Knight, *supra*, "that in the progressive development of the medical jurisprudence of insanity more intelligent views have gradually prevailed respecting the functional activity of the mind and the course of symptoms indicating mental disease, and that just conclusions have more frequently been reached by courts and juries in recent years in regard to the relation of insanity to criminal responsibility. But since the announcement of the decision by this court in State vs. Lawrence, in the year 1870, this abstruse and difficult question has been the subject of exhausted re-examination and renewed study in the light of all modern discoveries of scientific truth bearing upon it by the most eminent medical and legal jurists in this country and England, and by courts of the highest authority in both countries; and it is still held by an overwhelming weight of judicial authority that, when the insanity of the accused is pleaded in defence, the test of his responsibility for crime, afforded by his capacity to understand the nature and quality of the act he was doing, and his mental power to distinguish between right and wrong with respect to that particular act at the time he committed it, is the only proper legal criterion; and that, when fully developed and explained to the jury in its application to the special facts and circumstances of different cases, it will always be found adequate to meet the demands of justice and humanity toward the accused as well as to insure the protection and safety of the public."

Health Reports.

Health Reports: The following cases of smallpox, yellow fever, cholera and plague, have been reported to the Surgeon-General, U. S. Public Health and Marine-Hospital Service, during the week ending January 17, 1903:

SMALLPOX—United States.

			C.	D.
CALIFORNIA:	Sacramento	Dec. 27-Jan. 3	1	
COLORADO:	Denver	Dec. 27-Jan. 3	7	
CONNECTICUT:	Thompson	Jan. 10	1	
FLORIDA:	Pensacola	Dec. 6-Jan. 10	49	
GEORGIA:	Atlanta	Dec. 24-Jan. 7	14	3
ILLINOIS:	Chicago	Jan. 3-10	6	
INDIANA:	Evansville	Jan. 3-10	1	
	Indianapolis	Dec. 27-Jan. 10	95	16
KENTUCKY:	Covington	Nov. 27-Jan. 10	82	2
	Newport	Jan. 3-10	2	
LOUISIANA:	New Orleans	Jan. 3-10	1	
MAINE:	Biddeford	Jan. 3-10	7	
	Boston	Jan. 2-9	10	3
	Cambridge	Jan. 3-10	2	
	Fall River	Jan. 3-10	2	
	Lowell	Jan. 3-10	1	
MICHIGAN:	Detroit	Dec. 27-Jan. 10	78	
	Grand Rapids	Jan. 3-10	18	
MISSOURI:	St. Louis	Dec. 28-Jan. 4	9	1
NEBRASKA:	Omaha	Jan. 3-10	11	
NEW HAMPSHIRE	Manchester	Jan. 3-10	2	
	Nashua	Jan. 3-10	3	
NEW JERSEY:	Camden	Jan. 3-10	3	
	Newark	Dec. 27-Jan. 10	1	1
NEW YORK:	Buffalo	Jan. 3-10	2	
	New York	Jan. 3-10	1	
OHIO:	Cleveland	Jan. 3-10	9	2
	Dayton	Jan. 3-10	2	
	Toledo	Dec. 27-Jan. 10	26	1
PENNSYLVANIA:	Altoona	Jan. 3-10	2	2
	Erie	Jan. 3-10	10	1
	Johnstown	Dec. 27-Jan. 10	2	1
	McKeesport	Jan. 3-10	1	
	Northumberland	Dec. 1-30	14	
	Philadelphia	Jan. 3-10	33	
	Pittsburg	Jan. 3-10	22	1
	Reading	Jan. 5-12	1	
TENNESSEE:	Memphis	Jan. 3-10	1	
UTAH:	Salt Lake City	Dec. 27-Jan. 3	10	
WISCONSIN:	Milwaukee	Jan. 3-10	5	

SMALLPOX—Foreign.

			C.	D.
AUSTRIA:	Prague	Dec. 6-20	25	
BARBADOS:		Dec. 5-20		2
BELGIUM:	Antwerp	Dec. 6-20	10	3
	Brussels	Dec. 13-20		1
CANADA:	Winnipeg	Dec. 27-Jan. 3	1	
FRANCE:	Paris	Dec. 13-20		1
GREAT BRITAIN:	Liverpool	Dec. 20-27	74	1
	London	Dec. 13-20	5	
	Manchester	Dec. 13-27	7	
	Sheffield	Dec. 13-27	8	
INDIA:	Bombay	Dec. 2-9		7
	Calcutta	Nov. 27-Dec. 6		2
MEXICO:	City of Mexico	Dec. 28-Jan. 4	2	5
RUSSIA:	Moscow	Dec. 6-13		2
	Odessa	Dec. 6-20	7	2
	St. Petersburg	Dec. 13-20	24	2

YELLOW FEVER.

			C.	D.
MEXICO:	Tampico	Dec. 27-Jan. 3		10
	Tuxpam	Dec. 23-30		1
	Vera Cruz	Dec. 27-Jan. 3	6	2

CHOLERA.

			C.	D.
INDIA:	Bombay	Dec. 2-9		1
	Calcutta	Nov. 27-Dec. 6		51
JAVA:	Batavia	Nov. 22-29	6	2

PLAGUE.

			C.	D.
INDIA:	Bombay	Dec. 2-9		133
	Calcutta	Nov. 28-Dec. 6		25
	Karachi	Nov. 30-Dec. 7	12	11
MEXICO:	Ensanada	To date	14	13
	Mazatlan	Dec. 31, Officially reported.		

Edema of the Glottis Revealing Latent Nephritis.—In the *Journal des Sciences Médicales de Lille*, (December 20, 1902) L. Derville reports an interesting case in a woman of 60, with the following history. She had been coughing for several years and had lately noted oppression at night, with dyspnea on exertion and much mucous expectoration. Examination showed emphysema and bronchitis, but no tuberculosis. Suddenly she complained of great difficulty in breathing, especially in inspiration, and her voice was hoarse. Examination disclosed edema of the larynx. Then only was the urine examined, and large quantities of albumin found. She improved upon nephritic treatment, milk diet and diuretics. In this case the first sign of the nephritis was the edema of the glottis. [M. O.]

The Philadelphia Medical Journal

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See Advertising Page 8

VOL. XI. NO. 5 JANUARY 31, 1903 $5.00 PER ANNUM

Mr. Carnegie's Gift to the College of Physicians.—Mr. Andrew Carnegie has never endowed a library that has more valid claims upon his munificence than the library of the College of Physicians of Philadelphia. We say this deliberately, although we suppose that Mr. Carnegie might be surprised to be told that this particular institution has any particular claims upon him. The library of the College of Physicians of Philadelphia has claims upon Mr. Carnegie's munificence in the sense that it is a great educational institution, and in the further sense that Mr. Carnegie has shown by his widespread benevolence that he is the special friend of libraries in general.

It has always been a source of some surprise to us that the College of Physicians of Philadelphia has not been the object of more generous support by the citizens of Philadelphia than has been the case. One reason may possibly be found in the fact that few citizens of Philadelphia really know what the College of Physicians is. It is not a college in the popular sense, but rather an academy or institute, and the custodian of a fine museum and (what is of still greater importance) of one of the finest medical libraries in the world. It is not saying too much to say that Philadelphia owes not a little of her position as a leading medical center to the library of the College of Physicians. In fact, we do not well see how the medical work that has been and is being done in this city, could have been or could be done without the library of the College.

Mr. Carnegie's gift of $50,000 is conditioned, we understand, on the raising of a similar sum by the College itself. This condition will, of course, be a spur to the friends of this venerable institute to raise the money, and will offer an opportunity to some of Philadelphia's affluent citizens to come to the assistance of one of Philadelphia's oldest and most useful institutions. The College of Physicians is not a close corporation for gain, but a body of medical scholars, and its motto is

Non Sibi sed Toti.

The California Plague.—Governor Pardee, of California, evidently looks at the plague situation in San Francisco in a different light from that in which his predecessor, the notorious Gage, saw it. Governor Pardee, the new governor, is a physician, and he is apparently prepared to put the public welfare before politics.

While the Plague Conference was in session in Washington last week, Governor-Doctor Pardee made the following statement, according to a dispatch to the New York Herald:

> "So far as the effect upon California is concerned, it makes no difference whether there is bubonic plague in San Francisco or not, so long as the body now in session at Washington believes that plague does exist here and persists in that belief. The effect will be the same, whatever the truth may be, and there is only one course for us to pursue, namely, to proceed to get a clean bill of health, and that as soon as possible."

The merit of this declaration by Dr. Pardee, lies, so to speak, in its application. If it means that Governor Pardee is himself still uncertain whether bubonic plague does exist and has existed in San Francisco, it is not as enlightened a statement as could have been wished for from the Chief Executive of a great State; but if it simply expresses the intention of the new Governor to act in harmony with the Federal and other State authorities, and in response to the enlightened demands of the whole country, even if he has to sink his individual opinions, it does him some credit, and is a sign of progress.

The Conference of State Boards of Health in Washington spoke in no uncertain words, and there was something in its tones which it may be wise for the Californians to heed. If the various State Boards should get into an ugly mood about this plague business in San Francisco, they might possibly proceed to make things unpleasant for our friends on the Pacific coast. This could be done in various ways. There were minatory words and gestures in Washington last week; and all the country knows that nothing is more pugnacious than a State Board of Health. Imagine some 40 and more of them declaring war on California!

Plague has existed in San Francisco for several years. It still exists. How many persons have died of it, is unknown. How many are yet to die of it, is likewise unknown.

The Administration of Anesthetics.—Repeatedly in these columns we have called attention to the recent advances made in the administration of anesthetics and the great need of better teaching on this subject in our medical journals. It is a subject which demands the careful consideration of the profession, and we offer no apology for again referring to it.

In the *Lancet* of January 10 is a lecture on "The Anesthetization of the So-Called 'Difficult' and 'Bad' subjects," by Frederic W. Hewitt, being one of the emeritus lectures delivered at the London Hospital. The British profession has always paid more attention to the question of anesthetics, and particularly their administration, than have we, and yet Hewitt says that the matter has not yet received the place in the curriculum of the English Schools which it should occupy. Hewitt refers to the time when it was supposed that the danger of anesthesia lay in the anesthetics themselves and in the peculiar susceptibility or physical condition of the patient, and not in the method of administration. So true was this in fact that nurses and even domestic servants were entrusted with the administration of the anesthetic. It is true, and we are glad to say it, that in this country, as well as in England, surgeons and medical men are learning to look upon the administration of ether and chloroform and even of nitrous oxide as a very responsible occupation, and one that requires both study and practice.

Hewitt states that the "death-rate from anesthesia may be reduced to almost infinitesimal proportions, whilst the results of many surgical operations may be distinctly improved by placing the administration of anesthetics in experienced and skilled hands." He does not mean to say that every accident which now occurs is preventable, but he does say that there are many cases in which life is unnecessarily sacrificed. He points out the fallacy of supposing a strong and perfectly healthy man to be the best subject for anesthesia. On the contrary, he states that the greater the muscular development the greater will be the consequent respiratory derangement. The ideal patient for an anesthetic is "a middle-aged woman in moderately good health, of spare build, sallow complexion, placid temperament and moderate habits, possessing a free nasal air-way and somewhat defective teeth." In this lecture Hewitt considers only one class of difficult and bad subjects, namely those patients whose health is good but who possess some physical peculiarity rendering them more or less liable to intercurrent embarrassment or arrest of breathing, important among which is the possession of a well-developed muscular system. These patients are more liable to excitement and struggling, and intercurrent asphyxia is liable to occur from muscular spasm, and should it occur when chloroform is being used, this agent may become imprisoned in the lungs and be absorbed in dangerous quantities. Nitrous oxide and ether in this class of subjects are said to produce admirable results. It is stated that a change from ether to chloroform should never be made during any muscular excitement or struggling. Hewitt prefers to have a patient breathe through the mouth, and in patients with good muscular development or patients with thick fat necks he employs a mouth-prop to keep the teeth apart. This device should also be employed when the teeth are even and regular and especially when the upper teeth greatly overlap the lower ones. A continuation of this subject will be found in the next issue of the *Lancet*.

The Germicidal Action of Fruit-Juices.—Observations made in several bacteriological laboratories have lately been published, in which a claim is made that some fruit-juices, more particularly lemon juice, have power to render inactive the bacillus of typhoid fever. The exact method of investigation is not detailed in the literature at hand, but it is worth noting at the outset that the general restraining effect of acids upon bacterial development has been long known, as has also the fact that several of the so-called vegetable acids, though commonly supposed to be of feeble chemical power, are really very active. The observed feebleness is due to the high dilution in which they commonly occur. Citric acid in concentrated form is a strong acid. General adoption of the view that some fruit-juices can render harmless articles of food or drink contaminated with the typhoid germ, should only follow much careful investigation, and, even if the decision is favorable, it will possibly be found that some of the common mineral acids will answer the same purpose.

The most active discussion of the subject in this country has been in Chicago. The bulletins of the Health Officer of that city, Dr. Reynolds, have a breeziness and originality that stamp them as a new departure in hygienic literature. These hebdomadal visitors to our sanctum, products of the Health Officer's pen, though wrought in an atmosphere redolent of Pork and Main Drainage, bear no flavors of these, but suggest baked beans and Boston Common. People do not die in Chicago. "The Grisly Reaper" gathers them in. This same reaper having lately been (with his typhoid scythe, for instance,) making a good many Chicagoans unavailable for the population statistics, it has behooved the health authorities of that city to search for every weapon to combat the scourge. In the bulletin for the 17th. inst. we are told that the juices of different lemons differ much in their antiseptic effects. Unfortunately, we are not told whether this difference bears any relation to the amount of acidity, expressed in terms of some alkali, nor, indeed, whether such determinations were made. We can hardly suppose that tests could be made without careful preliminary determinations of the nature and amount of the free acids and acid salts present. Nor are we informed how it was determined that certain bacilli were killed in a given time. If this were done by culture, information should be given as to what method was used to neutralize the acidity of the fruit-juice. Tests were made with bottled grape-juice obtained in grocery stores and also with fresh grape-juice prepared in the laboratory. The latter alone failed to show germicidal effect. Here again no information is given as to the relative acidity of the samples, nor are we informed as to whether preservatives were sought for in the active samples. This point is eminently important in view of the statement that, while some of the brands of bottled grape-juice were effective in a proportion of one per cent., the juice prepared in the laboratory was inactive in a proportion even as high as 100 per cent. The little practical value of the observations so far is shown when we reflect that, since the grape-juice is so uncertain in its effects, no one can determine how much of any given sample to use.

Is Pulmonary Tuberculosis a Curable Disease?—Nowadays, in order to promote the erection of sanatoria to encourage the government powers to wage energetic combat against tuberculosis, and to cheer the afflicted, it is customary to talk glibly of the curability of tuberculosis. We fear that perhaps this will be overdone; that, in spite of the desire of the public to be encouraged, there will come a time when, realizing that a large proportion of all patients afflicted with pulmonary tuberculosis that have reached a stage at which their relatives consider them seriously sick, ultimately die, there will be a return of the old idea that all persons going into decline are doomed. In fact we are not at all sure that better results might not be obtained by slightly more conservative statements. We now run the risk of making the public believe that pulmonary tuberculosis is only a moderately serious condition, that nearly all cases are curable, and if they do not get well, the doctor is seriously to blame; and, moreover, in view of the mild nature of the infection, all the elaborate measures which are being advocated to combat it, may be useless.

Pulmonary tuberculosis is a serious condition. The fact might as well be faced, and might as well be impressed upon our patients. There are few physicians nowadays, who, in spite of the current talk at sanitary meetings and in lay and medical journals, would not be filled with horror at the discovery of tubercle bacilli in their own sputa or in the sputa of those near and dear to them. It is true that there are many people living in the west who have had for years undoubted pulmonary tuberculosis; there are a few such living in sanatoria in the east, and there are fewer still living in the eastern cities who have gotten well, or who have the disease in such a chronic form that it does not apparently affect their general condition. But the prognosis still remains grave. How many patients have gone to the west and, nevertheless, died? How many patients have gone to the Adirondacks and returned worse than when they started? In the interest of truth, in the interest of the patient, perhaps in our own interest, we think that the serious nature of the condition should be more generally urged by the medical profession.

Referred Pain in Spinal Disease.—Too much emphasis cannot be laid upon the referred pains which are symptomatic of many conditions so often wrongly diagnosed. It is too common an occurrence, in spite of the familiarity of the condition, to see many cases of incipient hip disease in children brought into the clinic with a bandaged or blistered knee, this being the point at which the child complained of pain and to which the unwary physician had limited his attention. Somewhat less frequent does it happen that a supposed rebellious case of stomach disease in a child turns out on careful examination to be one of caries of the spine. The January number of the *Practitioner* contains an interesting paper by Sir Frederick Treves dealing with several examples of mimicry of gastric troubles by spinal disease in the adult. A very brief allusion to these two cases should not be without profit.

The first patient, a woman of 45 years, presented symptoms of chronic dyspepsia with marked dilatation of the stomach. A close study revealed the fact that there was the deformity of Pott's disease in the dorsal region, and the patient then explained that she had suffered from caries of the spine in childhood. The dilatation of the stomach may depend frequently upon various ill-recognized nerve conditions, and a narrowing of the pylorus is by no means the commonest cause of this condition. Treves' second patient was a man of fifty years who for ten months had been suffering acutely from violent gastric pain and indigestion. In spite of all treatment the condition grew worse. The pain was located over the pylorus and was described as burning in character. At the patient's urgent solicitation an exploratory incision was made, with the possibility in view of discovering some growth about the pylorus. A thorough examination of the contents of the abdomen was negative. Several days after the operation the nurse drew attention to a slight lump between the patient's shoulders of which he himself was entirely unconscious. This proved in due course to be a sarcoma developing from the mid-dorsal region of the spine. In the opinion of Mr. Treves there was no doubt that this growth produced the symptoms, which appeared from first to last to be wholly gastric, and he draws an eminently practical moral from this and similar causes: That we should be suspicious of the genuineness of a gastric disturbance, with pain predominating, when vomiting is either absent or insignificant.

The Relation of Gonorrhea to Sterility.—There has occurred of late a marked reaction in the accepted belief as to the etiology of sterility in women. It was formerly the rule to ascribe the larger percentage of sterile marriages to anteflexion of the uterus with accompanying cervical stenosis; to enforced sterility from the use of shields; to some obscure change resulting from the higher education of women; to syphilitic endometritis; and to some sexual incompatability between the man and the woman. There is not a shadow of a doubt that all these and other factors not mentioned have a share in the production of sterility in some of its forms. It is now very generally recognized, however, that, while *chercher la femme* is an excellent adage for one's guidance in many lines of life, it should not overshadow exploration elsewhere in the question of sterility.

The extreme importance of gonorrhea in the male in the production of sterility is universally admitted. A very perceptible percentage of unfruitful marriages, which are unjustly attributed to some defect on the part of the woman, results from a double epididymitis with hermetic closure of the tubes, or from an obscure affection of the spermatic tubules resulting in the discharge of deformed or effete spermatozoa. In addition to this male sterility, the result of the action of the gonococcus, the same germ, when introduced into the genital tract of the woman, produces such radical changes in the mucous membranes that sterility on the part of the woman is produced. The alkaline leukorrhea that results is inimical to the vitality of the spermatozoids, should they be healthy. Again, if the Fallopian tubes be involved in the process, the cilii are quickly shed, and by their absence prevent the ingress of the ovum into the uterine fundus. The activity of the pathogenic process also produces such a tumefaction of the tubal walls that the lumen of the tube is obliterated, and hermetic closure follows from adhesive inflammation. Gonorrhea must, therefore, be regarded as a very prolific cause of sterility both in the woman and in the man.

The Health of Judges.—The *Medical Press and Circular*, a British Journal, has commented favorably on the law passed by the Legislature of the State of Pennsylvania, authorizing the appointment of medical commissioners to inquire into the mental and physical health of judges who for any reason may be presumed to be unfitted by illness for the discharge of their onerous duties. Our contemporary says that a similar commission appointed in England could have rendered signal service in some instances, and regards it as a lapsus in the English judicial organization, "that it should be possible for an aged judge to outlive his acumen and perpetrate scandals which in the long run determine his enforced retirement."

It seems that a judge retains very much of his pristine and almost autocratic power in most of our courts, and amongst his privileges is the right to be sick as long as need be and to continue to draw his salary without being accountable to anybody. The system is certainly liable to abuse. A judge is a public servant, just as much as the lowliest officer in his court, and if his health does not permit of the discharge of his duties, and his friends and medical advisers are not willing to recognize the fact, there should be some legal means by which the state of his health could be investigated, and he could be retired gracefully but none the less effectually from the bench. In the case of mental ill health this is especially desirable. The amount of injury and wrong an insane judge could do upon the bench is incalculable. In our elective system in Pennsylvania, according to which a judge holds office for a specified term of years, the chances of abuse arising from a judge in ill health are, of course, not so great as in cases in which the office is held for a life-tenure. But still, even with us, the office of judge is held for very long terms, and there is ample time for some members of the judiciary to become the victims of ill health or to be superannuated. This is a delicate subject. The honor and respect in which the members of our judiciary are held, would lead the public to regard with leniency and toleration what might become in some instances the source of great misfortune to the public as well as to the individual judge himself.

Dr. Lorenz at Home.—Now that Dr. Lorenz has returned safely to his home in Vienna, he is saying many even more pleasant things about Americans than he said in our midst. In truth, he has some good cause to remember Americans with an unctious sense of gratitude. He probably never knew what a famous man he was until he reached Chicago. But when he reached London, on his way home, he found he was not so famous as he imagined he was. The British surgeons appear not to have raved over Dr. Lorenz. In London the great orthopedist from Vienna might as well have been from nowhere.

Dr. Lorenz explains this by saying that the Americans "represent progressiveness, while the English physicians are extremely conservative. In America it was difficult to accommodate the doctors and students who desired to attend my lectures, while in London many of the most eminent surgeons showed no interest in the new methods, while others who were present declared the old way best."

This explanation may be perfectly satisfactory to Dr. Lorenz's own sense of self-complacency; but perhaps, if he knew it, there were a good many conservative doctors in America, too, and they regarded some of the furore over our esteemed colleague as rather "fresh."

Current Comment.

THE COLLEGE OF PHYSICIANS OF PHILADELPHIA.

Philadelphia owes the continuity of its medical tradition to the College of Physicians. Its position as a center of medical education, the high place occupied by the profession in this city and the aid which it has been able to render to the steady improvement of the municipality are in no small degree due to this organized body of the leader's of this great calling—the College of Physicians, which has, through more than a century, preserved the standards, advanced the learning and deepened the professional enthusiasm of the leaders in medicine both in this city and in the State.

Those great services are none the less great because they are intangible. They are visibly and materially represented by the building in which the college for two generations has had its home, by its collections and, above all, by its library, to-day the second in the world—a repository of medical knowledge of value to every practitioner, and from which every man under the care of a physician in a critical case, or in cases not critical, which require special skill, is daily the debtor.

—*The Philadelphia Press.*

ALEXANDRE DUMAS AND THE DOCTOR.

The *Lancet* for November 29th. tells the following story of Dumas: The author of the *Three Musketeers* was breakfasting at Marseilles with Dr. Gistal, a physician of that city. The doctor asked his distinguished guest to adorn his album with a specimen of his power of improvisation. Dumas thereupon wrote under the eyes of the doctor:

Depuis que le docteur Gistal
Soigne des familles entières
On a démoli l'hôpital

"Flatterer!" interjected the doctor. But he was a trifle premature, for Dumas finished his quatrain with a line the reverse of flattering:

Et l'on a fait deux cimetières!

—*New York Medical Journal.*

Reviews.

Memoirs of the American Academy of Arts and Sciences. Vol. XII, No. 5. Cambridge. John Wilson & Son. August, 1902.

I. Experiments on the Effects of Freezing and Other Low Temperatures Upon the Viability of the Bacillus of Typhoid Fever, With Considerations Regarding Ice as a Vehicle for Infectious Disease.

II. Statistical Studies on the Seasonal Prevalence of Typhoid Fever in Various Countries and Its Relation to Seasonal Temperature.

This monograph is an unusually important contribution to the study of the typhoid bacillus in its relation to public health. The authors first discuss the work that has previously been done concerning the production of disease through ice and ice-cream the presence of bacteria in ice, snow, hail and ice-cream; and the experimental work upon the effect of temperature upon the viability of bacteria. They then report a long series of painstaking experiments of their own. They decide, with Prudden, that many bacteria are killed by freezing, their experience being that 2 weeks' exposure kills an average of over 99 per cent.; that about half of the bacteria die in the first half hour, and that after this the number dying increases in proportion to the time of exposure, although the bacteria were scarcely ever completely killed off, no matter how prolonged the freezing. The authors insist that there are evidently races of the typhoid bacillus that exhibit different degrees of resistance, the difference in resistance not being due to difference in the immediate environment. Alternate thawing and freezing proved somewhat more fatal than simple freezing; but, when repeated four times, this did not kill the most resistant of the bacilli. A temperature somewhat above freezing killed a large proportion of the bacilli; but the results were more varying and uncertain than those after freezing, and occasionally an increase seemed to occur. The effect of cold upon the bacilli in wet and dry earth was also studied. It was found that in dry earth the bacilli behave just as they do in water and in ice. In moist earth the destruction was much less rapid, and occasionally, in spite of the cold, the bacilli seemed to hold their own. Sedimentation and crystallization were likewise investigated. Sedimentation did not seem to show any marked effects, while ice formed on the surface of a quiet body of water contained only about 5% of the bacilli present in the water just beneath, the reduction seeming to be due to the greater reduction of temperature and to the extension of germs by the crystalizing process. The authors reach the important conclusion that ice cannot be an important vehicle for the transmission of typhoid fever, except, perhaps, in the case of artificial ice. If this is not made from pure water, it is more dangerous than natural ice, because it is used so much more quickly than natural ice that the effect of time in connection with the low temperature is largely lost. The authors then present a series of tables based upon an elaborate study of the relation of the prevalence of typhoid fever in various parts of the world to seasonal temperature. In 18 of 30 communities studied there was a complete parallelism between the temperature-curve and the typhoid-fever curve, and in the instances in which this parallelism was not present, the authors believe, for reasons presented, that the failure of correspondence between the curves was due to the occurrence of epidemics or to the peculiar influence of an unusually badly contaminated water-supply. They believe that the seasonal prevalence of typhoid fever depends mainly upon seasonal temperature. [D. L. E.]

A Text-Book of Medical Jurisprudence, Toxicology and Public Health. By John Glaister, M. D., D. P. H., F. R. S. E. 8vo., 803 pages and index. Edinburgh, E. & S. Livingstone. 15 shillings, net.

As indicated by the title, this book is a departure from custom, inasmuch as a treatise on hygiene is included and, as this section covers 281 pages, it will be seen that it is not a mere appendix. The book, as a whole, is admirable. Its author, who appends to his name on the title-page a long list of professional qualifications, in addition to his degrees, has been for a quarter of a century in active medical practice and for most of that time also engaged in teaching the topics included in the work. He has rightly judged that abundant illustration taken from actual cases is of great value. The accuracy of modern photography and photographic engraving renders possible the obtaining of excellent and artistic illustrations and the present volume uses such abundantly and, by the aid of good presswork and paper, a highly creditable result has been attained and a very attractive and serviceable work produced. The text is fully in keeping with these features. The author has given it the benefit of care and high scholarship. The total result, therefore, is a work of the highest grade; in the reviewer's opinion, indeed, it is the best so far issued. The trifling use made of American records and methods is a matter of regret, but this is all too common a defect in books originating in England. The omission, however, is less of a drawback in this case, as the topics are all treated scientifically and clearly, and the general principles are the same under all circumstances.

Among the topics which deserve special mention are the following: Identification, in which the Bertillon system and the Galton finger-print are described, the latter with numerous illustrations, excellently made. Striking pictures are given of tattoo marks, and some descriptive data collected by Mr. Cathcart, a student with Dr. Glaister, concerning the occupation-markings on the hands of artisans. From this investigation we learn that the dyer's hand is "still subdued to what it works in," as in Shakespeare's day. The chapter on death by electricity contains interesting pictures of some of the effects of lightning on clothing, as well as on the human body. One hundred and forty pages are devoted to toxicology, but it is to be noted that no attention is given to the common synthetic poisons, acetanilid, antipyrine, phenacetine and lysol, nor is the poisonous action of methyl alcohol in small and repeated doses described. Under House Drainage, many appliances used by the plumber are described and illustrated.

Author, printer and publisher are to be congratulated on the work, which is a most useful addition to the literature of important and difficult subjects. The book has a good index. [H. L.]

Taschenbuch der Massage. Für Studierende und Aerzte. Von Dr. Erich Ekgren an der III. medicinischen Universitätsklinik zu Berlin. Mit einem Vorwort von Geh. Med.-Rath Prof. Dr. H. Senator. Mit 11 Abbildungen. Berlin, 1903. Verlag von S. Karger. S. 90.

This is a concise exposition of massage, its physiology and technique. A special section is given to each of the following: Massage of the head, of the neck, upper extremities, the breast and the back, of the heart, of the abdomen, in prolapsed rectum, hemorroids, massage of the liver, of the spleen, massage in floating kidney, massage of the bladder, in prostatitis, in sciatica, of the lower extremities, and gynecological massage. This extensive list will show the comprehensive manner with which the author has treated his subject. It is a valuable little book and one that will be frequently consulted. [W. A. N. D.]

Practical Gynecology, Obstetrics, and the Menopause. By A. H. P. Leuf, M. D., Philadelphia. Three parts, complete in one volume of 326 pages. Price, cloth, $2.50. Published by The Medical Council, 4105 Walnut street, Philadelphia, Pa., U. S. A.

The first portion of this book, which originally appeared as three serial articles in the Medical Council of Philadelphia, regards the general practitioner as his own gynecologist. The second portion deals with common sense in obstetrics, and the third is a study of the change of life in woman. The book is largely a plea in favor of the abolishment of specialists, many of whom, we are led to believe, the author regards as humbugs. We do not endorse the recommendations of the author that the soft-rubber stem-pessary should be used. All stem-pessaries are objectionable and dangerous. The author, to say the least, presents his own and original ideas on the subjects he treats of.
[W. A. N. D.]

American News and Notes.

PHILADELPHIA AND PENNSYLVANIA.

Society Meetings Next Week.—The following societies will meet next week at the College of Physicians, Philadelphia, at 8.15 p. m.: Monday evening, February 2nd., Academy of Surgery; Wednesday evening, February 4th., College of Physicians, and Thursday evening, February 5th., Obstetrical Society.

Tests for Poison.—At a lecture delivered at the Philadelphia College of Pharmacy, January 20th., Dr. Henry Leffmann called attention to the frequent use of carbolic acid by suicides. He said that death from poisoning was much more common than was indicated by the mortality statistics. He mentioned that it is comparatively little known that alcohol and whiskey are antidotes for carbolic acid, but carbolic acid is not an antidote for whiskey. Death from illuminating gas is also becoming more frequent. Dr. Leffmann also reviewed the tests employed for the detection of poisons, which are unfortunately frequently overlooked.

Philadelphia County Medical Society.—At the meeting held January 21st., the following officers were elected for the ensuing year: President, Dr. F. M. Perkins; vice-presidents, Drs. J. C. Cooper and W. S. Higbee; secretary, Dr. W. S. Wray; assistant secretary, Dr. R. H. Skillern; and treasurer, Dr. C. L. Bower.

College of Physicians.—The sum of $50,000 has been offered to the College of Physicians, by Mr. Carnegie, on condition that the same amount is subscribed by others. This offer has been accepted, and $18,000 have already been collected. Of this amount, $10,000 were given by Mr. F. W. Vanderbilt, of New York, $5,000 by Mr. C. A. Griscom, and $1,000 by several Philadelphians. Two committees have been appointed, a committee on funds, consisting of Drs. C. H. Frazier, F. X. Dercum, Alfred Stengel and William Pepper; and a committee on plans, including Drs. H. C. Wood, G. F. Baker, S. G. Dixon, J. K. Mitchell, George McClellan, J. C. Wilson and W. B. Hopkins. It is believed that the money will be spent in enlarging the present building and in adding to the library of the college, which already contains over 80,000 volumes. A dinner for the members of the College, held January 24th., at the Hotel Walton, was provided by the Weir Mitchell entertainment fund. Dr. J. C. DaCosta was toastmaster. Speeches were made by Drs. H. C. Wood, S. Weir Mitchell, E. G. Janeway, of New York, Edward Martin and Talcott Williams. Among the out-of-town guests were Dr. Abraham Jacobi, of New York, Dr. C. W. Stiles and Dr. Wylie, of Washington, and Drs. Cushing, Thayer and Randolph, of Baltimore.

Henry Phipps Institute for the Study, Treatment and Prevention of Tuberculosis.—The director of this institution, Dr. L. F. Flick, has leased a large four-story house at 238 Pine street, which will be used as temporary quarters for the institute. Dr. Flick hopes to have the institute open sometime next week. The hospital staff will consist of 5 physicians at first. The Berkelbach bill, repealing the Act of 1899 which prevented the erection of a new hospital in the built-up portion of the city, has passed the Pennsylvania Senate and has been reported by the committee of the House of Representatives with a favorable recommendation.

Department of Public Health, Philadelphia.—A bill has been introduced into the Pennsylvania State Senate to abolish the Department of Charities and Correction and to place the city's charity institutions and the Board of Health in a new department, to be called the Department of Public Health. This idea originated with Dr. J. V. Shoemaker, at present President of the Board of Charities and Correction, and it is believed, should the new department be established, that Dr. Shoemaker will be appointed director of the Department of Public Health of the City of Philadelphia. It is intended to make this department similar to the Departments of Public Safety and of Public Works.

Chester Hospital, Chester.—An X-ray apparatus, given to the hospital by Miss M. B. Shaw, has now been installed and will soon be ready for use.

The Health of Philadelphia.—For the week ending January 24th., the number of cases of typhoid fever reported was 294, with 35 deaths, as compared with 323 cases, with 19 deaths, during the week previous. There was a marked decrease, also, in the number of cases of smallpox reported, but 13 as compared with 35 in the preceding week. The number of cases of scarlet fever reported was 80, exactly the same as during the previous week, and there was an increase in the cases of diphtheria reported, 45 as compared with 34 during the week before. Of the cases of typhoid fever, the great majority are in the 29th., 28th., 15th. and 24th. wards. Several schools have been closed in the city on account of the occurrence of smallpox and scarlet fever.—Smallpox has also caused the closure of schools in West Wheatfield.—An epidemic of diphtheria is reported at Mount Jackson.

Episcopal Hospital.—Dr. D. D. Stewart, visiting physician to the Protestant Episcopal Hospital of Philadelphia, has recently resigned. The position left vacant by his resignation has not yet been filled.

Medical Club of Philadelphia.—At the annual meeting, held January 12th., at the Hotel Bellevue, the following officers were elected for the ensuing year: President, Dr. E. E. Montgomery; vice-presidents, Dr. R. G. Curtin and Dr. J. C. Biddle; secretary, Dr. Guy Hinsdale; treasurer, Dr. F. S. Pearce, and the executive committee, Drs. Alexander McAlister, Ernest LaPlace, Wharton Sinkler, W. H. Warder and E. L. Duer. The club now numbers over 460 members.

Presbyterian Hospital, Philadelphia.—Thirty thousand dollars have been received from an unknown donor, for the erection of a new maternity building. Work upon the new building will begin early in the spring.

Bequests.—By the will of the late Moses Reinhard, over $10,000 were left to the Jewish Hospital. Over $30,000 were left to other Jewish charitable institutions.—By the will of the late Hannah W. Gadsden $5,000 were left to the Episcopal Hospital, for endowing a free bed.

NEW YORK AND NEW JERSEY.

Lectures on the Neurosis and Psychosis of Spirits and Drug Addictions.—Dr. T. B. Crothers, of Hartford, Conn., will deliver a course of lectures on alcoholism, morphinism and other drug manias, at 328 West Forty-second street, New York City, on the first Tuesday of every month, at 11 A. M. and 8 P. M., to which physicians are cordially invited.

Saunders in New York.—W. B. Saunders & Company, the well-known Philadelphia medical publishing firm, has established a branch in New York City, in the Fuller Building, better known as the "Flatiron," with offices in the seventeenth floor.

To Exterminate Mosquitoes.—An active campaign against all breeding-spots in New York City has been begun by the Health Commissioner. Antimosquito brigades have been sent out to search all mosquito pools in the 5 boroughs of the city. Maps will be prepared and property owners will be instructed to draw off stagnant water, filling up all pools with dry earth. This will be made compulsory, all mosquito pools being considered nuisances. The Health Commissioner does not place much reliance upon the use of oil for the destruction of the mosquito larvæ. Letters have been sent to 7000 physicians, to enlist their support in this work.

NEW ENGLAND.

Smallpox Hospital Burned.—The smallpox hospital at Biddeford, Me., was destroyed by fire, January 25. The 36 men, women and children patients escaped in their night clothes, and suffered terribly from exposure, as the temperature was several degress below zero. Eight of the patients are critically ill and one is dying. In spite of their dread of the disease, both firemen and police worked hard to extinguish the fire. The patients were placed in a temporary hospital near the burned building, after having been kept in the cold over 2 hours.

Italian Hospital, East Boston.—The Italians of Boston are preparing to establish a hospital for Italians, on Orient Heights, East Boston. It is probable that a graduate of an Italian medical school will be the superintendent, and that Italian Sisters of the Order of the Sacred Heart will be the nurses. It is intended that patients may be permitted to have any doctor they desire. Those who can afford to pay will be charged.

Children's Convalescent Home Destroyed.—The main building of the Children's Convalescent Home, at Wellesey, Mass., a branch of the Children's Hospital in Boston, was totally destroyed by fire, January 20. causing a loss of $65,000. The children were all saved, being removed in blankets. The home was in charge of the Sisters of St. Margaret.

Production of Vaccine Lymph in Massachusetts.—The Massachusetts State Board of Agriculture has presented its report upon the feasibility and probable cost of producing vaccine lymph for free distribution at the Massachusetts Agricultural College, at Amherst. It will be necessary to construct but a single building, and there will be little expense for apparatus. The report approves the plans.

Fire in the City Hospital, Boston.—Fire broke out in Ward E, containing 14 delirious patients, on the evening of January 22. All the patients were removed, however, without anyone being injured. The damage done is estimated at about $1500, though the fire lasted over an hour before it could be extinguished.

Scarlet Fever in a School.—An outbreak of scarlet fever is reported at the Lyman School for Boys, Boston. There have already been 43 cases of the disease, with 4 deaths, out of 350 inmates. It is believed that the disease has now been checked.

A Bequest.—By the will of the late George R. Bradford of Gloucester, Mass., $10,000 were left to the Addison Gilbert Hospital, for the foundation of a bed free to all residents of Cape Ann.

WESTERN STATES.

Plague in San Francisco.—Another fatal case of bubonic plague has been reported in San Francisco. This case, which was the only one in December, occurring December 11, is the ninety-third since the beginning of the outbreak in March, 1900.

Milwaukee Hospital for the Insane.—The last report of this institution recommended the building of a separate institution for imbeciles and feeble-minded persons, in connection with the asylum for the insane at Chippewa Falls. The report also suggested that the new institution be built at Wauwatosa. During the past year a new industrial building has been added, containing a carpenter shop, engine room, mat and basket shop, brush and broom factory, mattress and weaving department, picture framing shop, etc. The basement contains a dining room, club room, bowling alley, billiard and pool table for the patients. The institution has now also a barber shop.

Scarlet Fever at Lake Forest University, Chicago.—To prevent the spread of scarlet fever, which has appeared among the students of Lake Forest University, all classes and exercises have been suspended for one week. Students have returned home and a strict quarantine has been established. While one professor and one student have outspoken cases of scarlet fever, a number of students have developed suspicious symptoms.

New Insane Asylum, Pacific City, Cal.—A movement is on foot to secure an appropriation from the California State Legislature for the erection of a new insane asylum at Pacific City, on account of its incomparable climate.

University of Indianapolis.—The Medical College of Indiana, the Medical Department of the University of Indianapolis, has purchased 3 lots north of the present medical buildings, at the cost of $14,500. A maternity hospital will be built on this site.

St. Mary's Hospital, Beloit, Wis.—As soon as a site and building can be obtained, the Sisters of St. Mary, of Chicago, will equip and maintain a hospital at Beloit. But half of the money required has as yet been subscribed.

Chicago University.—Dr. G. N. Stewart, for the past 5 years professor of physiology at Western Reserve University Medical School, Cleveland, Ohio. has been appointed head of the department of physiology at Chicago University to succeed Dr. Jacques Loeb, who recently went to the University of California. Dr. Stewart will go on duty April 1.

Smallpox in Indiana.—During November and December, 520 cases of smallpox with 14 deaths have occurred in the State of Indiana, as compared with 9 cases reported in the previous year, without any deaths. Cases have been reported in January at Greentown, Edwardsport and Ora. At the last 2 places the schools have been closed.

Providence Hospital, Oakland, Cal.—It is expected that the buildings of this new hospital will be finished next May. The institution, which is to cost about $63,000, will be under the direction of the Sisters of Providence. It has been announced that there will be a ward exclusively for the use of poor patients, from which no one will ever be turned away.

SOUTHERN STATES.

The President's Injury.—Four weeks ago, while playing at single sticks with General Leonard Wood, the President was struck on the right wrist. Slight periostitis followed this. In order that his injured wrist might recover the more quickly, the President has not been using his right hand any more than was absolutely necessary, although he shook hands with a great number of people at the New Year's Day reception, a few days after injuring his wrist. As the periostitis was decidedly worse afterward, the President has used his left hand at all receptions since that time. The injury is not regarded as being at all serious.

Morgantown City Hospital, W. Va.—A large house was bought, January 23, at Morgantown, W. Va., which will be converted into a city hospital, as the present city hospital is soon to be torn down.

American Congress of Tuberculosis.—A charter for a period of 20 years was granted, January 22, to the American Congress of Tuberculosis. Leading American and Canadian physicians are among the petitioners. The object of the organization is to study the best method for the treatment of tuberculosis.

Measles at Annapolis.—It has been reported that a number of cases of measles exist at present among the cadets at the U. S. Naval Academy and St. John's College, Annapolis. An epidemic of measles is also reported in Baltimore.

Johns Hopkins Medical School.—By invitation, Dr. Samuel Theobald, of Johns Hopkins Medical School, will read a paper entitled "The Exercise of Common Sense in the Practice of Aural Surgery," before the section on otology of the New York Academy of Medicine, February 12 next.

Cecil County Medical Society.—At the last meeting, held at Elkton, Md., January 22, an address was delivered by Dr. John B. Deaver, of Philadelphia. Other papers were read by Dr. William Skinner, of Glasgow, Del.; Dr. C. F. Ellis, of Elkton, and Dr. G. M. Stump, of Perryville.

MISCELLANY.

Bubonic Plague in Mexico.—Latest reports denote that the bubonic plague, now existing at Mazatlan, while not increasing, has not yet shown many signs of decreasing. Six deaths occurred January 21, 6 January 22, 4 January 23, and 2 January 24, at which time the total number of cases in the hospital was 44. There have been from 4 to 6 deaths daily during the past week. Already 141 houses have been burned in Mazatlan, on account of the plague. Four quarantine stations have been established at Ameca, San Marcos, Zapatalan and Tuzpan, cities on roads which communicate with Mazatlan. The Mexican authorities have appropriated $130,000 for fighting the plague in Mazatlan. Of the 220 persons, who had been exposed to infection and are being kept isolated, not one is ill. With the exception of one case each at Embocada, Villa Union and Faro, the plague does not exist in Mexico outside of Mazatlan.

The Health of American Cities. During the past 15 years the death-rate of New York City has fallen from 26.27 to 19.06 per 1000. The following table shows the changes in the death-rate of other American cities during the past 15 years:

City.	1887.	1902.
Philadelphia	22.04	17.67
Chicago	20.21	13.88
Boston	24.97	19.70
St. Louis	20.71	17.72
Baltimore	19.16	19.63
San Francisco	18.27	19.06
Washington	22.40	21.83
New Orleans	25.34	21.24
Pittsburg	22.04	19.70
Louisville	23.30	16.02
Savannah	23.77	15.21
Cincinnati	19.97	18.88
Albany	23.81	17.59
Denver	17.10	14.30
Detroit	18.65	13.85

As may be seen, every American city, with 2 exceptions, has materially reduced its death-rate in the last 15 years. The reductions have been most marked in Chicago and Philadelphia, which have improved their water-supply. The 2 cities which show an increase in the death-rate are Baltimore and San Francisco. In Baltimore this is explained by the fact that former health reports were less thorough and accurate than those of to-day. In San Francisco the increase in death is only nominal, not actual, due to the decrease in the Chinese population.

Yellow Fever in Mexico.—Under date of January 21, 5 deaths were reported at Vera Cruz. Two of these occurred in Germans. There are a number of cases now under treatment in Vera Cruz.

Obituary.—Dr. Joseph Edwin Clark, at Brooklyn, N. Y., January 20, aged 79 years.—Dr. J. C. Hackett, at Millington, Md., January 21, aged 46 years.—Dr. T. F. Stair, at Evansville, Wis., January 17.—Dr. R. H. Stone, at Garrisonville, Va., January 20, aged 86 years.—Dr. M. Stanton, at Syracuse, N. Y., January 23, aged 58 years.—Dr. Edward Thayer Dickerman, at Springfield, Ill., January 24, aged 35 years.—Dr. J. M. B. Ward, at Marcus Hook, Pa., January 21.—Dr. Charles H. Haesler, at Pottsville, Pa., January 23,

GREAT BRITAIN, ETC.

Hospital for Infectious Diseases, Guernsey.—This new hospital, built on a hill 200 feet above the sea, forming the isolation building of the Castel Hospital, has recently been opened. The Bailiff of Guernsey, in his opening address, suggested that the new hospital should be called the King Edward VII Sanatorium.

Bubonic Plague in South Africa.—The latest reports from Durban, Natal, state that bubonic plague, which is epidemic there, is assuming alarming proportions. There were 42 cases under treatment January 26, 2 of them being in Europeans. Twenty-seven have already died from the disease.

Liverpool School of Tropical Medicine.—King Leopold of Belgium has subscribed $2500 to the Liverpool School of Tropical Medicine for inquiries to be made in Congo Free State respecting measures to combat malaria.

England's Failing Water-Supply.—Year by year the continually decreasing yield of the wells and streams in the counties causes uneasiness to water engineers. Dr. Willoughby, in a treatise in the *Sanitary Record* on "The Water Famine in Bucks, Herts and Essex, in Relation to the London supply," attributes it largely to the yearly increasing proportion of water which the companies supplying the metropolis draw from the wells. That a vast reservoir exists in the chalk beneath the whole of Greater London is undoubted. But if the quantity withdrawn by pumping is constantly in excess of that added by the downward percolation of the rainfall, the total storage will diminish, and, if the process be continued long enough, it will be practically exhausted in time. The companies maintain that they observe no signs of failure, but their wells reach to the lower of the water-bearing beds, and, naturally, would not show any falling off.

CONTINENTAL EUROPE.

Oysters in Constantinople.—At a meeting of the Association of Physicians in Pera, last month, the occurrence of a great number of cases of typhoid fever in Constantinople was discussed. A large percentage of cases could be traced to the consumption of oysters. This was especially noticeable among the better classes, by whom oysters were eaten raw. Bacteriological examination has shown typhoid bacilli in some oysters only. It is believed that oysters taken from the Bosporus or the Sea of Marmora are likely to contain typhoid bacilli because the sewage passes directly over the oyster beds. On the other hand it is believed that oysters from the Gulf of Ismidt and the Princes' Islands are not contaminated. But it is not always possible to ascertain whence the oysters have come.

Serum for Tuberculosis.—Dr. Marmorek, of the Pasteur Institute, Paris, whose antistreptococcus serum was discovered some years ago, has now announced the discovery of a tuberculosis serum which he states has proved a specific in a number of cases.

Dr. Brouardel Honored.—Dr. Brouardel, for 25 years dean of the Paris Medical Faculty, professor of medical jurisprudence, and now honorary dean of the Paris Medical School, was presented with a medal, January 18th., in the large amphitheater of the Paris Medical School. The medal was executed by Roty, and was presented to Dr. Brouardel by his pupils and friends, to celebrate his promotion to the post of "Grand Officier de la Légion d'Honneur."

Women Students at the University of Berlin.—Only 549 women students are now attending Berlin University, as against 611 last year. The decrease is owing to the stricter regulations regarding the issue of permits to Russian women.

International Congress of Life-Insurance Medical Officers.—The third annual meeting will be held in Paris in May. Among the articles to be read are papers on tuberculosis, by Drs. Poels, of Brussels, and Florschutz, of Gotha; peritonitis, by Dr. Bourcy, Paris; emphysema, by Dr. Hirtz, Paris; cholecystitis, by Dr. Carrigues, Paris; diseases of the stomach and intestines, by Dr. Braga, Paris; asthma, by Dr. Mabillon, Paris; anomalies of the thorax, by Dr. Redard, Paris; pregnancy, by Dr. Tissier, Paris; gout by Dr. Lereboullet, Paris; arteriosclerosis, by Dr. Moritz, St. Petersburg; contagion in cancer, by Dr. Peyrot, Paris; obesity, by Dr. Norton, Paris, and confidential medical examinations, by Dr. Weil, Paris.

Measles at Potsdam.—Measles has broken out among the children of the German Emperor, who are therefore quarantined in the new palace at Potsdam, with their mother.

Italian Society of Internal Medicine.—At the next annual meeting, to be held next autumn, the following subjects will be discussed: Individuality in Relation to Pathogenesis and the Evolution of Disease; Modern Views on Immunity in Regard to the Prophylaxis and Treatment of Acute Infectious Diseases; and the Premature Induction of Labor in the Course of Internal Disease. Besides, Dr. A. Zeri, of Rome, will make a report on medical progress in diagnosis, and Dr. U. Flora, of Florence, will report on progress in treatment.

A New Serum for Pneumonia.—Professors Panichi and Tizzoni, of the University of Bologna, have just announced the discovery of the bacillus of pneumonia, before the Royal Academy of Sciences, Rome. By means of a serum which they have prepared, they have succeeded in destroying the bacilli in patients with pneumonia.

Obituary.—Dr. Henri Varnier, the well-known Paris obstetrician, died recently, aged 44 years. He received his degree in 1888, and later became obstetrician to the Paris hospitals and professor agrégé. He had written a large number of articles upon subjects connected with obstetrics, having collaborated with Pinard and Champetier de Ribes in an Atlas of Obstetrical Morbid Anatomy, and with Faraboeuf, in an Introduction to the Study of Midwifery. He was one of the editors of the *Annales de Gynécologie* and of the *Revue d'Obstétrique et de Pédiatrie*. It was due to Dr. Varnier's efforts that symphysiotomy was revived, recently, in France.—Dr. Photinos Panas, formerly professor of ophthalmology in the Paris Medical School, died January 5, in his seventy-first year. Though a native Greek, he became naturalized in Paris, and was graduated in medicine in 1860, becoming professor agrégé in 1865. In 1873 he was appointed lecturer on ophthalmology, and soon published a book on strabismus and ocular paralysis. In 1879 he was appointed professor of ophthalmology and was elected a member of the Académie de Médecine, of which institution he was later president. He was the author of a number of works on diseases of the eye.—Dr. Heinrich, Baron von Weil, a well-known orthopedic surgeon, died recently in Vienna, aged 69 years.—Dr. Angelo Mazzucchelli, professor of pathology at the Medical School of Pavia, also died recently.—Dr. Alfred Kast, professor of internal medicine and director of the medical clinic at Breslau, died at Nice, France, January 6, aged 47 years.—Dr. Isidor Albu, formerly professor at the Teheran Medical School, died January 5, aged 67 years.

The Latest Literature.

BRITISH MEDICAL JOURNAL.

January 10, 1903. (No. 2193.)

1. A Clinical Lecture on Appendicitis.
GILBERT BARLING.
2. Remarks on a Second Series of Fifty Cases of Recurrent Appendicitis Treated by Operation.
F. A. SOUTHAM.
3. Constriction of the Small Intestine by a Gangrenous Appendix.
G. LOVELL GULLAND and DAVID WALLACE.
4. Four Cases of Duodenal Ulcer Perforating Acutely.
D'ARCY POWER.
5. A Clinical Lecture on Resection of the Large Intestine for Carcinoma. JAMES SWAIN.
6. Enterectomy for Malignant Disease.
WALTER L. WOOLLCOMBE.
7. Three Cases of Intussusception in the Same Family.
ROBERT G. RIDDELL.
8. A Case of Volvulus of the Cecum.
F. R. B. BISSHOPP and ALFRED FRIPP.

1.—Barling has operated upon 143 patients with **acute appendicitis** with a mortality of 17.5%. Whenever possible, operation is deferred until the acute symptoms have subsided. An abscess or a general peritonitis call for immediate operation. In the majority of cases at the end of a few hours improvement begins and continues on to convalescence. There is no royal time for operation, the time for intervention may be soon after the onset or at the end of the week. Persistent vomiting, widespread rigidity, the development of the tumor and a rapid pulse call for operation. The temperature is an uncertain guide, but should it remain raised for 3 or 4 days, operation is indicated. The value of the leukocyte count is considerable, but not infallible. The position of the incision should vary according to the site of the inflammatory focus, and in a limited number of cases the abscess may be opened through the rectum or vagina. In appendicitis associated with abscess, adhesions should not be disturbed in order to reach the appendix. Of 72 patients, in whom the appendix was not removed, recurrence was noted in 5. The use of opium in appendicitis is commended. [F. T. S.]

2.—Southam analyzes 50 cases of patients with **recurrent appendicitis** on whom he has operated. Thirty-nine were males, and 11 were females. Twenty-three occurred in persons between 20 and 30 years of age. The youngest patient was 10 and the oldest 53 years of age. In only 5 patients had there been but one distinct attack. In almost every case the lumen of the appendix was either partially or completely occluded at some point in its course. In 6 cases fecal concretions were present, but in no instance was any foreign body found. Three of the patients had already been operated upon for appendicitis with abscess, the appendix not having been removed. All of the patients recovered. [F. T. S.]

3.—Gulland and Wallace report a case of **obstruction of the small intestine by a gangrenous appendix.** The patient was a boy, aged 11 years. At operation a gangrenous appendix twisted upon itself was found; it was firmly adherent at its tip to the mesentery close to its base, and through the ring thus formed a loop of small intestine had passed. Death followed operation. [F. T. S.]

4.—Power reports 4 cases of **perforating duodenal ulcer.** The patients, all males, were operated upon within 15 hours of the onset of symptoms. In 2 instances perforation occurred on the posterior surface of the duodenum and in both of these suturing was difficult and defective. Only one patient recovered, perforation occurring on the anterior surface of the first part of the duodenum. Duodenal ulcers occur more often in men than in women. The extravasated fluid trickles into the iliac fossa and causes a local peritonitis which may be mistaken for an acute appendicitis. The transparent or bile-stained *succus entericus* found in the peritoneal cavity is diagnostic of a perforated duodenal ulcer. It is quite different from the gastric contents escaping through a perforated ulcus ventriculi. The prognosis of a duodenal ulcer is worse than that of a perforating gastric ulcer on account of the greater difficulty in closing it satisfactorily. Free drainage is imperative. [F. T. S.]

5.—Swain publishes a clinical lecture on **resection of the large intestine for cancer.** He prefers the end-to-end union by Halstead sutures without the intervention of any mechanical appliance. In one patient upon whom he operated, the specimen consisted of 6 inches of the ileum, the cecum and appendix, the whole of the ascending colon with the growth, about 2-3 of the transverse colon and the whole omentum. When intestinal obstruction is present it is much safer to relieve the obstruction first and to resect the bowel at some future period. [F. T. S.]

6.—Woollcombe reports 2 cases of **intestinal resection for malignant disease.** In the first patient the growth involved the transverse colon and had invaded a coil of adjacent jejunum upon which it rested. Four inches of the jejunum and 8 inches of the transverse colon were excised together with the omentum and a large wedge of mesocolon containing infected glands. Recovery ensued. The second case was one of cancer of the sigmoid in which acute obstruction had supervened. The growth was delivered through the abdominal wall and fixed by a tube passed through the mesentery. Next day the growth was excised and a Paul's tube tied in place. On the fifteenth day the divided coils of intestine were united. Recovery followed. [F. T. S.]

7.—Riddell reports **3 cases of intussusception occurring in the same family.** One patient was 5 months and the other 2 each 7 months of age. The first perished without operation, and the remaining 2 survived after operative reduction. [F. T. S.]

8.—Bisshopp and Fripp report a case of **volvulus of the cecum** occurring in a woman, aged 52 years. The previous history was that of chronic constipation. A definite tumor could be felt in the region of the sigmoid. Although obstruction had been complete for 5 days, there had been no signs of acute strangulation. The abdomen was opened in the middle line and a volvulus discovered. After untwisting the bowel it became evident that the distended part consisted of the cecum and ascending colon provided with an abnormal mesocolon and sufficiently long not only to allow a twist through a complete circle, but also to permit the displacement of the cecum to the left of the median line. Uneventful recovery followed. [F. T. S.]

LANCET.

January 10, 1903.

1. Two Lectures on the Anesthetization of So-called "Difficult" and "Bad" Subjects. Lecture I.
   FREDERIC W. HEWITT.
2. An Address on the Problem of Infection and Immunity in Tuberculosis and the Issues Involved.
   HUGH R. BEEVOR.
3. An Improved Method for the Microscopical Diagnosis of Intermittent Fever. RONALD ROSS.
4. Vaccination Rashes and Complications.
   GEORGE PERNET.
5. A Second Case of Successful Operation for Perforation in Typhoid Fever. ANTHONY A. BOWLBY.
6. A New Differential Stain for the Klebs-Löffler Bacillus of Diphtheria. J. WICLIFFE PECK.
7. The Diffusibility of Scarlet Fever Virus.
   JOHN SUTHERLAND.
8. Bence-Jones Albumosuria, with Report of Three Cases.
   JAMES M. ANDERS and L. NAPOLEON BOSTON.
9. Intravascular Antisepsis.
   J. M. FORTESCUE-BRICKDALE.
10. A Case of Hypertrophic Stenosis of the Pylorus in an Infant; Recovery Without Operation.
    H. WILLOUGHBY GARDNER.
11. Some Reflections Upon the Professional and Ethical Questions Arising out of Contract Practice.
    W. MUIR SMITH.

1.—To be treated editorially.

2.—Beevor, in an article entitled **the problem of infection and immunity in tuberculosis and the issues involved,** points out that the greatest importance is the education of the public in regard to the nature of tuberculosis and the methods of its transmission. He, however, makes a plea that the medical profession at large should not encourage the public to avoid their tuberculous fellow-creatures, which, in his opinion, would not diminish the amount of tubercle but would swell the ranks of the unemployed, depress the phthisical wage-earner's spirits, empty his pockets and ultimately, by want and distress, reduce his family to that condition of low vitality which the tubercle bacilli require for a successful invasion. He holds the view that tuberculosis is not highly infectious, and that it is not a disease that requires isolation. Finally, he urges the instruction of the young in the principles of hygiene, and that these measures will prove to be of more value eventually than the isolation of the unwilling artisan or the excommunication of the clerk. [F. J. K.]

3.—Ross has devised **a new method for the microscopical diagnosis of malarial fever,** which consists in preparing thick blood-films, drying these (being careful to avoid fixation), then staining with an aqueous eosin solution followed by carefully washing the stain from the preparation and then counterstaining with an aqueous methylene blue solution for a few seconds, rinsing with water, drying the preparation and mounting it. By this method the hemoglobin is removed so that the parasites are easily recognized in the thick preparation. The claims that dehemoglobinized, thick film preparations are 25 times better for diagnostic purposes than the thin film preparations, as the parasites are much more numerous and therefore easily found. He has used the dehemoglobinized thick film preparations for staining crescents since 1895, and points out that the smallest intracorpuscular hyaline parasites in such films, when properly stained, are easily recognized. [F. J. K.]

4.—Pernet contributes an article **on vaccination rashes and complications** and discusses them as they present themselves clinically in the following order: (1) Local abnormalities or irregularities in the development of the vaccine vesicles; (2) incidental exanthematic eruptions; (3) diseases inoculated with vaccinia at the time of the operation; (4) diseases of a septic nature which find a nidus in the wounds subsequent upon the operation; and (5) diseases excited in subjects especially predisposed to the same; (6) accidental vaccination; (7) horse-pox or grease and sheep-pox in man; (8) effects of intercurrent diseases on vaccination and *vice versa*; and (9) vaccination as a mode of treatment. In his concluding remarks he writes that successful vaccinations and prevention of complications may be had by scrupulous cleanliness. The factors which are not in our control are idiosyncrasies, renal inadequacy, cardiac insufficiency, etc.; however, the rashes which develop in these cases are usually of an evanescent and trivial nature. [F. J. K.]

5.—Bowlby reports a second case of **successful operation for perforation in typhoid fever.** The patient was a boy, 10 years of age, who suffered a relapse in the third week; on the fourth day of the relapse he had a sudden fall of temperature and marked abdominal symptoms, with great pain and sweating Operation was performed, it is thought, two hours after the perforation occurred. A considerable quantity of almost clear fluid was found in the abdominal cavity with a small collection of fecal matter. The whole small intestine was greatly distended. The perforation, the size of the head of a pin, was found about two feet from the cecum. The ulcerating area was inverted with Lembert sutures of silk. The abdominal cavity was given a dry toilet and a drainage tube introduced and the wound partially closed. The patient was quite sick after the operation but made a good recovery except for two epileptiform attacks. A number of months after the operation the boy was in excellent health. This case and another already published constitute Bowlby's experience in operations for typhoid perforation, and both have been successful. His success in both these cases he largely attributes to the fact that in each the perforation occurred after the fever was practically over and when the patient's general condition was otherwise relatively good. Bowlby closes with the suggestion that in all cases in which perforation is suspected a surgeon should be called in as promptly as possible. [J. H. G.]

6.—Peck has devised a **new differential stain for the Klebs-Löffler bacillus of diphtheria,** which consists in staining the films with Löffler's methylene blue and counterstaining with Neisser's brown. The technique is as follows: Films are prepared and fixed in the usual manner, then stained with Löffler's methylene blue for from 3-4 seconds, washing quickly and counterstaining with Vesuvin 0.2% aqueous solution for 30 seconds, again washed quickly and mounted in Canada balsam. He has found this method, to which he has applied the name "Löffler-Neisser Method," reliable for staining bacilli from cultures and organisms obtained from direct swabbings of the throat. Other organisms stain indistinctly or remain unstained. [F. J. K.]

7.—Sutherland discusses **the diffusibility of scarlet fever virus.** He has studied the transmission of this disease in a large number of cases. The total number of cases was 224, which occurred in 132 households. From his studies he favors the view that the disease is not transmitted by a third person, so that a healthy nurse or an attendant upon a scarlet fever patient does not carry the infection, even from one room to another. [F. J. K.]

8.—Anders and Boston report **3 cases in which they found Bence-Jones albumosuria in the urine.** They contend that Bence-Jones albumose is more or less closely allied to peptone, globin, histon and digestive albumoses, but that it shows certain characteristics unknown to these substances. It is a normal constituent of spermatic fluid, and may be found in the bone marrow in cases of myeloma. They maintain that Bence-Jones albumose, when present in the urine, is invaluable as a diagnostic factor in obscure cases of multiple myeloma in which other signs of this disease are absent. It is also valuable in differentiating multiple myeloma from such bone lesions as carcinoma, sarcoma, osteomalacia, etc. The continuous presence of albumose in the urine is generally a grave prognostic sign. The disappearance of this body from the urine after it has existed for some time signifies approaching danger and probably an early fatal issue. [F. J. K.]

9.—Fortescue-Brickdale has conducted a number of **experiments upon animals to ascertain the value of intravascular antisepsis.** After detailing his experiments with various remedies he concludes as follows: Generally, then, it may be said that at present there is no experimental evidence which would warrant the assumption that the course of a septicemia in animals can be influenced favorably by the intravenous injection of antiseptic substances, and that the only result to be obtained by pressing such a treatment beyond the maximum nontoxic dose is to hasten the death of the animal. In view of the results described in this paper and those obtained by former investigators, it seems useless to continue trying to apply clinically a method which, while by no means free from special dangers and difficulties, is at present unsupported by any experimental evidence, either as to its present advantages or future prospects. [J. H. G.]

MEDICAL NEWS.

January 24, 1903. (Vol. 82, No. 4.)

1. Cases Illustrating the Therapeutic Uses of the Röntgen Rays. SAMUEL BERESFORD CHILDS.
2. Subphrenic Abscess as a Complication of Appendicitis. HENRY A. CHRISTIAN and LOUIS C LEHR.
3. A Consideration of the Scientific Application of Mechanical Vibratory Stimulation in the Treatment of Disease. MAURICE F. PILGRIM.
4. Tonsillitis Classified as an Infectious Disease. WALTER SANDS MILLS.

1.—Childs says that there is no pain in the use of the X-rays, and that the patient arises from the application unaware for the time that any action has been wrought. He reports 6 cases of epithelioma, one of carcinoma, 3 of lupus erythematosus, one of chronic eczema, one of tubercular glands, one of tuberculosis pulmonalis and one of Hodgkin's disease, treated by this method with favorable results. [T. M. T.]

2.—Christian and Lehr mention that **subphrenic abscess, secondary to appendicitis,** may occur in one of 4 ways: (1) As a localized abscess, a part of general purulent peritonitis; (2) by extension of the diseased process from the appendix to the subphrenic region by an intraperitoneal route; (3) by extension of the diseased process by an extraperitoneal route, either by way of the lymphatics or by infiltration through the retroperitoneal tissue; (4) by way of the bloodcurrent as part of a general embolic septic process, or as a sequence of liver abscesses which are of embolic origin by way of the portal vein. [T. M. T.]

3.—Pilgrim states that this treatment is applied to accomplish stimulation of the nerve or nerve centers concerned in and controlling the diseased organ, which are found principally in the spinal and sympathetic systems. This is attempted for 2 purposes, namely, (1) stimulating and equalizing bloodcurrents and (2) stimulating secretion and excretion and the lymphatics. The author believes that its range of application is almost co-extensive with the needs of the acting physical organism, and is, in a varying degree, applicable to almost every form of disease. The diseases that have been treated in this manner are: (1) Nervous disorders; (2) ocular affections; (3) ear affections (less satisfactorily); (4) exophthalmic and nonexophthalmic goiter; (5) scoliosis; (6) various congestive forms of pelvic diseases; (7) functional disorders of the digestive organs; (8) varicose conditions; (9) inflammation and pruritus; (9) malignant growths; (10) incipient pulmonary tuberculosis; (11) subacute rheumatism. [T. M. T.]

4.—Mill's medicinal treatment is to gargle with cheap claret wine, to obtain the benefit of the tannic acid therein, every 2 or 3 hours or oftener. Aconite in small doses is often serviceable in simple tonsillitis, 10 per cent. solution, 8-drop doses every hour, preferably in water. If we find very high fever, pulse full and bounding, face flushed, eyes red and evidence of intense congestion of the throat, a one per cent. solution of belladonna is the best remedy. For follicular tonsillitis the remedy *par excellence* is phylolacca in one-drop doses as a one per cent. solution, every one or 2 hours, according to the severity of the case. If suppuration does occur, nothing will clear it up more quickly than calcium sulphide in 1/100-grain doses. [T. M. T.]

MEDICAL RECORD.

January 24, 1903.

1. A Contribution to the Pathogenesis of the Uremic State; the Probability of Its Physico-Electric Substratum. HEINRICH STERN.
2. Reasons for Believing that the Only Way in Nature for Yellow Fever to be Contracted by Man Is from the Mosquito. JOHN W. ROSS.
3. Ankylosis of the Crico-arytenoid Articulation, Due to Acute Inflammatory Causes. D. BRYSON DELAVAN.
4. The Relations and Treatment of Follicular Conjunctivitis and Trachoma. ELLICE M. ALGER.

1.—Stern presents a contribution to the pathogenesis of the uremic state in which he advances the probability of its physico-electric substratum. His conclusions are: (1) None of the retained known products of metabolism is in itself toxic to any degree. (2) In uremia there is a higher molecular concentration of the bloodserum, which is due to the accumulation of normal products of katabolism. (3) Hyperosmosis of uremic serum is evidenced by determination of its freezing-point. The freezing-points of normal bloodserum lie between -0.55 and -0.57° C., those of uremic bloodserums are depressed to between -0.61 and -0.67° C. (4) The point of attack and origin of the uremic convulsive phenomena is situated in the psychomotor centers of the cortex cerebri; the hyperosmotic condition of the blood and liquids in the brain may occasionally furnish the stimulus to the uremic attack, but there is no analogy between the degree of molecular concentration and the intensity of the uremic process. (5) In uremic serum there occurs invariably an abnormally large amount of retained nitrogen. There is no parallelism between the degree of freezing-point depression and the amount of retained nitrogen. (6) Nonelectrolytes do not only interfere with complete dissociation, that is ionization, but also retard ionic movement. Their presence, therefore, lessens the electrical conductivity of the watery liquid in which the electrolytes are contained. (7) In uremia the large amounts of retained albuminous derivatives exhibit most potent nonelectrolytic qualities. (8) The ions as independent molecules participate in augmenting osmotic tension and in depressing the freezing-point; the excessive high osmotic pressure of uremic serum is not due to its ions, but to its contents of neutral molecules. (9) Determination of the freezing-point of uremic serum discloses the fact of its high molecular concentration, but not the degree of its electrical conductivity. (10) Dissociation of electrolyte molecules into ions occurs in the ratio of the dilution of the watery solution. The more concentrated the serum, the smaller its conductive qualities. (11) The conductivity of the bloodserum of healthy individuals varies between 106.18 and 119.12. The lowest conductivity of human blood yet found, 98.29, occurred in a case of uremia. (12) Intravenous injection of water for therapeutic purposes dilutes uremic serum in such a manner that it may exhibit greater conductive properties. (13) Normal conductivity of the serum is more readily and frequently re-established if the uremic state has developed on the basis of parenchymatous nephritis than if it occurs as the consequence of interstitial nephritis. A most potent reason for this is the fact of the existence of smaller amounts of retained nitrogen in the parenchymatous than in the interstitial type of the affection. (14) In most instances of uremia, especially in those characterized by deep and prolonged coma, the body temperature is considerably lowered. This fact again contributes toward reduction of serum conductivity. Elevation of temperature, on the other hand, as long as within well-defined limits, tends to increase the conductivity. [T. L. C.]

2.—Ross advances reasons for believing that the only way in nature for yellow fever to be contracted by man is from the mosquito. This article is a résumé of the valuable work done by Finlay, Ronald Ross, Carter, Gorgas and others. [T. L. C.]

3.—Delavan reports 6 cases of **ankylosis of the crico-arytenoid articulation due to acute inflammatory causes.** In one patient the condition was due to acute laryngitis, in another to phlegmonous pharyngitis. Two followed diphtheria and two typhoid fever. [T. L. C.]

4.—Alger discusses at length the **differential diagnosis of follicular conjunctivitis and trachoma.** He states that the confusion of diagnosis between the 2 diseases has lead to an equal confusion in the treatment. In trachoma the essential element is lymphatic hyperplasia, and the treatment which he has found most successful has been based on the treatment of lymphatic enlargements in other portions of the body. First, so far as possible the cause of irritation, whether chemical, mechanical or bacterial, should be removed. This often involves not only frequent irrigations of the conjunctiva with boric acid solution, but we should consider the physical condition and surroundings of the child. Cod-liver oil and iodide of iron are valuable internally. Locally, on alternate days, he has found a combination of **ichthyol 15 m., tincture of iodine 1 dr., glycerine 1 oz.,** to be of value. On the other days an instillation of one drop of the following combination may be made at home: **Zinc sulphate one gr., wine of opium 8 m., water ½ oz.** [T. L. C.]

NEW YORK MEDICAL JOURNAL.

January 24, 1903.

1. Valedictory Address by the Retiring President, Dr. Robert F. Weir, Hon. F. R. C. S., England, Delivered at the New York Academy of Medicine, January 15, 1903.
2. A Study of the Deaths Occurring in New York City on the Opposite Sides of Twenty Streets During the Year 1895. ALFRED E. THAYER.
3. Cases Illustrating Some of the Newer Points in the Surgery of the Day. ROBERT T. MORRIS.
4. Chronic Gastritis and Gastric Motor Insufficiency in Children. E. L. WACHENHEIM.
5. The Treatment of Nonparalytic Strabismus, Including a New Operative Procedure. J. H. WOODWARD.

2.—Thayer has made an interesting study of **deaths occurring on the 2 sides of 20 streets in New York City,** the object being to determine if there was any difference in the mortality on the northern side of the street, compared with that on the southern. He found that the mortality was greater on the northern side. This he explained by the fact that the people inhabit the rear rooms of the houses, and hence are not exposed to the rays of the sun, besides ventilation is more or less imperfect, whilst on the southern side the rooms are exposed to the sunlight, and ventilation is more frequent. The prevailing diseases on the northern side he found to be pneumonia, phthisis and nephritis. Zymotic diseases were the most frequent cause of death on the southern side of the streets. [P. B. B.]

3.—Morris reports cases illustrating **some newer points in surgery.** The first case was that of a young woman with a tumor of the humerus. He simply called attention to the importance of making frozen **section diagnoses** at the time of operation. The second case was one of compound fracture of the frontal bone, which was treated for some days with balsam of Peru and gauze packing, the object being to stimulate the reparative process and keep the wound aseptic until a local hyperleukocytosis was established. The third case was one of abscess of the abdominal wall, following operation for gangrenous appendicitis. The fourth case was one of ununited fracture of the tibia and fibula. In preparation of this patient he called attention to the value of a sulphide depilatory. This agent he considers of much value. [P. B. B.]

4.—In considering the subject of chronic **gastritis and gastric motor insufficiency in children,** Wachenheim first reviews the literature of the subject, then speaks of the etiology and diagnosis. He classifies the condition as follows: (1) Simple chronic gastritis; (2) motor insufficiency of the stomach and (3) a combination of these 2. The symptoms and differential diagnosis he mentions in detail. The treatment may be grouped under 3 heads, lavage, diet and medication. Lavage he considers as important as any. As to diet he does not believe in too rigid a restriction, but believes that far more important is proper cooking, slow eating, thorough mastication and the removal or correction of dental defects. Tea, coffee and alcohol must be interdicted. Medication he regards as relatively unimportant. [P. B. B.]

5.—Woodward, in considering the **treatment of nonparalytic strabismus,** first calls attention to the principal causative factor, namely, errors of refraction. Hence the treatment of every case of strabismus must begin with the correction of refraction, and, if no pathological changes have taken place in the muscles or Tenon's capsule, such a procedure will usually suffice. However, in the great majority of fixed squints and periodic squints operative interference will be required. The object of the treatment of strabismus is threefold: (1) To remove the deformity; (2) to establish normal association of movement between the eyes and (3) to reclaim the deviating eye from amblyopia. As to operative treatment he does not favor free tenotomy. Advancement with previous thorough stretching of the muscle, he says, is better. After operation, stereoscopic, prismatic and reading exercises, with careful supervision of the refraction should be continued until the cure is completely established. [P. B. B.]

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

January 22, 1903. (Vol. CXLVIII, No. 4.)

1. Vaginal Celiotomy, Its Scope and Limitations. J. RIDDLE GOFFE.
2. A Case of Acute Pancreatitis and Necrosis of Fat Tissue, Laparotomy, Drainage, Death Nine Days After Operation, Autopsy. GEORGE H. MONKS and DAVID D. SCANNELL.
3. Cerebral Syphilis. ALBERT E. BROWNRIGG.

1.—Goffe, in his article on **vaginal celiotomy**, advocates the **anterior vaginal incision** which fulfils the following functions most satisfactorily: (1) It is free from danger; more than that, it is devoid of any untoward or annoying consequences; (2) as an exploratory incision the author found it to afford the means of accurate, definite and reliable information in regard to the entire contents of the pelvis; (3) the great scope of its application. [T. M. T.]

2.—Monks and Scannell remark on this condition as follows: (1) The previous existence of 2 attacks, presumably due to gall-stones; (2) the extension of the fat necrosis toward the left adrenal and kidney, emphasizing the value of posterior drainage in such cases; (3) the possible importance of the destruction of the adrenal in producing the fatal issue; (4) the negative results of bacteriological emanation in extensive necrosis of the pancreas and fat tissue. [T. M. T.]

3.—Brownrigg gives the chief points which will make us suspicious of this condition: (1) Headache and vertigo; (2) nausea and vomiting; (3) optic neuritis; (4) cranial nerve palsies or paralyses; (5) apoplectiform attacks or more gradual attacks of somnolence or coma, with partial hemiplegia; (6) irritability and general mental failures; (7) polyuria and polydipsia; (8) marked remittent character to all the symptoms and their changeability. [T. M. T.]

AMERICAN MEDICINE.

January 24, 1903.

1. Influence of Nephrectomy Upon Absorption. S. J. MELTZER and W. SALANT.
2. Secondary Carcinoma of the Liver, with Report of a Case in which the Liver Weighed 15,110 Gm. (33 1/3 lbs.) HENRY A. CHRISTIAN.
3. Through-and-Through Intestinal Suture, with Report of Additional Cases. F. GREGORY CONNELL.
4. Transmissibility of Plague. W. J. CALVERT.
5. Karyokinesis in Malignant Tumors. FREDERICK G. CANNEY.
6. X-rays in Surgical Diagnosis. ARTHUR T. McCORMACK.

1.—Meltzer and Salant present a brief preliminary note upon the **influence of nephrectomy upon absorption.** The experiments were made upon rabbits. They state that they have demonstrated that after nephrectomy absorption is considerably improved. They claim to explain why no edema was observed after nephrectomy in animals or in pathological cases of acute anuria in human beings lasting sometimes 5 and 6 days. The first effect of complete anuria is not an increase in the normal transudation, but an increase of the power of absorption of the blood. [T. L. C.]

2.—Christian reports a case of **secondary carcinoma of the liver** in which this organ weighed 33 1/3 pounds. A point of interest in the case was its long duration, more than 35 months. The primary growth was in the rectum and offered no obstruction to the lumen of the intestines, hence interference with the digestive functions was reduced to a minimum. [T. L. C.]

3.—Connell presents an elaborate paper discussing the advantages of **through-and-through intestinal suture,** with a report of 64 additional cases. He summarizes his claim as follows: (1) The suture that aims to include but a portion of the bowel wall is dangerous, because (*a*) it is liable to fail to include any of the submucosa, in consequence leaving a weak stitch; (*b*) if including any of the submucosa it is almost certain to penetrate the coat, leaving a stitch open to the dangers of capillarity. (2) By utilizing a through-and-through suture the danger of yielding is excluded. (3) By employing a suture that is knotted in the lumen the danger of capillarity is diminished. (4) It is acknowledged that the most appropriate place for the knot when all coats are perforated is in the lumen of the bowel. (5) It is undeniable that when the submucosa has been perforated accidentally the knot ought to be placed inside. (6) It is also undeniable that many so-called Lembert stitches perforate the submucous coat and thus convert an intentional nonperforating into an unintentional perforating suture. (7) It is undeniable, too, that owing to the extreme tenuity of the submucous coat (1/6 of the thickness of the needle which is to "penetrate but not perforate" it), we are utterly unable to differentiate between a perforating and nonperforating Lembert stitch. (8) The logical conclusion is that the ideal location for the last and all knots in an enterorrhaphy is outside of the peritoneal cavity, in the lumen of the bowel. (9) As a chain is no stronger than its weakest link, it is of practical import that the last one or two stitches be also perforating and knotted in the lumen. (10) The diaphragm by its valve-like action is of great value in the prevention of leakage. (11) The tying of the knot, according to the method described above, does not interfere with the establishment of firm union or tend to leakage. (12) The side-knot, or "square" stitch, in rendering a retaining suture unnecessary, is superior to the top-knot or "circular" stitch. [T. L. C.]

4.—Calvert discusses the **transmissibility of plague.** The relatively small number of cases occurring among attendants in plague hospitals demonstrates the minor rôle of direct transmission. In direct transmission the viability and virulence of the organism are of prime importance. In infected cities certain houses become plague centers. Air and water rarely, if ever, carry infection, except in pneumonic cases. The plague organism is long lived. It is carried by raw materials, insects, etc. A relatively small number of organisms may cause the disease. [T. L. C.]

DEUTSCHE MEDICINISCHE WOCHENSCHRIFT.

December 11, 1902.

1. Investigations Concerning Epithelioma Contagiosum of Fowls. E. MARX and A. STICKER.
2. Concerning a Reaction to Mercury that Appears in Syphilitic Subjects. K. HERXHEIMER and KRAUSE.
3. Bloodplates in the Blood of Syphilitics and their Significance. H. VOERNER.
4. Further Contributions Concerning Syphilis Bacilli. M. JOSEPH and PIORKOWSKI.
5. Concerning Congenital Elephantiasis. L. BERNHARD and M. BLUMENTHAL.

1.—The conclusions arrived at are: **That the virus of fowl-pock may be filled; and, therefore, that it belongs to the soluble disease-producing substances. None of the parasites so far described as the cause of fowl-pock is considered to be of importance. The virus exhibits great resistance to various procedures.** It may be fully dried. It stands diffuse daylight, and even sunlight, for many weeks; also a temperature of less than 12° C. and warming to 60° C. If it has been thoroughly dried it withstands one hour's heating to 100° C. It is also undamaged by the action of glycerine throughout weeks. Two per cent. carbolic acid destroys it. The virus of pigeon-pock, when passed through the hen, does not subsequently cause disease in pigeons; hence it then resembles original hen-pock. The occurrence of one attack of the disease produces immunity. [D. L. E.]

2.—The reaction described is the appearance of a **very marked increase in the eruption, but a decided change in its character, in syphilitics, after the first inunction with a considerable amount of mercury**—about one dram of the ointment. The eruption becomes of an urticarial or erythematous character and of a bright color. It loses the characteristics of a syphilitic eruption; but there is no itching, burning or sense of heat. This reaction rapidly disappears, and the eruption soon again exhibits its typical syphilitic characteristics. The authors believe that the rapidity of the cure of the eruption is in direct relation with the intensity of the reaction; and also that the reaction is of importance in the diagnosis. [D. L. E.]

3.—Losdorfer has recently reported that granules are present in enormous numbers in the blood of syphilitic subjects. Vörner confirms this statement, the granules being considered by him to be **very numerous bloodplates.** He believes that bloodplates are nearly always present in large numbers in the blood of syphilitic subjects, and that their appearance does not depend upon any special stage of the syphilis or upon any special activity of the symptoms. Furthermore, they are **not specific of syphilis,** as they can be found in large numbers in other conditions. The statement made by Losdorfer that the granules disappear from the blood after the use of inunctions, Vörner modifies to the statement that they **disappear only when antisyphilitic treatment is followed by a cure of the syphilitic anemia.** [D. L. E.]

4.—To be continued.

5.—The case reported is that of a child, 2 years of age, who was brought to the clinic for treatment of a deformity of its external genitals. Shortly after birth, a phimosis had been operated upon, and at that time it was observed that the left foot showed some appearance of elephantiasis. After the operation the prepuce swelled continuously; the skin in the neighborhood became involved, and, finally, within a few weeks, the **whole left leg exhibited a condition of pronounced elephantiasis,** the leg and the external genitals being greatly swollen and showing numerous marked furrows, and the skin greatly thickened. Measurements of the 2 sides showed a difference of from 4 to 8 cm. in favor of different points along the left leg. The skin on that leg was of about the same temperature and sensibility as that of the right; but it was drier and harsher, and felt denser. Microscopical examination showed that there was a **diffuse fibromatous change in the connective tissue, with marked lymphangiectasis.** There was no family history of the condition and no evidence of an inflammatory condition that had originated the elephantiasis. It was thought probable that it was due to some congenital anomaly in the lymphatic system. [D. L. E.]

December 18, 1902.

1. Concerning Congenital Diaphragm of the Larynx. P. FRAENCKEL.
2. A Serum Specific for Human Placenta. W. LIEPMANN.
3. A Case of Myasthenia Gravis Pseudo-Paralytica with Acute Course. DORENDORF.
4. Contribution Concerning Retroperitoneal Cyst. RUDOLF SCHORLEMMER.
5. Further Contribution Concerning Syphilis Bacilli. (Continuation). M. JOSEPH and PIORKOWSKI.
6. Oxyuris Vermicularis as a Cause of Acute Appendicitis. RAMMSTEDT.

1.—Fraenckel reviews the scanty literature concerning membranes in the larynx and reports 2 cases, the first being in a man of 22, who had been hoarse since childhood; whose hoarseness readily grew worse after slight exposure, etc.; and who always had pain in the larynx on swallowing or coughing. There was **double ptosis, and an examination of the larynx showed a delicate membrane** at the level of the vocal cords, running between them for about 1/3 of their length, and ending posteriorly with a sharp edge convex to the front. There were minute vessels in the membrane. The **glottis of the patient's mother was rounded at the anterior angle, and she also showed double ptosis.** Apparently this was a family anomaly, as was the case also in Seifert's patient. The second patient was a 16-year-old boy, who showed a **membrane in the subglottic space.** He had never had disease or injury of this region, and this was apparently a congenital abnormality. Probably these membranes occur at the level of the vocal cords because that is the narrowest point of the larynx and the one at which the 2 sides remain longest in contact. [D. L. E.]

2.—Liepmann has attempted to produce a syncitiolytic serum—an experiment in which Weichhardt has recently claimed to have been successful. Liepmann, however, was **never able to demonstrate karyolysis as the result of the specific serum;** but he was able to produce a serum that becomes cloudy when placental tissue is added, while normal serum does not. The precipitate formed as the result of this clouding contains albuminoid, precipitine-like masses and intact placental cells. The reaction occurs best at body temperature. The serum has a slight hemolytic action, probably because it is impossible to make placental tissue entirely bloodfree; and after prolonged action it causes a slight reaction with other human cells. The author believes that it may be possible to demonstrate the presence of placental-tissue elements in the bloodstream in this way and suggests that the time is not far distant when a **serumdiagnosis of pregnancy may be made by this means;** it is also possible that this serum **may aid in the early diagnosis of nephritis and eclampsia in pregnancy.** [D. L. E.]

3.—The case is important because of the great rapidity of its course. **The entire duration of the disease was 29 days.** Only one case in which the course was shorter has been reported; and only 2 others of the same duration are on record. [D. L. E.]

4.—The cysts that may be found in the retroperitoneal space are chiefly chylous or bloodcysts, or rarely dermoid. They may be either retention-cysts or the products of new growth. Retroperitoneal cysts are more rarely observed than omental or mesenteric. Most of them are pancreatic, but a few are due to other obscure causes. The case reported is that of a man of 52, who for 3 years had had symptoms, chiefly gastric. There was a prominence in the meso- and hypogastrium that was elastic, and had no determinable relation with any of the abdominal organs. The patient was operated upon. The cyst was found to be retroperitoneal and to contain a milky fluid, the quantity of which was at least a liter. The fluid coagulated rapidly and spontaneously. The cyst was emptied and the wound closed. The patient quickly regained health. The cyst-wall showed no epithelium or endothelium. The fluid cleared upon shaking with ether; and a chemical examination showed that it contained fibrin, 0.4 per cent. of albumin, and .46 per cent. of nitrogen. There was no sugar, and pancreatic ferments were absent. The **source of the cyst could not be determined;** it apparently had no relation with the pancreas, the lymphglands, the kidney, or the suprarenals. The **fluid contained in the cyst was evidently chylous.** [D. L. E.

5.—Will be abstracted when concluded.

6.—In the case reported there was an attack of appendicitis of moderate severity, with marked and increasing leukocytosis. Operation was undertaken, and the appendix was found to be very dense. After it had been removed and opened, it was found to be **distended in its central portion with large numbers of the oxyuris vermicularis.** It also contained some feces, but nothing else. The author believes that the attacks of appendicular colic and the appendicitis itself were due to the presence of the worms. He thinks that it is **important, in cases of appendicitis, to look for parasites in the stools;** but that to carry out an anthelmintic treatment during an acute attack would certainly be of doubtful propriety, and that the decision concerning operation should be reached without regard to the presence or absence of worms. [D. L. E.]

MUENCHENER MEDICINISCHE WOCHENSCHRIFT.

November 25, 1902.

1. Phagocytosis, Synthesis and Other Intracellular Processes. J. ARNOLD.
2. An Operation for Fibromyoma of the Uterus. A. HEGAR.
3. The Operative Treatment of Pulmonary Tuberculosis. A. LANDERER.

4. The Spirometer. R. v. HOSSLIN and GEBHARDT.
5. The Explanation of the Intestinal Action of Atropine With Consideration of Its Application in Intestinal Obstruction. J. PAL.
6. Tuberculosis of the Lungs in Early Infancy. M. HOHLFELD.
7. The Therapeutic Value of Bismutose. H. STARCK.
8. Paraldehyde and Scopolamine (Hyoscine) as a Hypnotic and Quieting Substance for Bodily and Mental Diseases. BUMKE.
9. The Gelatine Treatment of Melena Neonatorum. E. OSWALD.
10. Contribution to the Casuistry of Fatal Hemorrhage. M. TIEGEL.
11. Two Cases of Severe Acute Purulent Otitis Media Due to "Schneeberger." W. SCHROEDER.
12. Hypertrophy of the Prostate and Galvanocaustic Treatment According to Bottini-Freudenberg. BIERBAUM.
13. The Application of Strong Elastic Rings for the Purpose of Relieving Pressure Over the Tender Points in the Foot. BETTMANN.
14. The Nautical Occupations and Venereal Diseases. C. GRAESER.
15. Experiences in Physicians' Practice Among the Chinese. PERTHES.
16. Results of the Tuberculin Treatment According to Goetsch's Method. W. ROEMISCH.

1.—Arnold states that **phagocytosis** is accomplished by active protoplasmic movements. This can be readily observed under the microscope. It is questionable whether similar protoplasmic movements occur in other cells in which cell-enclosures are found, as for example endothelial and epithelial cells. The phagocytic inclusions of fat droplets may also occur. These fat droplets are found in very various forms of cells and can be observed by the injection of fats into the spinal lymphsacs of frogs. The eosinophilic cells found in the kidneys of frogs may be made to react to Sudan III and osmic acid by injecting the frogs with soap. There appears in these cases to be a sort of **synthesis** between the fat and the granules. In cells that have not the ability to enclose substances we can only assume that the fat enters either as a result of a synthetic process or in the form of an emulsion. Arnold does not believe that the fat is absorbed in the form of an emulsion, and urges in proof that in the cartilaginous cells fat granules may be found, although they are never seen in the capsules. He warns against ascribing too broad a significance to phagocytosis, and insufficient attention to the possibility of a reconstruction of the tissue by the action of the plasmasomes of the cells. Experiments in the observation of iron have shown that the iron is absorbed in the solution and then fixed upon the granules of the cells; the same result was observed in hematogenous siderosis. [J. S.]

2.—Hegar describes the various operations that have been performed for fibromyoma of the uterus. At first these were restricted to fibrous polypi and, as hemorrhage was feared, they were often strangulated by a ligature and allowed to become necrotic, thus giving rise to serious danger to the patient. Later enucleation was practised, and finally, when ovariotomy became a popular operation, they were removed through an abdominal incision. Porcelini suggested morcellement, the danger of which consists in the subsequent necrosis of the stump of the cervix. Hegar improved the treatment of the stump in this operation, and as far as life is concerned the results were fairly good. Intraperitoneal and extraperitoneal methods of treating the stump were then employed. Hegar then suggested castration in tumors of moderate size, and the results were very good. Another method is enucleation through the adominal incision. This can only be employed in certain favorable cases. The latest operation is total extirpation through the abdomen. The operation is rapid, often the convalescence is protracted. It can be rendered even safer by doing the first part of the operation through the vagina, but the results are not always very successful. Vaginal enucleation and total extirpation is particularly recommended by Duterssen. This can only be done when the tumor does not extend above the umbilicus. If the tumor is large it is not advisable to attempt to preserve the uterus. When possible, the best operation is total extirpation through the vagina. [J. S.]

3.—Landerer reports the cases of 3 patients with **pulmonary tuberculosis upon whom operations were performed.** In the first 2 there were subcutaneous abscesses which were opened, in the first patient leaving a fistula and cavity in the lung which refused to heal, and through which a considerable amount of expectoration was discharged. The second patient died after 10 days, and the third, a patient with a pyopneumothorax, died during the operation. Landerer, nevertheless, is not entirely pessimistic regarding operative intervention for pulmonary tuberculosis. Advanced tuberculosis is not a favorable condition for severe operative procedures. He reports in more detail 6 additional cases. The first patient, a woman, 25 years of age, had been sick for 10 years. The left lung appeared to be completely involved, and there was a cavity at the right apex. Resection of the ribs on the left side was performed, there was collapse of that side, and the patient improved, gaining 23 pounds. The next patient, a girl, 15 years of age, also had a resection of the ribs and subsequently improved. The third patient, a man, 23 years of age, with severe pulmonary hemorrhages and involvement of the right lung, demanded an operation and experienced considerable improvement, including increase of weight, amounting to 6 pounds. Other cases, a girl of 22 years, a man of 23 and a woman of 26, all were greatly improved, and in the case of the man there was some evidence of a complete cure being obtained. At any rate, the tubercle bacilli disappeared from the sputum. In regard to the technique of these operations Landerer insists that they must be performed rapidly. Hemorrhage must be avoided; resection must be extended at least the breadth of one rib beyond the limits of the cavern, as determined by physical examination. The incision is preferably vertical, and it is desirable after the operation that the cavity should be evacuated through the wound. Cases of acute tuberculosis are not as favorable as those of more chronic duration. [J. S.]

4.—Von Hosslin has performed a series of experiments with the **spirometer** and found that the vital capacity showed a very marked change on different days. This variation appeared to bear some relation to the temperature, and a series of experiments were, therefore, performed upon healthy persons to see whether it was equally true with them. The results showed that the spirometer possesses such serious defects that it cannot be regarded as a scientific instrument. In order to use it with any degree of accuracy it is necessary that the patient should expire in a room heated to the temperature of the body. He gives a careful description with illustrations, of the spirometer employed by himself and Gebhardt. Gebhardt insists that if the vital capacity is to be given any fixed significance it must be defined as those units of volume of air which after the deepest inspiration at a temperature of the breath (36° C.) can be expired. Variations in the temperature of the room must be corrected for the temperature of 36°. Calculations cannot be made according to Gay-Lussac's law, because the expired air is a mixture of air and water vapor. He gives some formulæ designed to prove this fact, and to indicate the method according to which the corrections must be made. These formulæ are too complicated to be reproduced in an abstract. [J. S.]

5.—Pal has found that **atropine** injures the terminal nerve aparatus of the vagus and splanchnic nerves, and, in some cases, produces complete paralysis. The muscle of the intestine, however, remains intact, as does also the ganglion apparatus which produces peristalsis. The tone of the intestinal wall is usually diminished, although this is only transient. As the intestine, however, is not so susceptible to inhibitory contractions, the conditions are more favorable to the intestinal movements. To produce this, however, there must be a corresponding irritation which may be present under pathological conditions, or may be added after the application of the atropine. These facts have been proved by experiments upon dogs. He has further observed that small quantities of morphine cause increased activity of the intestinal tracts after large doses of atropine. It follows from this that atropine is of value in dynamic, or in certain cases of paralytic intestinal obstruction. Genuine intestinal stenosis is not, however, an indication for the atropine treatment. Therefore, the drug should only be used when the mechanism of the obstruction is clear. In addition to the poisonous action, danger may be produced by interference with the clinical picture of the disease, and the possibility of too great a delay of the operation. [J. S.]

6.—Hohlfeld reports the case of a boy, 7 months of age, who developed fever with signs of pneumonia. Tubercle bacilli were found in the mucopurulent sputum obtained from the retropharyngeal regions. The baby's mother had tuberculosis. The autopsy confirmed the diagnosis of pulmonary tuberculosis and showed also cheesy degeneration of the bronchial glands. There were also ulcers in the intestines, and tubercles in the liver. The second case occurred in a boy, 10 months old. He had similar symptoms; tubercle bacilli were found, and at the autopsy the lungs, bronchial glands, liver, spleen, intestines and mesenteric glands were all found tuberculous. During life there were symptoms of cavity which at the autopsy were found to be due to a bronchiectatic dilatation. [J. S.]

7.—Starck has used **bismutose** in various forms of intestinal catarrh of children, employing fairly large doses, that is about 10 grains every hour or two. The results were invariably prompt and satisfactory. There could be no doubt that the remedy and not the cessation of the disease was the active factor. He prefers it to the other bismuth salts. Bismutose is prepared by the coagulation of pure egg albumen with a solution of chemically pure crystallized bismuth nitrate in a solution of sodium chloride. The coagulum is washed, dried and powdered. It contains from 21% to 22% of metallic bismuth, which is united both with the albumin molecule and with the chlorine. The remedy may be administered in suspension in water either with mucilage of acacia or syrup, or simple milk. The maximum dose is about 10 grams, that is 150 grains, per day, for a child. In cases of obstinate vomiting it can be administered by the rectum. [J. S.]

8.—Bumke recommends that **paraldehyde** should be given sweetened with plenty of cane sugar. Certain result is usually obtained by a dose of 3 gm. (45 gr.), which may be increased to 6 gm. (90 gr.). Sleep occurs in from 13 to 15 minutes after a period of fatigue and without any period of excitement. The duration of sleep is usually from 5 to 8 hours. The patients awake exactly as if they had had physiological sleep. There seem to be no disagreeable after-effects. In some rare cases after a prolonged administration of from 30 gm. to 60 gm. per day the patients get into a state of delirium similar to that produced by alcohol. No cases of acute poisoning have been recorded. In very rare cases this remedy does not produce sleep, usually in forms of insanity. **Scopolamine**, which is identical with **hyoscine**, diminishes the excitability of the cortex and, therefore, tends to promote sleep. The dose is from one-half to one mg., best given hypodermically. The after-effects may be mydriasis, diminution in the secretion of saliva and sweat, and larger doses sometimes produce symptoms of poisoning, but fatal cases have not yet been recorded. The 2 remedies seem to complement one another very satisfactorily. [J. S.]

9.—Oswald has observed 5 cases of genuine **melena neonatorum** in the Baseler Women's Hospital. The first patient was treated with ice and the low position of the head, and recovered. The second patient was treated with ergot, heat and camphorated oil, grew worse, but was removed from the clinic; the third patient with ice upon the body and ergotin subcutaneously, with recovery; the fourth patient with gelatine injections, patient recovering in 2 days; the fifth with **gelatine injections**, followed by recovery in less than 2 days. In view of these results it is not certain that the fourth and fifth patients would not have recovered without the gelatine injections, nevertheless, the impression obtained by Professor von Herff was that the gelatine had saved life. [J. S.]

10.—Tiegel reports the following cases. A woman, 42 years of age, had had acid eructations and pain in the abdomen. Finally she vomited blood and became extremely anemic. She received injections of gelatine and artificial serum, and vigorous stimulation to the heart, but finally died. At the autopsy a small ulcer was found on the posterior wall of the stomach, and there were tuberculous ulcers in the intestines. The second patient, a man of 22 years of age, suddenly had hematemesis during which he lost consciousness. He was brought to the hospital in a state of extreme collapse, and had another violent hemorrhage from the stomach. He was given injections of gelatine and artificial serum. He again vomited blood and shortly afterwards died. A small ulcer about 3 mm. in diameter was found in the smaller curvature of the stomach, and an eroded bloodvessel was found in it. The third patient, a woman of 23 years, who had had chlorosis, insufficiency of the mitral valve and hyperplasia of the spleen, had pain after eating. She had fainted and vomited a large quantity of blood, and the attack had been repeated the following day. She was given opium, artificial serum and some milk by the mouth. The hemorrhage was repeated, and the patient died. An ulcer not more than one mm. in diameter was found in the smaller curvature of the stomach, and an eroded bloodvessel was found in it. The interesting feature of all 3 of these cases is the very slight alteration in the mucous membrane of the stomach. They indicate that the diagnosis of **gastric hemorrhage** without particular anatomical foundation can only be made after the most careful examination of the mucous membranes of the stomach, as even a slight defect may be the cause of a violent hemorrhage. [J. S.]

11.—The patient snuffed some "**Schneeberger**" into the nose on account of a cold. He immediately felt pain in the left ear, which became exceedingly violent, and the next morning an examination showed swelling of the drum with all the signs of a hematotympanum. During the day perforation occurred. The opening was enlarged and the excretion was purulent. There was an old spur in the septum which had prevented the snuff from being carried upward. The second patient, a boy of 14 years, with ozena, had been ordered by his father to snuff Schneeberger. A few hours after the first dose there was pain in both ears, becoming more severe. The following morning the left tympanic membrane was perforated, and there was a serous bloody fluid excreted. Cure was effected in the course of 3 weeks. This form of snuff contains various drugs, of which the most dangerous appears to be rhyzoma veratri. [J. S.]

12.—Bierbaum reports his own case of **hypertrophy of the prostate**, which from earliest life until his sixty-second year had caused increasing discomfort. He submitted to the Bottini operation, performed with local anesthesia, which diminished, but did not abolish, the pain. For some months he suffered from decreasing discomfort, after some time being able to do away with the catheter. Finally he reached a condition in which he was practically well, and there was no residual urine. [J. S.]

13.—Bettmann suggests that in cases of **tender spots on the foot** a small ring of rubber be fastened to the foot with plaster so that it surrounds the tender spot. By this method he has been able to secure immediately painless walking. [J. S.]

14.—Graeser discusses the various methods that have been employed to combat venereal disease among the sailors. None of these methods seems to be particularly practical. [J. S.]

15.—Perthes reports some of the results of his experience with the Chinese during the late war in China. He mentions that chloroform narcosis usually proceeded without any complications: opium was commonly used for suicidal intent, but this effort was often nullified by washing the stomach. Among the severe forms of injury were those due to the whipping of criminals. This usually occurs upon the calves of the legs, and produces a gangrenous area which heals by granulation. He mentions various foreign bodies, the most interesting of which was the patella of a pig which obstructed the esophagus. Tumors of the parotid were very common. They belonged to the mixed tumors of this gland. Aneurysms were not uncommon. Various forms of skin diseases were also frequently observed. The infectious diseases did not differ in their course from those observed in Europe. This was true of scarlet fever, diphtheria, smallpox and tuberculosis. Noma is more common in China than it is in Europe. Venereal diseases are exceedingly common. Chinese medicine, according to Perthes, has only one rational method, and that is the employment of mercury in syphilis. The substances found in the apothecary shops were not familiar to European physicians. Scorpions appear to be an important drug. Nevertheless, those Chinese who had had any training at all appeared to be wonderfully skilful in the application of dressings and the performance of minor operations.]J. S.]

16.—Roemisch continues his article upon the results of

the treatment of tuberculosis with minute doses of tuberculin. He reports altogether, more or less briefly, 17 cases, some of them being merely mentioned. The results on the whole were satisfactory, mostly in the early cases, but, nevertheless, he believes that he can recommend tuberculin even in more advanced cases. [J. S.]

December 2, 1902. (No. 48.)

1. How Shall We Produce Narcosis? O. WITZEL.
2. Five Hundred Chloroform Narcoses in Gynecological Practice. W. EVELT.
3. A Self-Closing Ether Bottle for Narcosis. A. KURRER.
4. Investigations Upon the Extent of the Albuminous Digestion in the Stomach of Human Beings When Carbohydrates are Administered at the Same time. E. HEINRICH.
5. A Report Upon a New Case of Syphilitic Tumor of the Stomach. M. EINHORN.
6. Compensation of Deformities of the Bones. K. PORT.
7. Pregnancy Complicated With Carcinoma of the Cervix. GOEBEL.
8. The Compound Treatment of Pulmonary Tuberculosis With Calcium and Tuberculin. RUDOLPH.
9. A Report Upon the Results of Vaccination in the Kingdom of Bavaria in the Year 1901. L. STUMPF.
10. Professor Edoardo Porro. GALLI.

1.—Witzel, premising that we will never succeed in attaining an anesthetic which will not be dangerous to life, believes, however, that, as chloroform injures the heart and ether does not, the latter is probably safer. **Ether narcosis,** however, in order to be safe requires more experience than chloroform narcosis. He employs the drop method, which is particularly difficult, but exceedingly satisfactory. It requires 2 persons, one, the physician, who holds the pulse and at the same time administers the anesthetic, and the other, who holds the patient's head and the mask upon which the anesthetic is dropped. In giving ether certain points must be observed; first, disinfection of the mouth and respiratory passages before administration; second, placing the patient with the head low and the neck bent strongly backward; this prevents fluids from the mouth and pharynx flowing into the respiratory passages; and third, systematic respiratory methods after the operation in order thoroughly to ventilate the respiratory passages. The advantages of the position of the head are that it stretches the soft parts around the larynx and keeps the tongue from blocking the glottis. The operation is always performed as rapidly as possible and, therefore, all preparations are carefully made beforehand. At the side of the anesthetizer there is a small table, on the top of which all the objects necessary are placed, and on a lower shelf are all the necessary objects for restoring patients from collapse. Witzel gives a careful description of his method for holding the head in a position of forced retraction and discusses the after-treatment, which consists, in addition to the forced respiration already mentioned, in frequent washings of the mouth, and, if there is a tendency to vomiting, washing of the stomach also. The drop method permits very little ether to get into the stomach, and, therefore, nausea after anesthetization is uncommon. Before the operation morphine is usually administered hypodermically. In conclusion he discusses Korff's method of hypodermic injections of morphine and scopolamine. He employed it in 3 patients, one of whom suffered from weak heart for many days afterward; the second died of sepsis and the third recovered. He believes, however, that it is too dangerous. [J. S.]

2.—Evelt reports the results of **chloroform narcosis in 500 patients.** Altogether 17,494 grams of chloroform were employed, and the total time was 436 hours and 40 minutes; the total quantity of chloroform was a little less than 40 grams per case, of 0.66 gram per minute. The maximum amount given to any patient was 154 gm., for narcosis lasting 140 minutes. In another patient 143 gm. were given in a period of 216 minutes. The smallest quantity was 4 gm. for a narcosis lasting 18 minutes, but in another 6 gm. were used for narcosis of 10 minutes. In 36 patients it was necessary to use stimulants. Asphyxia occurred in a mild degree in 10. There were no deaths and there were also no deaths in the additional number of 354 instances of chloroform narcosis, which were not included in the statistics. All the patients were anesthetized until they were entirely unconscious of pain. Evelt makes the following suggestions: That all narcoses should, as far as possible, be made in the morning; the patient should eat nothing after the supper on the previous day. The operation is usually performed in the winter time at 8 o'clock in the morning, and, in the summer time, at 7 in the morning. Half an hour before the commencing of narcosis .01 gm. of morphine hydrochlorate is injected subcutaneously. The mask of Sc is employed, and the chloroform allowed to drop upon it at the rate of about 20 drops per minute until the pupils become very narrow. This is the point at which tolerance is established. In cases of asphyxia the tongue is drawn forward with a sterilized instrument. The mask is allowed to remain on the face during the entire operation, even when chloroform is not used. Ordinarily no chloroform is given during the last 10 minutes. If there is no vomiting after the operation, the patient may take cold tea, lemonade, water and wine, fragments of ice, etc. If the vomiting is very persistent hydrochloric acid will usually stop it. [J. S.]

3.—Kurrer describes an ingenious **stopper for the ether bottle** which is so arranged that when the bottle is placed upon its side a heavy handle drops down and opens the valve; when the bottle is stood upright the handle closes it by gravity. [J. S.]

4.—Heinrich has performed a series of experiments according to the method of Müller, which consist in determining the proportion of dissolved or undissolved carbohydrates in the expressed stomach contents in order to ascertain the amount of solution of the albuminous bodies. Of course, he modified the method, determining the proportion of dissolved or undissolved albumins. The details of his method are as follows: The patients were given, on an empty stomach, 200 cc. of a broth composed of lean beef water and salt, the proportion being one kilo. of meat to 3 kilo. of water. An hour later the mixture was expressed, 30 cm. of this quantity taken, the solid particles separated by centrifugation and the amount of the nitrogen in the solid and liquid parts determined by Kjeldahl's method. The results of 8 experiments showed that about 24% of the albumin in the pure broth was dissolved, and about 32% in the broth mixed with rusk. These figures are slightly lower than those of Schroeder. He, therefore, concludes that in the course of one hour about 1/3 of the **albumin** introduced into the stomach is **dissolved.** This solution occurs without the appearance of free HCl. and is increased if at the same time carbohydrates are added to the nourishment. [J. S.]

5.—Einhorn reports the following case: A man of 42 years had had digestive disturbances for 7 years, including frequent pain in the stomach. There was constipation and but slight reduction in weight. Twelve years before he had had **syphilis.** A smooth **tumor** could be felt about 2 fingers breadth below the xiphoid, and the stomach contents showed a total acidity of 40, including free HCl. The patient was given strict antisyphilitic treatment and in 6 weeks had recovered completely. [J. S.]

6.—Port has studied some cases of **deformity of the legs** with reference to the **natural tendency to cure.** In one patient considerable improvement occurred without treatment, as was demonstrated by a series of plaster casts. An X-ray picture of the curved bone showed that the bone was thicker on the concave side than on the convex side of the medulla, indicating in which direction correction had occurred. The way in which deformities of the bones are corrected is either by the growth of new bone during normal development, or by some inflammatory irritation of the bone. He believes that Wolff's law of the repair of bones is not only scientific, but practically important in order to avoid therapeutic mistakes. [J. S.]

7.—Goebel reports the case of a woman who in the sixth month of pregnancy had a hemorrhage, which was found to be due to a **carcinoma of the cervix.** An operation was performed and the uterus removed entirely. The patient recovered rapidly. [J. S.]

8.—Rudolph has treated some cases of tuberculosis with **tuberculin,** and at the same time every night the patients received a clyster of 150 cc. to 200 cc. of a solution of **calcium** with the object of increasing the calcium of the blood and promoting the calcification of the tubercles. At the same time the patients took powders containing calcium carbonate and calcium phosphate, 3 times a day.

Five cases of advanced pulmonary tuberculosis, in all of which tubercle bacilli were found in the sputum, were treated in this manner. In one the symptoms disappeared; the other 4 were greatly improved, although in 2 of them an entire lobe appears to have been infected. [J. S.]

9.—Strumpf reports the results of vaccination in the Kingdom of Bavaria during the year of 1901. The total number of inhabitants is 6,106,067. The choldren presenting themselves for primary vaccination were 210,549; of these 154,746 were actually vaccinated with positive results in 153,152. Some adults and others were also inoculated for the first time, giving an increase in the statistics of 168,206 inoculated, 166,282 with successful results. All the patients were inoculated with animal lymph. One hundred and twenty-eight thousand, seven hundred and forty-four cases were inoculated for the second time with positive results in 124,917. All these patients were inoculated with animal lymph. He gives also a description of the preparation of the lymph, inoculation of the army and some observations upon the lymph itself. [J. S.]

10.—Edoardo Porro was born in Padua in 1842 and died in Milan in 1902. In his youth he was a soldier in Garibaldi's army. Later, he devoted himself to obstetrics and in 1876 performed for the first time the operation which goes by his name. In 1875 he was made professor in the University of Pavia; in 1882 he returned to Milan as chief of the Gynecological Institute. [J. S.]

BERLINER KLINISCHE WOCHENSCHRIFT.

December 22, 1902. (39 Jahrgang, No. 51.)

1. Chorea Electrica. LUDWIG BRUNS.
2. A Grape-like Growth in a Dermoid Cyst of the Ovary. L. PICK.
3. Investigations Upon the Amount of Albumin Digesting Power in the Gastric Contents of Healthy People and Those With Gastro-intestinal Diseases. RUDOLF SCHORLEMMER.
4. A New Esophagoscope. MAX EINHORN.
5. Two Cases of Stramonium Poisoning. KNAUT.

1.—**Chorea electrica** is a nervous disease characterized by muscular twitchings resembling those produced by an electrical current, affecting the neck and shoulder muscles, in children between 9 and 15 years of age. These twitchings pass away rapidly, and are repeated every few seconds or minutes. One side of the body is more affected than the other, as a rule. There are no psychical or speech symptoms. Bruns believes that this may be a peculiar disease itself, or it may be of hysterical or epileptic origin. The histories of 4 cases follow in detail, with one of hysterical origin. In the diagnosis it must be differentiated from the forms of tic and from paramyoclonus multiplex. Epilepsy and hysteria, if present, must be treated, and all other treatment necessary should be purely psychical, together with good hygiene and tonics. [M. O.]

2.—Pick reports the case of a woman of 30 with a **dermoid cyst of her right ovary,** which, after removal, was found **to contain outgrowths resembling bunches of grapes.** These were probably ectodermic in origin. Pick believes that such chorio-epitheliomata may exist, independent of pregnancy, in teratomata in men or women. [M. O.]

3.—After describing in detail the methods of **examining gastric contents** according to Hammerschlag and Mett, Schorlemmer reports his investigations in full. He concludes that equal amounts of the filtrates of stomach contents should be used with equal quantities of HCl, within physiological limits; that albumins of the same kind and quantity should be employed; that the normal body temperature is necessary; that the time for the filtrate to act on the albumin must be equally long in all experiments; and that more investigations are needed in shaking the stomach. His **experiments show that by the Mett method the exact amount of the albumin digesting power of the gastric contents is at once clear,** in both healthy and diseased people. There is no parallel between the secretion of HCl and pepsin, except in gastritis anacida. There is more pepsin with hyperacidity and pyloric stenosis; in gastric cancer the pepsin is either normal or decreased; it is also decreased in gastritis subacida. [M. O.]

4.—Einhorn describes a **new esophagoscope,** with photographs to illustrate its use, and gives the details of the technique for introducing and manipulating it. [M. O.]

5.—Knaut reports **2 cases of stramonium poisoning in young children** who, playing doctor, had taken the leaves and seeds of datura stramonium. Acute intoxication followed, with convulsions; the corneal reflex was absent, respiration was 60, the pulse 160, weak and easily compressible, and the skin slightly reddened. The abdomen was enlarged and tympanitic, and feces were passed involuntarily. Apomorphine caused vomiting and recovery gradually followed. [M. O.]

WIENER KLINISCHE WOCHENSCHRIFT.

December 18, 1902. (XV. Jahrgang, No. 51.)

1. Disturbances in Growth and Joint Deformities Following Traumatic Separation of the Epiphyses. HANS LORENZ.
2. Morphine and Scopolamine Anesthesia. K. SCHICKLBERGER.
3. The Local Changes After Intramuscular Injections of Mercuric Salicylate. C. Pezzoli.
4. The Observation of Intestinal Movements by Cystoscopy. WILHELM LATZKO.
5. A Reply to the Last Article. JOSEF HALBAN.

1.—Lorenz reports in detail 2 cases showing **peculiar disturbances of growth and deformities of the joints following traumatic separation of the epiphyses,** in men of 19 and 34 years of age. The conditions are well illustrated by photographs and radiographs. These cases often need operation in order to bring the fragments into good position, and suturing or even screwing them together may become necessary. [M. O.]

2.—Schicklberger reports 11 cases of **operations performed after injections of morphine and scopolamine** given 4, 2 and one-half hours before operation. In most women this method of anesthesia seems relatively successful, but it is not at all successful in children, nor was it so in the one man whose case-history is given, since the anesthesia had to be continued with chloroform. Scopolamine does not cause sufficient relaxation of the muscles. This method, advised by Schicklberger, is only to be used when chloroform and ether are both contra-indicated. Morphine may, however, be given about an hour before beginning to operate under ether or chloroform. [M. O.]

3.—Pezzoli reports the **histological findings** in a man of 35, who was killed by a stabwound while being treated for syphilis. He had been receiving **intramuscular injections of mercuric salicylate in liquid vaseline.** Cavities were found in the muscle, filled with the vaseline, surrounded by giant cells formed by the foreign bodies introduced. Besides, waxy degeneration of the muscle-cells, round cell infiltration, and hyperplasia of the fatty tissue were noted. Thus inflammation followed by necrosis resulted from the injections, yet much milder than with other preparations. The function of the gluteal muscles, where there is such a great mass of muscle cells, remains unaffected by the injections, yet the mercury is absorbed by the lymphvessels, and its therapeutic effect obtained. [M. O.]

4.—**Latzko believes that the movements of the intestine observed by cystoscopy,** which Halban in a recent article considered **due to adhesive fixation of the intestines to the vesical peritoneum, are purely physical,** and do not denote any adhesions in most cases. [M. O.]

5.—**Halban insists that in his case such adhesions were present,** even though, as Latzko states, the condition may be common and physiological in other cases. [M. O.]

BOLNITCHNAIA GAZETA BOTKINA.

August 21, 1902. (Vol. XIII, No. 34.)

1. Periodical Wave-Like Manifestations in the Activity of the Lower Part of the Digestive Canal. V. BOLDIREFF.
2. Some Data from Hospital Statistics of St. Petersburg. A. A. LIPSKY.
3. Conditions Under Which the Medical Students of the Urjeff University Live. A. VINOGRADOFF.

1.—Boldireff, working in the physiological laboratory of the Institute for Experimental Medicine, made an extensive series of observations on a **peculiar periodical activity of the lower portion of the digestive tract of dogs** with pancreatic and intestinal fistulæ. He observed that, when the stomach was empty and the animal deprived of food, the stomach and small intestine were undergoing a series of contractions which lasted about 15 minutes and recurred after a period of rest lasting for about 2 hours. At the same time there occurred a secretion of pancreatic and intestinal juices. When food was given or secretion of gastric juice excited psychically, the periodical activity stopped and reappeared with the termination of gastric digestion. The author does not attempt to give an explanation of this phenomenon, but states that the discovery of the causes will form a subject for his future investigations. [A. R.]

August 28, 1902. (Vol. XIII, No. 35.)

1. Binary Syphilis and Syphilitic Heredity. V. F. VELJAMOVITCH.
2. On the Casuistics of Malignant Growths of the Abdominal Cavity. E. DJATCHENKO.
3. Some Data from Hospital Statistics of St. Petersburg. A. A. LIPSKY.
4. Conditions Under Which the Medical Students of Urjeff University Live. A. VINOGRADOFF.

1.—Will be abstracted when concluded.

2.—Djatchenko reports 2 cases of **malignant growths within the abdominal cavity.** In one patient there was a **fibrosarcoma** of the mesenteric glands invading the intestines as far as the middle of the transverse colon, and, in the other, cancer of the stomach invading the posterior mediastinum. Both cases were diagnosed correctly during life. [A. R.]

September 4, 1902. (Vol. XIII, No. 36.)

1. A Case of Acute Leukemia Developing After Typhoid Fever. V. F. PETROFF.
2. Concerning a Case of Anthrax. N. M. BASOFF.
3. Binary Syphilis and Syphilitic Heredity. V. F. VELJAMOVITCH.

1.—Will be abstracted when concluded.

2.—Will be abstracted when concluded.

3.—Will be abstracted when concluded.

September 11, 1902. (Vol. XIII, No. 37.)

1. On the Position of the Physician in the St. Petersburg City Charities. M. I. ROSTOVTZEFF.
2. Concerning a Case of Anthrax. N. M. BASOFF.
3. Binary Syphilis and Syphilitic Heredity. V. F. VELJAMOVITCH.
4. A Case of Acute Leukemia Developing After Typhoid Fever. V. F. PETROFF.

2.—Will be abstracted when concluded.

3.—Will be abstracted when concluded.

4.—Petroff reports the case of a young man who suffered from a typical attack of **typhoid fever** from which he was recovering when attacked by acute leukemia. The disease terminated fatally. The opinion is expressed that the typhoid infection may have been the cause of the disease, although examination of the lymphatic glands revealed the presence of various micro-organisms which may have aided by symbiosis in the production of the leukemia. [A. R.]

September 18, 1902. (Vol. XIII, No. 38.)

1. On the Formation of Cartilagenous and Bony Tissue in the Tonsil. N. V. PETROFF.
2. On the Position of the Physician in the St. Petersburg City Charities. M. I. ROSTOVTZEFF.
3. Concerning a Case of Anthrax. N. M. BASOFF.
4. The Medical Students in Krakoff. ST. RUDZKY.

1.—Will be abstracted when concluded.

3.—Basoff reports a case of **intestinal anthrax** without any typical outward manifestations. The symptoms at first were quite suggestive of typhoid fever, but soon nervous manifestations supervened, leading to a diagnosis of tetany. However, the autopsy and bacteriological examination revealed the true nature of the disease. Histological examination of the brain showed numerous anthrax bacilli within the capillaries. An exhaustive review of the subject of anthrax in man is given. [A. R.]

NORDISKT MEDICINSKT ARKIV.

1902. (Afd. 1, No. 3.)

12. Otogenic Pyemia. E. SCHMIEGELOW.
13. Retroperitoneal Sarcoma. G. NAUMANN and C. SUNDBERG.
14. A Case of Cavernous Angioma of the Liver, with Remarks on Resection of the Liver. K. DAHLGREN.
15. Two Cases of Hair Balls in the Stomach. G. EKEHORN.
16. The Different Circular Methods of Suturing Large Arteries and Veins. W. REINSHOLM.

12.—Schmiegelow reports, with full details, the case-histories of 5 patients with **otogenic pyemia.** They were all children. Sinus thrombosis was present in some cases. All of his cases recovered after operation. The symptomatology, pathogenesis and treatment are described. In the last case the internal jugular vein was ligated successfully. Among the symptoms noted were headache, pain, vertigo, nausea and vomiting, fever, chills and signs of metastases, such as jaundice, albuminuria, pulmonary infarcts, gangrene, etc. The transverse sinus was either normal or thrombotic. The diagnosis is not difficult. The treatment is free drainage. [M. O.]

13.—Naumann and Sundberg report the case-history of a man of 20, with a **retroperitoneal sarcoma successfully removed by laparotomy.** A full description of the tumor follows, with a review of the literature. [M. O.]

14.—Dahlgren reports a case of **cavernous angioma of the liver,** in a woman of 33, which was successfully removed by resecting the liver. The exact diagnosis could not be made before operation. After giving the symptoms in full, he also describes an instrument, devised by him, for compressing the abdominal aorta during the operation, very simple and taking up but little room in the abdomen. A review of the literature follows. [M. O.]

15.—Ekehorn reports 2 case-histories of **patients with "hair balls" in the stomach,** removed by operation. From the literature he has collected 14 operated cases and 10 cases in which the tumors were observed post mortem. Most cases were in young women, with hysteria, insanity, etc. In the majority of cases the hair swallowed was blond or red; rarely black or brown. The hair collects in the stomach and the tumor takes the shape of the stomach, when large. Digestive symptoms are marked when the tumor becomes large. Tables are given, explaining the cases collected. [M. O.]

16.—Will be abstracted when concluded.

IL POLICLINICO (SEZIONE CHIRURGICA).

November, 1902. (Vol. IX, fasc. 12.)

1. Upon Primary Angioma of the Voluntary Muscles. O. MAGARUCCI.
2. Notes Upon Eight Cases of Fracture of the Patella and Four Cases of Fracture of the Olecranon, Treated by Apposition and Fixation of the Fragments with a Tendinous Flap. P. FARRARESI.

1.—Magarucci reports a case of angioma in the upper part of the rectus abdominalis and gives a detailed account of its macroscopical and microscopical appearances. From a goodly list of these cases, culled from the literature bearing upon this subject, it is evident that such tumors may occur in any muscle of the head, trunk or of the extremities, though they are often overlooked till some accidental cause, such as traumatism, calls attention to them by the manifestation of pain or interference with function. A tingling sensation may also arise from compression of the nerves by the tumor. The objective symptoms are those common to angiomata in general, but those located in the muscles have certain characteristics which the author presents as follows: Such tumors are generally soft, but calcareous or osseous infiltration may occur, or cystic formation may take place within them. Their outline is not clearly defined and the surface is irregular, frequently lobulated. The variations in the size of these tumors, from change of posture or exterior, is often very striking. Changes in consistence (due to quantitative variations in the contents) may be provoked at will through muscular contraction. Occasionally a venous murmur may be heard over the tumor. A lack of rhythmical expansion, synchronous with arterial diastole also characterizes such tumors. The prognosis of angioma of the muscles is said to be generally good, as their course is slow and they rarely compromise seriously the function of the part. Treatment should, in the author's opinion, be confined entirely to excision. [R. L. F.]

2.—The various methods employed in the treatment of fracture of the patella are reviewed by Ferraresi, and a detailed description of his own method is given. This consists in an incision about 19 cm. long in the median line, starting about 7 cm. above the patella and carried down below its lower border. From the tendon of the quadriceps extensor a flap, 2 mm. thick and of sufficient size entirely to cover the patella, is dissected, the inferior undissected border of the flap corresponding to the superior margin of the patella. While an assistant holds the fragments in close apposition, the operator inverts the flap, bringing it down over the patella and stitching it firmly below that bone to the patellar tendon. The lateral margins are then sutured to the surrounding fibrous tissue. Thus the patella is firmly encased in resistant fibrous tissue which permits no displacement of the fragment. The advantages that the author claims for his method are that it does away with the necessity of wire suturing of the bone, with the risk of entrance of the sutures into the cavity of the joint and possible induction of a serious arthritis; and it is especially adapted to comminuted fractures. The function of the joint is said to be excellent when this method is used. The same principle has been adapted by Ferraresi to fractures of the olecranon; a flap from the tendon of the triceps being used. The cases which the author reports illustrate the favorable results obtained by the application of this method. [R. L. F.]

AMERICAN JOURNAL OF ANATOMY.

September 15, 1902. (Volume 1, No. 4.)

1. The Development of the Pharynx and its Derivatives in Man. MERVIN T. SUDLER.
2. A Case of Heterotopia of the White Matter in the Medulla Oblongata. ALICE HAMILTON.
3. Palms and Soles. HARRIS HAWTHORNE WILDER.
4. The Pancreatic Ducts in the Dog. DANIEL G. REVELL.
5. The Morphology and Development of Intestinal Folds and Villi in Vertebrates. WILLIAM A. HILTON.

1.—Sudler has studied **the development of the nose and pharynx and its derivatives in man.** He finds that at first the pharynx is a round cavity; but that toward the end of the second week it becomes angular and much differentiated. Later on, it loses angularity and, in the seventh week, is curved and well rounded. The Eustachian tube is the result of the extension of the cephalic angle and ridge of the first visceral pouch and the narrowing of the buccal cavity. The relative position of the posterior nares changes by gradually moving backward and becoming larger. The turbinated bones first appear early in the sixth week. The tyroid is formed from the union of a median rudiment from the floor of the mouth and 2 lateral rudiments from the lining of the fourth pharyngeal pouch. The thymus arises from the lining of the third pharyngeal pouch. The left side of the pharynx develops more rapidly than the right side, although by the end of the seventh week the 2 sides have become about equalized. [J. M. S.]

2.—Hamilton reports the occurence of an **aberrent nerve tract** which was found **in the pons** of a child, aged 6 years. The tract had its origin in the mesial fillet near the nucleus of the trochlear (fourth) nerve and ran down in the formatio reticularis to the nucleus of origin of the facial nerve. [J. M. S.]

3.—Wilder advocates taking impressions of the **palms** of the hands **and** the **soles** of the feet as an infallible system for personal identification. He describes the general morphology of the impressions and gives a method of interpretation. As a means of personal identification it is available (1) because the records can be taken rapidly; (2) because the outfit required is inexpensive; (3) because the prints can be taken anywhere and by any one after a little coaching; (4) because the markings of the palms and the soles are permanent; (5) because the records are definite and (6) because the conditions found may readily be expressed in words. [J. M. S.]

4.—Revell contributes an exhaustive paper on the **pancreatic ducts in the dog.** As a result of his study he concludes that in the dog the pancreas has a double origin one part springing from each side of the pancreaticoduodenal vessels. These 2 parts unite beyond the vessels so as to form an arch over them. The duct of Wirsung springs from the ventral side of the duodenum and drains the head of the pancreas and the right half of the basal segment. The duct of Santorini springs from the dorsal side of the duodenum and drains the remainder of the gland. By the anastomosis of these 2 ducts the latter takes on the drainage of the former beyond that point. The author, therefore, divides the pancreas into (1) the basal portion, the anterior part of the right limb of the organ, which is composed of the basal portion of each rudiment; (2) the duodorsal portion, the divergent portion of the right limb of the organ; and (3) the omental portion, the left limb of the organ. The ducts he names the ductus hepatopancreaticus (Wirsung) and the ductus dorsopancreaticus (Santorini). [J. M. S.]

AMERICAN JOURNAL OF THE MEDICAL SCIENCES.

November, 1902.

1. On Splenic Anemia. W. OSLER.
2. The Rôle of the Toxins in Inflammation of the Eye. R. RANDOLPH.
3. Osteitis Deformans and Hyperostosis Cranii. A Contribution to Their Pathology, with a Report of Cases. M. PRINCE.
4. Certain Characteristics of Osteitis Deformans. R. FITZ.
5. Various Operative Procedures for the Relief of Chronic Suppurative Otitis Media, and their Comparative Value. E. DENCH.
6. The Entrance of Air Into the Veins. H. A. HARE.
7. The Relation of the Thymus Gland to Marasmus. WM. STOKES, JOHN RUHRAH and C. W. ROHRER.
8. The Anatomy of the Operation of Reaching the Ethmoid Cells Through the Antrum. H. MOSHER.
9. Typhoid Fever in Children of Two and a Half Years and Under. J. P. CROZER GRIFFTH and MAURICE OSTHEIMER.
10. Clinical Observations on Congenital and Acquired Transposition of the Viscera. JAMES ARNEILL.

1.—Osler gives a long discussion of the subject of **splenic anemia.** After reporting the subsequent histories of 4 of the 15 cases described in his previous paper, one of which apparently belonged to the group of pernicious anemias, he describes additional cases of which the summaries are as follows: Case 16: A man, 30 years of age, had had a large spleen, and pallor for 9 years. For 4 years he had had severe attacks of hematemesis, and often he had melena. The spleen was removed, but during the operation there was profuse hemorrhage, and death occurred a few hours later. Case 17: A woman, 40 years of age, had had melanosis 18 years before. The splenic tumor had been recognized for 11 years. In the latter part of her sickness she had had an atack of anemia with ascites. Two years later she had had a second attack complicated by jaundice, and one year after this a third attack in which the anemia was especially profound. The liver was also enlarged. Case 18: A man, 33 years of age, had recognized enlargement of the spleen for 15 years. There was considerable pigmentation, slight enlargement of the liver, jaundice and secondary anemia. When admitted, the patient had slight fever. On expectant treatment he improved and was discharged. Osler has been able to obtain the notes of 45 cases from members of the American Medical Association. He groups them as follows: Acute anemia of less than a year's duration, with enlarged spleen. In this group there were 12 patients, but none of them had a history of malaria. In 8 of them the red bloodcells were less than 2,500,000, and in one less than 1,000,000. The leukocytes were less than 6,000 per cmm., with the exception of 2 patients in one of whom the leukocytes were 7,000, and in the other 20,000 per cmm. There were 26 patients with chronic anemia associated with enlarged spleen. Eighteen of these were men. The duration ranged between 2 and 11 years, although in several it was spoken of as many years. In 2 of these patients the leukocytes were less than 1,000 per cmm. and the count was normal or low in all. Finally, there were 2 cases of simple splenomegaly, and 5 that could not be classified. Osler defines chronic splenic anemia as "a chronic affection, probably an intoxication of unknown origin, characterized by a progressive enlargement of the spleen which cannot be correlated with any known cause, as malaria, leukemia, syphilis, cirrhosis of the liver, etc., (primary splenomegaly); anemia of a secondary or chlorotic type; leukopenia; a marked tendency to hemorrhage, particularly from the stomach; and in many cases a terminal stage with cirrhosis of the liver, jaundice ascites (Banti's disease)." He abstracts the histories of 15 cases that he believes belong to this group. The etiology of the disease is not known. Heredity usually plays no part, but Brill has reported 3 cases in one family. Among the symptoms are, first, the remarkable duration of the disease; the enlargement of the spleen without apparent cause; the hematemesis recurring for a number of years; the anemia which is characterized by a moderate reduction of the number of corpuscles, a great reduction in the percentage of hemoglobin, and leukopenia. There is often pigmentation or bronzing of the skin. In some of the patients cirrhosis of the liver occurs, and in a small number ascites is present. Among the other symptoms jaundice sometimes occurs. After discussing some of the other conditions in which enlargement of the spleen and cirrhosis of the liver occur, Osler states that the condition found in the spleen is chiefly a fibrosis or hyperplasia with atrophy of the pulp and hyaline degeneration of the Malpighian bodies, or a change by which the normal texture is largely replaced by fibrous tissue and large endothelial cells with clear protoplasm containing 2 or more nuclei and among them giant cells. The disease probably represents a chronic toxic, rather than an infectious, process. The best name is probably splenic anemia. The treatment consists in splenectomy. In Osler's series it was performed on 3 patients, 2 of whom died as a result of the operation, and one recovered. [J. S.]

2.—Randolph has performed an elaborate series of investigations in order to determine whether the toxins **of various micro-organisms** are capable of **producing inflammation in the eyes of rabbits.** He found that instillations with toxins of the gonococcus, the staphylococcus aureus, of the diphtheria bacillus, of the colon bacillus, of the pneumococcus, of the micrococcus epidermidis albus and xerosis bacillus produced no reaction. When, however, the toxins were injected into the conjunctiva, a rather severe reaction occurred. When toxins were injected into the anterior chamber of the eye, there was a moderate reaction which usually disappeared in the course of a week. Randolph then carefully studied the bacteriology of the normal conjunctiva of the rabbit and found a large variety of micro-organisms. In 36 out of 47 cases, however, the staphylococcus albus was present, and none of the others was nearly as frequent. The experiments are a further proof of the importance of the integrity of the epithelium as a protection against infectious processes. There seems reason to believe that, in many cases of injury which have been caused by infectious material getting into the eye, the real factor was the violent rubbing which ensued. Randolph summarizes his conclusions as follows: Bacterial toxins, when instilled for many hours into the healthy conjunctival sac, are incapable of producing inflammation. If they are injected into the tissue of the conjunctiva or into the anterior chamber, they invariably set up local inflammation. Some micro-organisms produce a toxin even in young cultures, although it was previously supposed that they did not. It requires a delicate reaction to demonstrate it, such as injection into the conjunctival tissue. [J. S.]

3.—Prince reports a series of cases of osteitis deformans, with some excellent illustrations. The first, a woman, 44 years of age, reported to the hospital for impairment of vision and later was transferred to the neurological department on account of pains in the head. The deformity in the bones had not attracted her attention. She seemed old, the arteries were sclerotic, the cranium was enlarged, and the right side of the lower jaw was also elongated and thickened. The bones of the extremities were considerably altered. The second patient, a woman of 63, somewhat eccentric and suffering from myasthenia, also showed enlargement of the head, rigidity of the cervical dorsal spine and general impairment of development. The arteriosclerosis was also pronounced. Prince calls particular attention to the fact that calcification may take place in the new bone tissue and is characterized by patches of ivory-like density. The third case was one described as hyperostosis cranii in 1896. Five years later it had developed into a typical case of Paget's disease, and all the long bones of the body were affected. Prince discusses the osteo-arthritic changes which he believes are identical with those found in certain types of rheumatoid arthritis or osteo-arthritis. He then goes on to discuss the changes found in the spinal cord, and mentions that in some cases considerable changes were found. In 3 cases, for example, there was the posterior sclerosis, although careful examinations were made. In 2 cases the cord was studied, but the technique was very imperfect. Prince believes that all the changes that might be found characteristic of osteitis deformans would be of a more general and finer type than those characteristic of the ordinary nervous diseases. Perhaps the arteriosclerosis is the most important factor. In conclusion, he says that we have no sure ground for differentiating hyperostosis cranii from osteitis deformans; that they are both probably trophic disorders, and not improbably allied. The osteo-arthritic changes are probably manifestations of the disease and not complications, and the results of autopsies do not exclude the nervous system as the seat of the trophic derangement. [J. S.]

4.—Fitz discusses the first case reported by Prince, giving a somewhat more elaborate history and physical diagnosis. He has made some careful X-ray studies of these conditions, showing particularly well the changes in the bones and how they may be localized to certain points, whilst others of a similar nature escape, as, for example, when the fifth metatarsal bone in both feet was not affected. He agrees with Prince that there is probably little difference between osteitis cranii and osteitis deformans. [J. S.]

5.—Dench discusses **the treatment of chronic suppurative otitis media**, which consists in free drainage, the mainte nance of an aseptic condition in the auditory canal and the relief of congestions in the upper air passages. When, however, there is tuberculous infection of the intratympanic structures, all the dead bone must be removed, particularly the malleus and incus, which are nearly always affected. When the disease is so extensive that the bone cannot be removed through the external auditory canal, it is necessary to expose the cavity by removing the bony wall and thoroughly cleansing it. There are some valuable hints upon the technique to be employed in the different cases. There are certain difficulties and dangers in attempting to remove the incus by the incus-hook, but after this has been successfully done and the floor of the tympanic vault removed, the middle ear should be thoroughly curetted. When a radical operation is performed, that is, the opening of the mastoid cells, it is usually desirable to enter the mastoid antrum through the cortex. Some excellent illustrations are given of the various steps of this operation. The subsequent treatment of the opening varies with each individual case. Among the serious complications are injury to the facial nerve, which can be avoided if curettement is not done until the field of operation is visible; injury to the labryinth through too forcible curettement, etc. Exposure of the dura mater in the internal fossa is not a matter of much moment. If the lateral sinus is injured, the hemorrhage can be checked. The effects of these operations upon audition are of the greatest benefit. Usually there is immediate improvement and rarely any deterioration. It is usually safest to state that after the radical operation the hearing will probably not be as good as before. [J. S.]

6.—Hare, in reply to an article of Goodridge, states that a moderate amount of air may be thrown into the venous system without danger, and that there is no reason to dread the entrance of such small amounts. He further criticises the deduction Goodridge draws from his experiments, which, according to Hare, shows that a considerable amount of air can be thrown into the right ventricle of a dog's heart without necessarily causing the animal's death. Finally, he states, that it is not safe to apply the experiments made upon dogs to other animals, as the difference in susceptibility to air embolism is considerable. [J. S.]

7.—Stokes, Rühran and Rohrer have made a series of investigations upon the **thymus gland**, discussing first its embryology and histology and then its condition in various pathological states, particularly marasmus, of which they cite 18 cases. The weight of the thymus in these patients varied between 1.2 and 7.5 gm. The other organs were also carefully studied and showed no abnormal changes. The thymus gland, however, showed thickening of the fibrous capsule, increase in connective tissue, atrophy of the lobules with more or less complete disappearance of the lymphoid structure. There was also considerable alteration in the corpuscles of Hassel. The gland was also studied in a series of patients dying from chronic wasting disease, and there was some alteration of the bloodvessels and some increased fibrosis and hyalin degeneration of Hassel's bodies. In the case of a child dying from acute disease no change was observed. Four patients with marasmus were treated with thymus, 3 dying and one steadily improving. The authors conclude that atrophy of the thymus is always found in atrophy of children; that the nutrition of the gland and, therefore, the state of nutrition of the infant may be estimated by a microscopical examination. They tabulate the results of their autopsies upon 23 cases. [J. S.]

8.—Mosher discusses briefly **the method of reaching the ethmoid cells through the antrum.** In short the operation consists in opening the antrum from the canine fossa, and the working back with the knife which is inclined toward the horizontal as much as the opening permits, and carried directly backward. This knife penetrates between the inner and upper walls of the antrum, enters the anterior cells at their lower angle and finally brings up against the anterior wall of the ethmoid. The working space is about half an inch in height. The operation would probably be of advantage in combined empyema of the antrum and of the middle of the posterior ethmoidal cells. It would probably not be efficient if the frontal sinuses were also affected. [J. S.]

9.—Griffith and Ostheimer report 18 cases of **typhoid fever occurring in young children.** In many of these patients the Widal reaction was positive, and in some the post mortem findings were very characteristic. They also collected from the literature a number of case-histories, which they classify as those in which the disease was congenital, those in which apparently healthy children gave a positive reaction and those with typhoid fever in the first year. In the latter group there are 139 cases. Finally they collect considerably over 200 case-histories of the disease occurring in the second or third year of life. A positive Widal reaction was obtained in only 44 of these patients. The mortality was high: 142 dying and 136 recovering, although the authors state that this by no means indicates the actual relative mortality of the disease in childhood. The only conclusion is that the disease is much more frequent in early life than is commonly supposed. [J. S.]

10.—Arneill has observed 4 cases of transposition of the viscera in living persons. The cases were all typical, except that the area of cardiac dulness was on the right side in one woman of 45, in whom there was evidence of pleural effusion on the left side. He also gives notes on 2 cases of acquired dextrocardia, one due to new growth of the pleura, and the other to empyema of the left side. He believes that the condition is quite frequently discoverable clinically. [J. S.]

LA SEMAINE MEDICALE.

November 12, 1902.

Chronic Splenomegaly with Anemia and a Myeloid Reaction of the Blood. P. EMILE WEIL and A. CLERC.

The classification of splenomegalies has given rise to considerable confusion, hence these authors propose to adopt a classification based upon the blood examination. Clinically, the condition described under the title, chronic splenomegaly with anemia and a myeloid reaction of the blood, differs but slightly from what is generally known as splenic anemia. The onset is always insidious, the patients become very pale and gradually lose their strength. Loss of flesh is not a constant sign, and the fat may often be preserved or even increased. The increase in the size of the spleen is not accompanied with pain. There are 3 cardinal symptoms noticed in the beginning of these cases. **the pallor, the enlarged spleen and the changes in the blood.** The red globules are unequally diminished in number, often below a million; they are pale and present polychromatophilia. The leukocytes are not greatly increased, they usually vary between 12,000 and 15,000, The presence of mononuclear neutrophiles is constant, but neither the polymorphonuclear eosinophiles nor the mastzellen are increased. In other words, there is a myeloid reaction of the blood with a very slight existing leukocytosis. The hematopoietic organs present myeloid hyperplasia more or less complete. The lymphatic glands are slightly, if at all, enlarged. Fever is a variable symptom and sometimes is not present. The prognosis is grave. Seventy-five per cent. of the authors' cases proved fatal. [T. L. C.]

Society Report.

FIRST EGYPTIAN MEDICAL CONGRESS.

Cairo, December 19-24, 1902.

SECTION ON MEDICINE.

Prof. Camillo Terni, of the Institute of Hygiene, Messina, read a **contribution to the study of the etiology of yellow fever.** Present research on the etiology of yellow fever depends on the supposition that yellow fever, like malaria, is propagated by a special mosquito. Terni studied the question in the St. Sebastian Hospital, Rio de Janeiro. He concludes that the theory of recognizing the mosquito as the agent of propagation of yellow fever has no positive foundation. He believes that yellow fever is a disease of bacterial origin, the bacillus icteroides probably being the specific agent of infection. He finds that the organic juices, as well as the gastric and intestinal contents filtered, determine in animals symptoms and pathological changes identical with those produced by the toxin of the bacillus icteroides. He does not agree with Sanarelli, who supposes a larva to be the medium, but, on the contrary, thinks that infection follows the direct drinking of infected water. The difficulty of isolation of the bacillus icteroides depends on the culture media. By using 10% gelatine and exposing cultures to 15°-20° C., it is possible to isolate the bacillus icteroides from vomitus and intestinal contents, thus permitting a diagnosis in the cases which are not yet definite clinically. Exceptionally the bacillus icteroides may be found in the blood, but only toward the end of the disease. It determines the elimination of toxins in the intestine, which, when absorbed by the portal vein, cause the characteristic hepatic changes and sometimes renal changes, producing uremia, from which, in grave cases, the patient may succumb before hepatic changes have occurred.

Prof. V. De Semo, of Alexandria, discussed **heart disease in Egypt.** He noted 2 main divisions in valvular and arterial cardiopathies. In Alexandria he was struck by the infrequency of valvular heart disease, explained by the relative rarity of acute articular rheumatism in Egypt. On the other hand, arterial cardiopathies are more frequent than in Europe. The causes of arteriosclerosis may be dyscrasic, infectious or toxic, the last being more common in Egypt than anywhere else, the sclerosis being localized in the arteries of the myocardium. Among the dyscrasic causes are diabetes, polysarcia, phosphaturia, gravel and auto-intoxication from decreased function of the liver. He mentioned syphilis, parasyphilitic and hereditary syphilitic manifestations. Alcohol, tobacco, overalimentation, overwork and emotion furnish the great factors in arteriosclerosis. He spoke of the state of the heart in the different forms of albuminuria and chronic interstitial nephritis. He believed most cases of angina pectoris to be pseudanginas of gastric origin. The action of tobacco is counterbalanced by abuse of coffee. He points out the extreme frequency of reflex cardiac troubles, especially of gastric and hepatic origin, which depend on dyspepsia, hepatic hyperemia, etc.

Dr. A. Valassopoulos, of the Greek Hospital, Alexandria, read a paper on **infectious febrile jaundice.** This disease, which has existed in Alexandria for nearly 30 years, has for a long time been confounded with the bilious typhoid fever described by Griesinger. Valassopoulos, who presented observations of 300 cases, with a complete study of the symptoms, pathological anatomy and pathogeny, demonstrated that the disease is identical with Weil's disease. Now that Weil's disease is better known in Europe, it is no longer considered benign, and he produced European statistics showing a mortality of 33%, while the mortality in his 300 cases has been 32%. The pathogenic agent has not yet been discovered, in spite of prolonged and laborious researches. The condition is prevalent in low places, where stagnation and putrefaction of organic matters occur, especially during the summer months when there is no rain. He calls the disease in Alexandria, as well as Weil's disease, infectious febrile jaundice.

Dr. Robert Bell, of the Hospital for Women, Glasgow, discussed **the causation of cancer and its treatment without operation.** In certain circumstances the influence exerted by the various conditions of life produces an effect upon certain idiosyncrasies, which tend to act prejudicially upon the general health. If cancer was due to a parasite or microbe, would it be unilateral, and would it not be invariably accompanied with a rise in temperature? He is convinced that the elements of cancer are present in every individual, because the cancer entity is, in its original state, a normal cell, which, from a combination of circumstances, has become altered in character, and assumed a new existence. Whatever acts prejudicially on the general health is liable to become a factor in the production of cancer. In other words, every circumstance, which tends to impoverish the general health, predisposes to cancer. Cancer is essentially a disease of civilization. It is practically unknown among savages and among those who lead a simple, natural life, so that there is no reason to doubt that it is preventable. The integrity of the epithelium depends largely upon the unimpaired integrity of the thyroid. Not only are the mucous membranes and skin dependent upon this organ for the continuance of health, but there is a direct physiological relationship between the thyroid and uterus, which fact was well known to the ancients. Concluding from experiments on animals, he says that, in cases of cancer, plenty of milk should be given in place of albuminous food. The administration of thyroid extract is of great importance. At the same time, constipation, which permits of the absorption of enterotoxins, should receive serious attention. He gives the following predisposing causes to cancer: Persistent and prolonged retention of feces, absorbed by the blood, producing a depraved condition of the nervous apparatus, handicapping functional activity, interfering with cell metabolism and eventually causing anemia in young persons, or cachexia in elderly people. If the functions of the thyroid gland are at fault, enterotoxins which otherwise would be neutralized are capable of producing mischief. If saccharomycetes are present in the blood, uricacidemia will result. The presence of these toxins in the blood, alone or combined with uric acid, exerts a pernicious influence upon cellular structures, predisposing them to malignant metamorphosis. And prolonged or repeated irritation of a part is liable to rouse into malignant activity cells which otherwise would have remained dormant.

SECTION ON OPHTHALMOLOGY.

Dr. Voilas, of Cairo, said that acute **trachoma** does not exist; its evolution is always chronic and latent, having for its seat the cellular tissue subjacent to the conjunctiva. It is a disease of the connective tissue and not of the conjunctiva itself. Dr. Guarino, of Cairo, has examined conjunctivæ of some of the well-conserved mummies and concludes that trachoma existed from time immemorial. He concludes that trachoma invades the lymphoid layers and engorges the lymphatic cells. The trachomatous bodies are formed of agglomerated corpuscles which represent a lymphatic follicle, analogous to Peyer's patches. They are glandular neoformations, covered with epithelium, and scattered in the thickness of the mucosa and submucosa. Dr. Eloui Bey, of Cairo, discussed **conjunctival granulations.** After having spoken of the etiological conditions of granulations, individual causes, the dirtiness of the Fellahin (Egyptian peasants) and their dwellings, and flies as vehicles, he passed to the symptoms which he described minutely, and gave statistics from the governmental, national and primary schools (kouttabs). In the governmental schools, 32%, in the national schools, 65%, and in the kouttabs, 75% of the students were affected. He concluded that the disease is the more frequent and serious, the more filthy and overcrowded the people are in their habits. The hygiene of houses, their ventilation, disinfection and cleanliness are prophylactic measures advised.

SECTION OF SURGERY.

Dr. Loos, of Cairo, discussed the **zoology of bilharzia.** The eggs of bilharzia present 2 sorts of spines: Lateral spines and terminal spines. The eggs of both kinds are found in the walls of the rectum and bladder. The orientation of the spine is due to the direction of the embryo in the egg. Bilharzia eggs sometimes have a smooth surface and sometimes a rough one. They produce numerous lesions of the urinary and intestinal tracts. The duration of life of the eggs is as yet unknown, but the parasites may die and the eggs continue living and produce considerable lesions. Water serves as the vehicle and medium of existence of the bilharzia. Water taken as a beverage is very rarely the source of the parasite in man. Cultures of bilharzia have been negative so far. All kinds of molluscæ have been examined for the intermediate host in vain. Dr. Ruffer, of Alexandria, does not believe that the parasites enter through the skin. In the Transvaal, where bilharziosis is very frequent, baths are rare. There may be fibrous lesions in which there are no eggs, and rough superficial lesions in which eggs are to be found. Ruffer considers that calculi having bilharzia as their origin are very rare. Dr. Goebel, of Alexandria, exihited an anatomical preparation of a bladder showing eggs in the subserosa, in the mucosa and muscularis. These eggs produce polypi over which there is proliferation of epithelium cells. At other times there are lesions resembling cancer of the bladder in which the worms may be found. Dr. Trekaki, of Alexandria, studied urinary bilharziosis, dividing his work into renal, ureteral and prostato-urethral lesions. Bilharziosis of the kidney may show primary bilharzic lesions and secondary bilharzic lesions. The first are produced directly by the eggs of the parasite, implanted in the kidney, causing sclerosis and nephritis. The second are secondary, caused by a toxic influence. The prostate and urethra may be attacked by the eggs, producing chronic prostatitis. Purulent urethritis has been found, also, but the most frequent lesions are fistulæ and strictures of bilharzic origin. Bilharziosis is very frequent in lower Egypt, especially in the Delta of the Nile. In upper Egypt it is much rarer, only one-fifth as frequent as is noted in lower Egypt. The cause of the difference between these countries is the great quantity of water which flows over lower Egypt. Here every province drinks Nile water and every one has the disease. In upper Egypt, where many cities have wells, the disease is rare. The Nile water is, therefore, the source of contamination for Egyptian peasants. The infected individual, who constantly re-infects the water of a canal, must be specially watched. He urges that the same prophylactic measures should be taken which are observed in other infectious diseases.

JOURNAL DES PRATICIENS.

December 6, 1902. (16me. Année, No. 49.)

1. Weak Infants. BUDIN.
2. Diet in Dyspepsia. HENRI HUCHARD.
3. Chronic Syphilitic Myelitis. CHAUFFARD.

1.—Formerly most **weak infants,** weak at birth, died. Now, when an infant has a subnormal temperature, it is given a bath at one degree above its temperature. This is repeated, the temperature rising after each bath, always given at one degree above the baby's temperature. Then the infant will take more nourishment and grow. Incubators may also be of use. The lower the temperature and body-weight, the higher is the mortality. Infections occur easily. Budin had but 59 deaths among 579 such infants. With careful attention, many weak infants will grow up into well, strong men. [M. O.]

2.—Will be abstracted when concluded.

3.—Chauffard describes 2 cases of **chronic syphilitic myelitis;** one with symptoms of locomotor ataxia, the posterior tracts being affected; the other with symptoms of spastic paraplegia, the lateral tracts being affected. Both were of syphilitic origin. Yet tabes, general paralysis and buccal leukoplakia, while syphilitic in origin, are not affected by specific treatment. These diseases have a double reaction on the nervous system, causing vascular inflammation and infiltration and the subsequent sclerosis. [M. O.]

Special Articles.

THE HENRY PHIPPS INSTITUTE FOR THE STUDY, TREATMENT AND PREVENTION OF TUBERCULOSIS.

By LAWRENCE F. FLICK. M. D.,

of Philadelphia.

The Henry Phipps Institute for the study, treatment and prevention of tuberculosis is to be an institution devoted exclusively to the work of exterminating tuberculosis. Prevention will be the ultimate object of everything that is done in the institution, and the establishment will be planned and operated with that aim foremost in mind. The institute will consist of pavilions with a capacity of 100 beds, well-equipped laboratories, facilities for hydrotherapeutic and phototherapeutic work and of such other accessories as may be necessary for carrying out the plans of the institution. There will be a dispensary connected with the institute from which will be given treatment and aid to the consumptive poor who are unable to give up employment or who cannot gain admission into some institution.

The pavilions will be built with balconies and a roof-garden so that the patients can be kept in the open air as much as possible. The wards and balconies will be so constructed that every bed can be run out on a balcony and the patient kept in the open air night and day if necessary. The beds of the institute will be used exclusively for advanced cases, the object being to take these patients out of their homes and thus prevent the spread of the disease. The house-patients will furnish the clinical material for scientific research in the laboratories, and in the various departments which will be attached to the institute. Facilities will be given for testing all new ideas in the treatment of tuberculosis which have a scientific basis.

The dispensary work will be modelled upon the Emile Roux dispensary at Lille, under the management of Dr. A. Calmette. Patients will be treated both at the dispensary and, when too far advanced to come to the dispensary, at their homes. Medicine and food will be supplied them when necessary, as also disinfectants, spit-cups and paper napkins. They will be taught the use of these things, and they will be kept under supervision so as to insure their carrying out of proper preventive measures. Printed instructions will be furnished them as to what to do in order to prevent the spread of the disease and an effort will be made to enforce the rules which are laid down.

A literary bureau will be established in the institute, through which information about the work in tuberculosis throughout the American continent will be gathered in, and from which information may be sent out to anyone who desires it. An effort to stimulate activity in the crusade against tuberculosis will be made through this bureau, and aid will be extended in efforts at organization wherever such aid is called for. If the growth of the work will justify it, a magazine will be published devoted to the cause. The holding of conferences and congresses upon the subject of tuberculosis for the purpose of stimulating thought and action will be encouraged and patronized.

The staff of the institute will be gradually formed as necessity arises and will be composed of young men who are desirous of devoting themselves to the study and prevention of tuberculosis. With a view of bringing clinical and laboratory work as closely together as possible, only men will be appointed to the staff who are equipped for both clinical and laboratory work. As ultimately equipped, the staff will consist of four clinical chiefs with assistants, a surgical chief with assistants, a laryngological chief with assistants, a dermatological chief with assistants and a neurological chief with assistants. The four clinical staffs will preside over the wards and the dispensary, and the other staffs will have charge of special work and will be given opportunity for special study.

The plan here briefly outlined may have to be modified by practical experience, but gives in a general way what it is contemplated to do in the Henry Phipps Institute for the study, treatment and prevention of tuberculosis. A temporary place will be opened as soon as a proper house can be secured, and work will be inaugurated in this temporary home during the time that the permanent establishment will be planned and erected. It is expected that this time will be about one year.

TROPICAL DISEASES.

TROPICAL DYSENTERY.

Second Lecture in a Course on Tropical Diseases, Etc.*

By CAPTAIN CHARLES F. KIEFFER,
Assistant Surgeon, U. S. Army.

Gentlemen: We take up for discussion and consideration to-day the question of tropical dysentery. Taking this disease as a type, I shall consider with it, in this and the next lecture, acute dysentery, chronic dysentery, sprue or psilosis, epidemic gangrenous rectitis, hill diarrhea and abscess of the liver.

In the consideration of these subjects, there is much that is interesting and much that is fascinating in the study of the bacteriology and pathology that I must pass by. I hope to give you what are now conceded and conceived of as facts, leaving untouched the speculative, experimental and purely scientific side of the question.

Acute Dysentery.

Definition.—Dysentery is a symptom complex depending on an inflammation of the colon. The complex changing, it is true, with the extent and location of the inflammatory process in the large bowel, but consisting in numerous bowel movements containing blood, mucus and intestinal structure, voided with intense pain and effort, tormina and tenesmus, accompanied with severe abdominal tenderness and very moderate febrile disturbance.

You may ask me, why "tropical" dysentery. Because, like malaria, this is, when in full efflorescence, a disease of the tropics. We see little in temperate climates to remind us of the frightful ravages of this disease in the tropics. The dysenteries of this latitude, as a rule, show very little of the malignancy we see so often in the tropics. It is true that the specific causes are identical, but the environment is so different, the opportunities for infection so much less frequent. The only cases we see here that at all compare in severity with the dysentery of the tropics are the outbreaks we observe and know as "asylum" or "institution" dysenteries. But among the general population, at least the adult population, we do not see such severe cases as in the tropics. The severity of dysentery as a type increases as you go toward the equator. It attacks native and colonist alike. It is the most fatal disease to the white man in the tropics and consequently merits our closest attention and study.

Manson has called attention to the remarkable parallelism between malaria and dysentery. They both infest the littoral towns of tropical islands, the banks of streams and particularly their deltas. Their favorite haunts are low, marshy places, and, although you very occasionally may find the one to be prevalent in a place without the other, yet the broad rule holds true that the geographical distribution, the local distribution, in short, the habitat of these two diseases is identical.

Dysentery has been classified under its etiological headings, the pathological findings and the extent or variation of the clinical phenomena. I shall first of all give you a classification by its etiological factors. I am well aware that this classification may be open to many inaccuracies and some criticism. But if it serve as a means of approach by which you can more readily apprehend the subject it will have served its purpose. I shall divide dysentery etiologically into three main groups, namely:

(*a*) Endemic dysentery or amebic dysentery.

(*b*) Epidemic dysentery, "specific" dysentery or bacillary dysentery.

(*c*) Sporadic dysentery.

(*a*) Endemic dysentery—amebic dysentery. I believe the name endemic dysentery is a very proper term for this variety of the disease. In the tropics it is always present. A case lighting up now here, now there, but always having some marked representation in the town and village necrology records. Sharply differentiated in this respect from the epidemic dysentery which comes in gusts, as it were, of moderate localized outbreaks in town, province or district. Endemic dysentery is a colitis due to the presence of the ameba coli. In comparison to other types of the disease, it is characterized by slow and insidious onset, severe course, a well-marked tendency to chronicity and an equally well-marked tendency to repeated relapses or rather recrudescences. It is further characterized by its liability to cause hepatitis, as a complication which, in about 20% of cases, results in suppuration or hepatic abscess.

The recognition of the etiological factor, the ameba coli, and the appreciation of its significance in this affection are distinctly achievements of American medicine for which the credit must fall to the brilliant band of workers led by Osler, of Baltimore.

The ameba as found in the fecal discharges of dysentery is a round body from three to five times the diameter of the red bloodcell. It is colorless or very faintly greenish in hue. It consists of a granular endosarc with a narrow zone of clear, colorless ectosarc. When recently voided, it is in constant characteristic motion. The motion you have all studied in different cell bodies and know as "ameboid." At or about 70° these movements cease and the parasite then has assumed a sharply defined circular form. Heating the slide renews its activity, and a close study will explain much in the manner of invasion of the tissue and also make clear a great deal that may seem obscure when we consider the amebic form of liver abscess. The colorless ectosarc is first protruded as a long process or feeler. After a moment or two the granular endosarc is seen to fill the clear protrusion with a sudden rupturing movement and the pseudopod is complete. These parasites are sometimes found in very great numbers. Then again they may be comparatively few, and it will require careful search and discrimination to identify them. The number of amebæ demonstrable in the dejecta, however, seems to bear very little, if any, relation to the severity of the disease. The parasite can be demonstrated not only in the discharges from the bowel, but also in the dysenteric lesion itself; not only in the necrotic or broken-down areas, but well into the margins of living tissue. It is also present in the pus of liver abscesses resulting from this form of dysentery. There are cases reported from time to time, in which the amebæ have not been found in the pus from these abscesses. As you know, and as shall be demonstrated later on, in many instances of liver abscess the pus is sterile. No pathogenic or other organism can be incubated from it. The ameba has not been propagated. Kartulis thought he obtained a growth by a special method, if I remember rightly, a hay infusion, but other careful observers have failed to verify this observation, and it must go down as a probable laboratory error. I have never failed to demonstrate the ameba in abscess of the liver by one or the other of the following procedures. If the pus itself shows no amebæ, a gauze swab twisted, with some little pressure, against the breaking-down liver tissue forming the abscess wall will bring out a mass of liver cells and leukocytes among which, in all probability, the amebæ will be found. If not, observe the pus during several days and you will surely find the amebæ appearing in the wound discharges within a few days and persisting to the closing of the sinus tract. I have no explanation to submit of this last phenomenon. I simply give it as an observation, founded on a very extensive personal experience with liver abscess, that in the great majority of cases, say 80%, the amebæ are easily demonstrated in the abscess contents; in the remaining 20% the amebæ are found either in a "rub" preparation such as I have described or appear in the pus after the flow from the abscess has been established from two to five days.

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*Second Lecture Delivered at the Jefferson Medical College, Philadelphia.

(*b*) *Epidemic dysentery*—specific dysentery or bacillary dysentery. This second type of dysentery occurs in an epidemic form. It devastates tropical countries during its visitations, particularly when it comes, as it is so prone to do, in time of stress and famine or war. Under some of these conditions it becomes widespread almost to the degree of a pandemic, and the mortality rises to as much as 45%. This form of dysentery is possibly not, however, so purely a tropical disease as the amebic form. Late observations seem to show that it is widespread. It sometimes rises to the height of a calamity in Japan, which mut be regarded as a high subtropical country rather than a tropical one. The pathogenic agent here is a bacillus first isolated and described by Shiga—the bacillus dysenteriæ Shigæ—by whom it was very properly placed in the great group of typhocolon bacilli, midway between the bacillus coli communis and the bacillus typhosus. His description and classification have held. Many French and Italian observers have reported other organisms which they regarded as variants of the colon group and which they believed to have etiological importance in dysentery. Kruse in particular classified and described variations in these dysentery bacilli. Flexner's recent labors have, however, unified these diversities and have shown that these various organisms are identical with that described by Shiga.

This organism in its cultural reactions and appearance is very similar to both the typhoid and the colon. It grows on all the ordinary media with very little that is distinctive in its appearance. It produces no gas, however, on glucose agar. It is a slender rod of 1-3 microns. It occurs in small groups, usually singly, sometimes in pairs. It stains with all the ordinary aniline dyes, but is not stained by Gram's method. It has a decided bipolar staining. It possesses very numerous flagellæ from eight to ten times the length of the bacillus, radially attached and disposed in whorls or spirals (peritricha). These flagellæ are demonstrated by van Ermengem's method as modified by Vedder and Duval. The bacillus is feebly motile in recent cultures. It seems to lose this motility after a few removals, and to this fact is undoubtedly due the slight confusion among bacteriologists on this point. Brownian movement is pronounced.

This organism possesses well-marked agglutinating properties. I may explain briefly to you that this reaction is entirely analogous to the Widal reaction in typhoid fever, and the technique of its development is identical. Very careful studies have been carried out with this organism and on this point very definite deductions seem to be justified. In a well-checked observation, using an authentic culture of the Shiga bacillus, it seems fair to tell you categorically that, when you have a positive reaction in an hour with a 1:40 dilution, the infection you have to deal with is the result of the Shiga bacillus. I, therefore, give you this standard of departure which, from all experience, seems to me to be a fair working mean. In immunized animals a reaction as high as 1:300 has been observed and an agglutination requiring 1:20 is most uncommon. This reaction, like the typhoid, has some curious variations. It sometimes does not appear until the disease is well established and, during the course of the disease, it may be absent for a day or two. In contrast with typhoid it persists but a very short time after recovery. It is not observed in old chronic cases. The reason of this is quite simple. The bacilli have likewise disappeared. The thickened ulcerated bowel is no longer suffering from a specific process, but from the damage that process has wrought, and in these cases neither can the bacilli be demonstrated in the alvine discharges, nor the agglutination reaction in the blood.

(*c*) *Sporadic Dysentery*. This group represents the occasional instances in which etiological factors, distinct from the first two classes, obtain. I must make clear to you that class *a* or amebic dysentery represents the greater number of cases in tropical practice. Between amebic and bacillary dysentery we probably encompass 95% of all cases. The other 5% I have grouped in the sporadic dysenteries.

(1) Those due to chemical irritants. This class has but little interest for us in connection with our subject proper. I quote you, as one typical example, that will suffice to cover this subdivision, namely, the enterocolitis of arsenical poisoning. When for any reason, such as perhaps the direct introduction of the irritant poison into the rectum, the irritation of arsenic expends itself in the colon, the pathological and clinical picture presented is one of acute dysentery and nothing else, and it would puzzle the most skilful clinician as well as the most skilled pathologist to differentiate either the symptoms or the anatomical specimens.

(2) Mechanical dysenteries. These are due to the ingestion of unripe or overripe fruits, husks of imperfectly winnowed cereals, shells of crustacea, etc. These cases are perfectly familiar to you in your experiences, perhaps, as boys with unripe fruits. They are nearly always trivial, rarely pass, if they fully reach, the catarrhal stage and have no pathological significance excepting in natives very much run down, in whom they may represent the infection atrium for severe secondary processes.

(3) A very important etiological factor, in my experience, has been the bacillus pyocyaneus. I am quite sure the importance of this organism as a factor in producing dysentery has been very much overlooked. I have seen many cases running a subacute course, in which the peculiar green color of the dejecta has led me to the examination for, and demonstration of, the bacillus pyocyaneus. These cases present one very striking peculiarity and that is the tendency to the extension of the disease into the ischiorectal fossæ and into the perirectal tissues with the formation of extensive abscesses in these locations. The pus from these abscesses stained a staring gendarme blue and will contain the bacillus pyocyaneus in almost pure culture.

(4) It seems probable from the studies of Zancarol and others that the various micrococci of suppuration may have, in isolated instances, some tendency to produce dysentery; particularly the streptococcus pyogenes. Late observations have little to say of these factors and, in this respect, my personal observation is barren. It behooves you, however, to bear these possible factors in mind in your study of this disease.

(5) Balantidium coli (paramecium coli). This peculiar organism with which your early studies in cellular theory have, no doubt, made you familiar, is responsible for a certain percentage of cases. Its action is wholly similar to that of the ameba coli. It is found in the dysenteric lesions in the necrotic areas and the circumscribed areas of inflammation. I have the opportunity here to call your attention to a very rare and very beautiful specimen of infection by balantidium coli. This specimen was removed from an ape with a true bloody flux. In this connection, as a matter of interest, I may say that it has been my experience, very limited, it is true, that the various species of monkey suffer from dysentery very much as man does. This specimen is, therefore, of value to your study. Strong has reported entirely analogous cases in man occurring in Manila. This observation may serve some purpose in the experimental study of dysentery. Much of the work that has been done and much of the confusion of results has been due to the fact that so many experimenters have used the cat. This animal, particularly prone to a colitis, will develop a dysentery on the ingestion of most any sort of irritant into the rectum or colon. I, therefore, suggest the ape or monkey as a substitute for dysenteric studies in the tropics.

In the vast majority of instances, dysentery is a waterborne disease, and the particular origin seems to be infection of the drinking-wells and springs with surface waters. In a small percentage of cases the infection is more direct. Many natives and some of our own people are very unclean in respect to the toilet of the anal region. In consequence the nails and subungual spaces are always infected more or less with fecal matter and organisms. From finger to rice bowl or drinking-cup and thence into some third person's mouth is an easy step and, undoubtedly, accounts for a small percentage of the cases. The accumulated evidence is overwhelming, however, on the point that the principal source of infection lies in the water-supply.

When we come to study the predisposing causes, we find a comparatively easy field. It is perfectly obvious that an intact, normal gastro-intestinal mucous membrane will dispose of any reasonable dose of the infecting agent. What then, in the tropics, are the factors that break down this resistance? Gastro-intestinal indigestion and catarrhs, malaria, scurvy, exposure, intestinal parasites, poor food and constipation. Anything, in short, that will diminish the general physiological resistance or directly lower the resistance of the structure.

In the tropics all ages are affected. There is no age or sex immunity. If there is any difference in susceptibility it is perhaps that children and adolescents are much more liable to the disease than adults. In the Philippines our observations on this point seem quite clear. Manson claims that children are peculiarly liable. The observations of the very able men in this country do not agree with this. In the United States amebic dysentery has not been common in children. If the identification, by recent observers, of the bacillus of Shiga as the cause of enterocolitis in infants, is correct, these observations will be brought to close agreement. From quite an extended experience with troops I believe the American negro to be relatively immune to dysentery, amebic or bacillary.

Concerning the pathology of dysentery I shall say very little. Your courses in pathology have covered this subject so thoroughly and so well that it would be mere repetition to go over the ground here. I shall only rehearse briefly and rapidly the salient points and call your attention to the specimens I now show you, typical of the various lesions of dysentery. These will serve to freshen your memory and fasten in your attention the essential facts. For all practical purposes the gross pathological findings in the various forms enumerated are very similar. It would be difficult, if not impossible, to decide from the macroscopical appearance what form of infection had caused the inflammation. Therefore, we consider the pathology under headings that describe the extent of bowel involvement. Bearing in mind, always, that these divisions and classifications are artificial and only for convenience of description and study, we divide the cases then into catarrhal, follicular, diphtheritic and gangrenous, remembering that in all probability these represent mere progressive phases of the same disease process.

The *catarrhal* form comes to autopsy very rarely and only as a result of some intercurrent disease. These are the cases of mild infection or the cases cut short by successful treatment. The mucous membrane is injected, red, swollen. The submucosa shares in the *tumefaction*. The rugæ are pronounced, may be slightly eroded and are covered with glairy mucus spotted and streaked with minute hemorrhages. The stools from these cases contain much mucus, a little blood, sometimes only demonstrable microscopically, and practically no formed bowel structure.

Follicular form. Here we have a very distinct intensification. We now find the typical dysenteric ulcer, such as I show in this specimen. The whole bowel is ecchymotic, inflamed, thickened and covered with ulcers of various sizes and depth. These ulcerations begin, as you see, in the summit of the follicles. I show you here raised follicles with minute ragged openings. As these follicles break down, the ulcer enlarges and penetrates the bowel coats. The ulcer so formed varies in size from that of a pea to that of a dollar. Its margins are sharply defined and coincide roughly with the folds of the mucous membrane. The floor of the ulcer is a dirty gray. It consists, at least in the early stage, of the submucosa, *although all the coats down to and including the muscularis* may be involved. You observe many ulcers of irregular shape due, without doubt, to the coalescing of several primary ulcers. You also observe a tendency to extensive undermining and exfoliation of the dead tissue. This, then, is the lesion of acute dysentery. There has been some discussion as to whether it originates, as I have described, in the glandular structure. Many pathologists have taught that, as a result of the direct irritation of the causative infection, an exudate is thrown out on the mucous surface itself, that the process ends in necrosis and sloughing with the formation of the dysenteric ulcer. We cannot here go into these interesting pathological questions. Suffice it to say that the weight of evidence lies with the teaching that, in bacillary dysentery at least, the process begins as an acute specific folliculitis. The lesions are confined to the large bowel and particularly the cecum and sigmoid. The transverse colon as well as the hepatic and splenic flexures are not so often involved. The ileocecal valve is the point of demarcation, in most cases sharply defined. Exceptionally, however, we may find the last foot of the ileum slightly involved in the process. The bowel movements in this stage contain more blood, more mucus and shreds and pieces of bowel structure. They are not very offensive. When the bacillus pyocyaneus is the infecting agent, it is at this stage we expect to find the typical green pus. I should add that all cases show streaks and nummuli, as it were, of thick creamy pus.

The diphtheritic form. I show you in this remarkable specimen a typical example of the diphtheritic form. You will observe this enormously thickened gut, "a black, rotten, friable, charred mass," consisting evidently of a new deposit overlaying the bowel structure. This mass shows no sign of glandular structure. It will recall to you on an enormous scale the diphtheritic deposits in the fauces. The deposit in this case is extreme. As a rule, this membrane occurs in small patches of one to two centimeters in diameter. These patches clearly give you the impression that the diphtheritic deposit is formed over the follicular ulcer. This membrane is sometimes very adherent, sometimes easily detached. The evacuations of this stage are quite characteristic. The glairy mucus has become more serous. In this mass we find pus and blood in large quantities. There is no fecal matter. There is, however, a great deal of pseudomembrane and pieces of exfoliated mucous membrane, usually quite small, but sometimes large. The tissues are suspended in the liquid mass which is horribly offensive. This is the form so frequently found in this country as a terminal dysentery in pauper institutions and asylums.

The *gangrenous stage* is simply an intensification of the foregoing to the point at which there is total death and destruction of the mucosa and submucosa. This stage is well brought out in the specimen I now show to you. I will not dwell on it further excepting to call your attention to the fact that the process has progressed far enough to appear on the peritoneal side as pouch-like elevations which, you observe, are filled with pus. I also call your attention to the friability of the mass, the ease with which it might be torn and the further fact that in most of these cases there is extensive matting together of the large intestine and the other abdominal contents. The fecal movements in acute cases of this class resemble flesh washings. In older cases Craig describes them as syrup-like in consistence. The bowel movements contain much pus and blood and large shreds and pieces of gangrenous tissue. In fact, ring-like portions *en masse* may be thrown off. The evacuations are offensive in the extreme

Clinical History.—I shall consider the three etiological groups together in the clinical history, pointing out their special modifications, if any. The symptom complex varies (1) with the intensity of the infection, whether it is catarrhal or has gone on to ulceration or even gangrene; (2) with the extension of the process, whether it be confined to a portion or invades, let us say, the whole tract; (3) with the location of the disease, whether it be principally localized in the cecum, rectum or in both points.

The disease may begin abruptly or insidiously.

Following, let us say, a period of intestinal indigestion, a malarial chill, an attack of constipation or perhaps an indiscretion in diet or exposure, the patient is seized with what he considers to be an ordinary diarrhea. The movements, however, first fecal, become watery and finally mucoid. The slight distress or discomfort in the abdomen has become accentuated. He now has severe griping, if the process lies chiefly in the cecum, or severe tenesmus, if it is chiefly in the rectum. From large watery, feculent, it may be bilious, stools voided with small effort and slight discomfort, he is now passing a teaspoonful perhaps of thick mucus stained or spotted with blood, with great effort and distress. Indeed, the patient may be crying aloud with the pain, and groaning and sweating with the effort at voiding the irritating bowel contents. In two or three days the disease is at its height with thirty, forty or even more movements in the twenty-four hours; or, on the other hand, the disease may rapidly become greatly extended with stools that are pure mucus and blood. Such a patient will give you the history of a suddenly appearing painful diarrhea with 10 to 15 movements and perhaps on the second day or at your first visit will tell you that the movements have become so numerous, the desire for stool so urgent and continuous, the tenesmus so great that he has lost track of their number. In truth, that he cannot tell when one movement ended and the other began, so continuous being the effort. With all this severe disturbance, there is a great deal of tenderness over the course of the colon, the location of the tenderness being in all cases quite a useful guide to the location and extent of the dysenteric lesions. There is, however, a very trivial febrile reaction. The temperature curve fluctuates between very narrow ranges, and an afebrile or relatively afebrile course is the rule. I have discussed with you under the pathology of the disease the character of the evacuations in the various degrees of the disease, so that I will not repeat it here, excepting to say that the careful examination of the bowel movements, more than the other clinical phenomena, will give you an accurate guide as to the progress of your case, whether into the intensifications of the process or the ameliorations that mean approaching cure. With the progress of the symptoms, emaciation and asthenia rapidly develop. In the ulcerative and gangrenous forms tympany becomes a constant and distressing factor. Smaller or greater hemorrhages and drenching sweats still further depress your patient, and death with a great similarity to the depression and algid symptoms of cholera ensues. There is nothing more striking than the rapid march of emaciation in some of these cases. The two or three hours that elapse between your visits may show marked changes. The face has become wan and pinched, the features smaller and thinner: indeed, the patient is visibly wasting before your very eyes. In the severe ulcerating and gangrenous cases, a troublesome hiccough is sometimes present. This is a most distressing and intractable symptom and one of most sinister import. In a rather extensive experience in acute tropical dysentery, I have never known a patient with hiccough to get well. For a time it was taught that catarrhal dysentery was a self-limiting disease of from seven to nine days' duration, and that the severe ulcerative forms ran a course of from six to twelve weeks. In the light of thorough therapeutics, in the tropics, these distinctions do not hold. The disease is not what we understand as a self-limited disease in the sense that typhoid fever, for instance, is.

The *complications* of acute dysentery show a great similarity to the train of accidents that are prone to follow in typhoid. They are:

(1) *Hemorrhage.* This accident happens in precisely the same manner as in typhoid. The dysenteric ulcer erodes and opens a bloodvessel of some importance exactly as does the typhoid ulcer. It is signalized by alarming and sometimes fatal hemorrhage.

(2) *Intussusception* is by no means a rare complication in tropical dysentery, especially in children. You must be constantly on the watch for it. It is marked by two distinctive symptoms, sudden and considerable increase in the local pain and tenderness, with sudden checking of the bowel discharges. The occurrence of these symptoms should lead you to a careful examination of the sigmoid and the cecum, particularly the former. The presence of a fusiform tumor establishes your diagnosis.

(3) *Perforation* is a rather uncommon accident in dysentery, but does occur precisely as in typhoid. The ulcer, instead of having the submucosa as its floor, burrows on through the muscular and finally perforates the serous coat, causing a diffuse peritonitis and death.

In connection with this accident I may also mention that a local peritonitis may arise by extension of the inflammation resulting in abscess formation either in the cecum or rectum. These cases sometimes result in diffuse septic infections with endo- and pericarditis, pyothorax, pylephlebitis; sometimes septic arthritis of the larger joints may supervene. This is the "rheumatic dysentery" of Sydenham.

(4) Hepatitis and abscess will be considered under a separate heading.

(5) As a sequel rather than a complication a neuritis may develop with paralysis, according to Weir Mitchell, chiefly in the form of a paraplegia.

(6) Thickening and cicatrices in the gut as a result of the inflammatory and ulcerative changes produce many complications that will be studied under chronic dysentery. Stricture is exceedingly rare.

These are, in brief, the clinical phenomena. Now how will you differentiate the two principal groups? I will parallel them for you:

Amebic Dysentery.	**Bacillary Dysentery.**
Endemic in its distribution and occurrence. A place disease *more or less constantly* present.	Occurs in localized epidemics, smaller or larger. Is not present as a constant *place* disease.
Commonly the *onset is gradual,* course subacute.	*Commonly* the onset and course are acute.
Death results from the sequelæ and *complications.*	Death more apt to follow from the *colitis direct.*
Chronicity with marked tendency *to relapses* and recurrences.	Not so marked. When chronic the *symptoms* are continuous.
Amebæ present.	*Amebæ* absent.
Serum reaction absent.	Serum reaction present in dilution 1:40.

The *diagnosis* in frank acute cases is, of course, obvious. Yet, I must warn you against very common sources of error. In the presence of dysenteric phenomena, it becomes your imperative duty to make a careful examination of the rectum from the sigmoid to the anal verge. Many cases are diagnosticated as dysentery that are nothing more than local disease of the rectum. Fistulæ, sloughing hemorrhoids, rectal polypi are sources of error. A gonorrheal proctitis may confuse you. Tubercular, carcinomatous or syphilitic ulcerations in the rectum may closely simulate the picture of dysentery with localization of the lesions in the lower end of the colon. The blood fluke (bilharzia hematobia) may cause dysenteric symptoms, and you must always remember this organism when there is any suspicion or evidence of hematuria. Finally, intussusception, particularly in children, may give rise to error. Indeed, the question whether you have intussusception as a complication with dysentery or intussusception alone may become a difficult and intricate one.

The prognosis varies greatly with the conditions, the class of patients and their resistance. I will simply quote a few figures to show you what a terrible scourge this disease may become. Modern methods of treatment have reduced the mortality bill. Here are figures, I quote principally from Manson. In India among Europeans from 3-22%, among natives 37%. In Egypt, natives 36-40%.

Treatment of Acute Tropical Dysentery. First of all, and of the utmost importance, you will put your patient to bed. You will make the rest in bed as absolute as possible. The patient should not rise for any purpose, particularly not for the purpose of moving his bowels. The use of the bed-pan must be insisted upon. In other words, general rest which means, as a result, local rest. The elder Gross, when lecturing in this school on certain surgical joint diseases, was wont to say: "Rest, gentlemen, in the name of God, rest!" His distinguished son and his very distinguished successor in the chair of the principles of surgery, Professor Keen, repeated this famous and striking aphorism. I can give you no more valuable advice. In the treatment of acute dysentery, "rest, gentlemen, in the name of God, rest!"

We have several treatments by drugs that, in tropical and subtropical practice, are of tried and great value. First and foremost, pre-eminent and valuable is *ipecacuanha.* The administration of this very valuable remedy has been very generally misunderstood in the United States. I am fully aware that the best clinical teachers in this country have laid it aside as of little value. My experience with it in this country has not been very extensive, yet I have very uniformly found its action to be quite as pronounced as in the tropics. The teaching in this school has recognized the value of ipecac, possibly more than any other, but even here the treatment is not carried out as far as it should be to insure success. To be of value the drug must be administered in one large decided dose. The following is the method of administration in tropical dysentery. Nourishment of every description is withheld for three to four hours. Then 15 to 25 drops of tincture of opium are administered and a small sinapism is applied to the epigastrium. In from 20 to 30 minutes, when the effect of the opium begins, from 30 to 60 grains of ipecac are administered in powdered form stirred up in one or two ounces of water. The patient lies on his back in bed with both eyes covered with damp, cool compresses. The pillow is removed. The patient is carefully enjoined to make no movement. If mucus gathers in the mouth and throat, a nurse, on sign from the patient, removes it with a cloth or towel. If all these precautions are rigorously carried out, the patient retains the dose. He may fall asleep and not waken until the danger of nausea has passed. If the remedy is vomited within an hour, it must be repeated and it had better be given as soon as the nausea subsides, because then there is a better chance of retaining it than if you wait several hours. If the ipecac be retained two hours or more, sufficient has been absorbed, in the majority of cases, to produce the effect. You will ask me if it is common to have a patient retain so large a dose as 50 to 60 grains of ipecac. When properly administered, in the large majority of instances, the drug is retained. Very much depends on the care with which it is given, and a great deal also depends on the patient and the nurse. In the tropics, when you wanted to know how competent a nurse was, you did not ask for her theoretical qualifications but "what proportion of her ipecac cases vomit." The patient must also co-operate. He must resist the inclination to vomit; at the same time you must remember the psychological factor and not let the patient know he is expected to vomit. I know if I were to administer to any of you, gentlemen, who know the effect of ipecac, any inert substance, telling you it was sixty grains of ipecac, I might confidently expect a prompt delivery of everything movable. You must not let the nurse dwell on this phase of the drug to your patient. In many moderate cases one dose will promptly abort the disease. In the usual run of cases, however, you will begin frequent small feedings when all signs of nausea have disappeared. The next day repeat the dose of ipecac, diminishing it by 5 or 10 grains, and continue in this way for three or four days, diminishing each day and using always the same precautions against vomiting. In my experience I have found the form of administration to be of little importance. It has been advised to give it in bolus or pill of keratin, in capsule and in various electuaries. My own method has been to give the powder stirred up in a little water. I have dwelt upon this subject in some detail because I am so thoroughly convinced of the great value of the remedy in tropical dysentery. I feel equally sanguine that, administered in the way I have described, it will prove of great value in the dysenteries of this climate. When the stomach is very irritable and the retention of the dose is impossible, the ipecac may be administered by the rectum. Ipecac with the emetine removed, *ipecac sine emetina,* has been much lauded, but my experience has failed to demonstrate its value. It also failed in Africa. The process seems to carry out some essential constituent useful in dysentery.

The remedies next in order are the salines. For this purpose we use either magnesium or sodium sulphate. There are two general plans of treatment: (1) The administration of one large dose, say one ounce, followed by 10 to 15-minim doses of aromatic sulphuric acid. The rationale of this plan of medication being first to clear out all irritant material by the salines. The acid preparation is then supposed to exercise its well-known constipating effect as well as to render the lower bowel a less favorable nidus for germ-life by increasing its acidity. (2) Salines may be given in small doses, 1 dram every hour in water, until feculent evacuation is produced.

In all these plans of treatment the preparations of bismuth are valuable adjuvants after the more intense symptoms have subsided, the most valuable probably being the beta-naphthol bismuth. But all bismuth preparations must be given in large and decided doses. Other remedies have been mercuric chloride and calomel in large doses with the intention of attaining a degree of intestinal antisepsis. In the Orient simaruba (ailanthus glandulosa) in the form of a decoction is considered a valuable remedy by the "dysentery doctors" among the native population. Monsonia ovata is reported as being used in Africa. In the Philippines the native places great faith in the intensely astringent pod of the mangosteen (gocinia mangostana) or in the equally astringent juice of the unripe guava fruit (psidium guayava).

About the local treatment of acute dysentery I shall say very little. While theoretically of great value, practically we see no very great results excepting in the mild catarrhal forms. Astringent and antiseptic irrigations of all kinds have been recommended and quinine injections in the amebic form. The fact of the matter is that in acute dysentery the use of injections is apt to increase tenesmus, aggravate the irritability of the bowel and offer us no very great counter-advantage. When we come to consider the treatment of chronic dysentery, however, we shall find another story. In these cases local treatment is our sheet-anchor.

Shiga has produced a serum by immunizing goats with cultures killed by heat, that is both protective and curative. He employed it in an extensive epidemic in Japan with a death-rate of 9.6%, while the prevailing death-rate at the same time in the same locality was 34.7%. This remedy, while successful scientifically, has not been put on a commercial basis and is, therefore, not as yet available. But in this direction we have much to hope for.

For the relief of pain you may use the ice-suppository, cold or heat to the abdomen and opium exhibited either in the form of suppository or as morphine hypodermically.

One word as to certain extraneous factors affecting the treatment. Parasites such as the cercomonas, ankylostomum or tricocephalus, should be eliminated at the earliest moment the intestine will bear the appropriate medication. You must also be on your guard against malarial manifestations in tropical cases. These will often give you a very perplexing febrile picture. Indeed, you may see some obscure dysenteries in which an asosciation with malaria would suggest to you typhoid fever and which would require some care to unravel. I can teach you nothing more valuable here than a golden rule of tropical practice. *Any fever that is not profoundly modified by quinine, properly exhibited, in a reliable preparation, is not malaria.*

The diet for these cases should be absolute milk or liquid diet and restricted in amount. The best criterion will always be the stools. Neither milk nor any other form of food should be exhibited in such quantity or concentration that portions will appear free in the bowel movements. Particularly should you avoid bulky proteid food that may furnish a bulky pabulum, in the bowel, for putrid changes. Finally, guard your patient during convalescence against dietary and bibulous indiscretions and protect him against temperature changes by a flannel abdominal band.

ZEITSCHRIFT FUER ORTHOPÆDISCHE CHIRURGIE.

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13. Deformity Statistics. LEONHARD ROSENFELD.
14. The Relation of Physiological Torsion of the Vertebral Column with Lateral Curvature to Scoliosis. WILHELM SCHULTHESS.
15. Zuppinger's Scoliosis Theory. WILHELM SCHULTHESS.
16. Congenital Upward Dislocation of the Patella. BLENCKE.
17. Lateral Deviation of the Phalanges of the Fingers. MAX KARCH.
18. The Femur as a Static Problem. FERDINAND BAEHR.

13.—Rosenfeld gives an immense number of **statistics upon different deformities**, divided into over 15 groups. He finds that one-seventh of all deformities are congenital. Yet congenital as well as other deformities are twice as frequent in females as in males. Unilateral deformity is much more often observed than bilateral deformity. In 4/5 of the cases of congenital deformity the lower extremity is affected. Foot and thorax deformities are most common in males; cerebral neuropathic deformities, torticollis, hand, finger and knee deformities are equally divided between males and females; while congenital dislocations are much more common in females. Some predisposition to deformity is noted in funnel-breast, hallux valgus and dwarfism. This is much less marked in scoliosis, flat foot, dislocation of the hip, etc. [M. O.]

14.—**After giving Lovett's article in full, translated into German, Schulthess comments upon the value of these experiments**, so different from all other scoliosis experiments. [M. O.]

15.—**Zuppinger believes the thorax deformity to be primary**, the anatomical changes in the vertebral column, torsion especially, being secondary. In an extensive article Schulthess endeavors to show the falsity of this theory. [M. O.]

16.—Blencke reviews the literature of **congenital dislocation of the patella**, reporting 5 cases of upward dislocation, with radiographs showing the high position of the patella. Other case-histories are quoted from the literature in detail. The condition is congenital, causes no symptoms as a rule, resembles Little's disease and is only found upon careful examination. [M. O.]

17.—Karch found **lateral deviation of the phalanges of the fingers** a very common condition. It was observed in 11 out of 41 women; in only 3 out of 41 men examined. Since it is usually symmetrical, it is probably congenital. Recovery follows osteotomy, which is generally easily performed. [M. O.]

18.—A reply to the recently published article, in this journal, by Ghillini and Canevazzi. [M. O.]

Original Articles.

INSANITY AMONG SOLDIERS OF THE AMERICAN ARMY IN THE PHILIPPINE SERVICE.

By A. B. RICHARDSON, M. D.,
of Washington, D. C.
Superintendent of the Government Hospital for the Insane.

From May 27, 1899, to June 30, 1902, there were admitted to the Government Hospital for the Insane from the Army of the Philippines 319 soldiers. Of these, 4 were admitted during the fiscal year 1899, 65 during 1900, 131 during 1901 and 119 during 1902. As ascertained from the records of the War Department, there were present in the army in the Philippines, from June 30, 1898, to July 4, 1902, a total of 122,401 soldiers, with a monthly average of 40,000 for the entire period. This gives a proportion of insanity of 26 per thousand for the four years. The average annual admissions of insane to the hospital from the Philippine service was 79.75, or a proportion of the average number of 40,000 soldiers of almost exactly 2 per thousand. Forty-three additional cases have been admitted to the hospital from June 30, 1902, to October 31, 1902, and probably all of these developed prior to June 30, 1902, and should be added, making 2.95 per thousand of the total number, and of the average yearly number 2.26 per thousand.

For comparison it may be stated that during the fiscal year 1902 there were admitted from the District of Columbia, having a population, in 1900, of about 276,000, 285 indigent and 21 pay-patients, or perhaps a proportion of about one per thousand.

It may be of interest to note a few points regarding these statistics. The first soldiers arrived in the Philippines on June 30, 1898, while the first patients were admitted to the hospital from that service on May 27, 1899. The greatest number of soldiers in the Philippines at any one date was in December, 1900, while the greatest number admitted to the hospital was during the year 1901. The proportion of cases developing seems to be slightly more than double that admitted annually from the population of the District of Columbia.

Turning to the supposed causes of the 319 cases admitted to June 30, 1902, we find that in 52 no cause was assigned in the surgeon's certificate which accompanied the patients Of the remaining 267, 64 were said to be due to overheat or heat-exhaustion; 52 to fevers, of which 46 were malarial and 6 typhoidal, and 7 to overheat and fever. In 40 cases alcoholism was the assigned cause, and alcoholism and exposure in 2. Dysentery and diarrhea were said to be the cause in 11 cases, and diarrhea and fever in 3. Injury to the head was assigned in 8 cases, masturbation in 12, army life in 6, nostalgia in 9, nostalgia and fever in 1, nostalgia and dysentery in 1, syphilis in 6, syphilis and alcohol in 4, and syphilis and exposure in 2. Climatic conditions were given as a cause in 3 cases, tuberculosis in 4, heart disease in 4, rheumatism in 2, organic disease of the brain in 3, meningitis in 3, neurasthenia in 2, nephritis in 1, epilepsy in 1 and beriberi in 1. Heredity was given as the cause in 2 cases, heredity and exposure in 1, remorse from homicide in 1, morphinism in 2, prison life in 2, imbecility in 4, insomnia in 1 and general ill-health in 1. These statistics are interesting in showing the predominating influence of a few causes, which are also those that have been popularly assigned. Fevers, overheat and alcoholism are the assigned causes, in whole or in part, in 64% of the known causes. Including dysentery, diarrhea and syphilis, the percentage is 73. Nostalgia is given as a sole cause in only 9, and a contributing cause in 2 cases. I am convinced that this is greatly underrated in this tabulation. A fact tending to indicate that this is true is that, according to the reports of the Surgeon-General of the Army during these four years, of the 396 patients who were returned to the States as insane, only 260 reached the hospital. Practically all of the remainder were found to be recovered when they arrived at the Presidio, California, or recovered while there and were returned to duty. A few improved and were discharged from the Presidio for disability, and a very few died.

It is extremely difficult to ascertain from this class the influence of heredity or congenital defect. Imbecility is assigned in 4 cases, heredity in 3, and masturbation, which, in my experience, nearly always means congenital defect, in 12. I am satisfied this proportion is much too low, and I am led to believe, from information derived from the patients after they have recovered or improved, or from the relatives, that the number who enter the army with histories showing defect or predisposition is quite considerable. Of a study, made in 1900, of cases admitted from the army and navy during the Spanish-American war, out of 297 cases, attacks of insanity previous to admission were ascertained to have occurred in 39, and, of these, 21 had been previously committed to asylums. A friend of mine, then superintendent of a western asylum, stated that three of his patients had escaped and joined the volunteer service.

Alcoholism was assigned as a cause, in whole or in part,in 45 out of 267 known cases, or 16.7%. I am quite sure this is misleading. In the first place, if a soldier has been seen intoxicated during his service a few times, a subsequent attack of insanity was very likely to be attributed to this cause. In the second instance, I have found but few cases in which this was assigned as a cause that the soldier showed any tendency toward alcoholic excess after recovery from his insanity, and very few showed any symptoms characteristic of alcoholic forms of insanity. The form of intoxicant used by soldiers in the Philippines is usually high in the percentage of alcohol, very irritating to the stomach and, under the climatic conditions there present, a comparatively small amount produced an unusual impression on the brain. It is, however, in most cases, not a true alcoholism, such as usually produces the insanity in this country, which is characteristic of alcoholic excess, but a milder form and accompanied with less weakening of will-power and less loss of self-control subsequently.

With regard to the form of disease, a study of the 319 cases discloses rather interesting facts, chief of which is the predominance of acute melancholia.

One hundred and ninety-eight, or 62% of the whole number, were of this form. Sixty-two, or 19.4%, were cases of acute mania, 11 were diagnosed as chronic melancholia, 5 as chronic mania, 36, or 11.2%, as acute dementia or acute confusional insanity, 4 as chronic dementia, one as paresis and one as imbecility. Many of the cases of melancholia had marked delusions of a persecutory type in the early stage of the disease, and occasionally one of these was denominated paranoia, but I do not think correctly so. This synopsis shows that in nearly all cases the form of disease developed is of acute form and belongs to one or the other of the three simplest and most favorable types, viz., acute melancholia, acute mania and acute dementia, better termed confusional insanity.

According to the classification of Kraepelin, which I much prefer, a large majority of the cases would be included in the two divisions of exhaustion and infection psychoses. This is, as we should expect, from the operation of such exciting causes, for comparatively short periods and without much complication from predisposing influences.

One fact, which is not disclosed in the tabulation and on which I cannot give exact proportions, but which has impressed me forcibly, is the prevalence, among the cases of melancholia, of delusions of persecution and, not infrequently, also of hallucinations of hearing. I am sure the percentage is considerably larger than among any other class I have ever had in charge. The subsequent history of these patients showed, however, that the delusions disappeared in most cases and a satisfactory recovery followed in a large proportion.

The duration of the disease on admission was reported as unknown in 67 cases. Of the remainder it was given as one month or under in 9 cases, between one and three months in 104, between three and six months in 107, between six and nine months in 14, between nine and twelve months in 12, and over twelve months in 6.

It is thus seen that in the 252 known cases the duration was between one and six months in 211, or 83.7%. This again corresponds with reasonable expectations. When the disease is more transient, the patient recovers before he reaches the hospital, and in the large majority the symptoms have not existed long before the patient is sent first to the hospital in Manila, then on a long sea voyage to San Francisco, where there is a further period of observation before transfer to Washington, these transfers consuming a considerable period of the three to six months given, in most of the cases, as the duration of the disease. Yet, while somewhat protracted, the disease, in most of the cases, had not continued so long as to prevent a favorable result.

Up to June 30, 1902, of the 319 cases received, 187 had been discharged as recovered, or a percentage of 58.6. Fourteen had been discharged improved, 6 had died and 112 remained under treatment. This recovery-rate is unusually high and indicates the favorable and comparatively uncomplicated character of the disease. It must be borne in mind, too, that this percentage is of those cases not restored by the sea voyage, the return to home country and the influence of a more favorable climate. The report of the Surgeon-General for 1902 shows that 145 cases were received at the Presidio from the Philippines, of whom only 91 were finally sent to Washington, 31 being returned to duty, 10 discharged on certificate of disability, 5 discharged on expiration of service, one died, two left the hospital and 12 remained at the close of the year. It is thus seen that of the 145 cases at least 31, or 21%, recovered before reaching the hospital.

That but 6 of 319 cases died during the four years also attests their favorable character and is such a result as might have been expected in a class selected for hard duty after a physical examination which excludes most forms of disease and defect. It is probable that, if this inquiry was made to comprise a more thorough examination into the soldiers' predisposition to mental disease and former history, the percentage of cases occurring might be somewhat reduced, but the result in developed cases would probably not be materially affected.

With reference to the recovery-rate, again, it is reasonable to assume that a number of the 112 remaining June 30, 1902, will still recover, particularly of the admissions of the year previous, numbering 119, who still remain under treatment.

Of the 187 patients who were discharged as recovered, 35 had been under treatment longer than six months and 152 less than six months, the large majority of these being discharged within three months.

With few exceptions, the patients were comparatively tractable on admission, and cases of violence were infrequent. A few required some mechanical restraint in transit to the hospital, but of a mild form, and it was very rarely necessary after admission.

Another interesting fact is that, almost without exception, the patients had been in service not longer than one or two years. I do not think there have been a dozen veteran soldiers among the entire number received since the commencement of the Spanish-American war. Of these I recall one who was shot through the legs at San Juan Hill, one had fever in Cuba and one was wounded in the Pekin campaign.

Taken all in all, it may be said that the popular impression of the prevalence and unfavorable character of insanity among the soldiers of the Philippine Army has been greatly exaggerated. Considering the character of the service and the climatic conditions, the percentage is very low and, as shown above, the character of the disease is, in nearly all cases, quite favorable. But one of the 319 cases was diagnosed as paresis, and, excluding cases of hereditary tendency or congenital defect, the number tending to dementia is by far smaller than among any other class I have had in my care during 26 years.

THE RELATION OF THE PREFRONTAL LOBES TO MENTAL FUNCTION.

By CHARLES W. BURR, M. D.,
of Philadelphia.
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There are at the present time three different opinions as to the localization of mental functions. According to one, there is no center of mind, and the mental functions depend upon, or are the result of, the acting together of large areas of the cerebral cortex. The second is that there is a center of mind clearly circumscribed in the prefrontal lobes or, indeed, in the left prefrontal alone. According to the third, the prefrontal region is more closely associated with mental processes than is the remainder of the brain, but is not in any proper sense a center of mind. The matter is of more than scholastic interest; it is, indeed, of great clinical importance, because, if it be true that certain mental symptoms are always or even frequently present in prefrontal disease, the fact will be of use in localization before operation.

Two of the most recent writers maintain contrary opinions. Edward Müller[1] inclines to the view that most probably character changes are either a general symptom of brain tumor or may be caused by a coincident epilepsy, alcoholism, syphilis or other diffuse cerebral disease. On the other hand, Charles Phelps[2] holds that "the more absolutely the lesion is limited to the left prefrontal lobe, the more positive and distinctive are the symptoms of mental default. The integrity of the mental faculties remains unimpaired in right frontal lesion, though it involves the destruction of the entire lobe, or even extends to the entire hemisphere." He concludes: "If, then, the same nature and degree of proof which is deemed sufficient for the localization of other cerebral functions may be accepted in case of the mental faculties, their center of control has been established" (in the left prefrontal lobe). He bases his opinion upon a large number of cases of disease of the left prefrontal lobe in which mental deterioration occurred, and a smaller number of cases of right-sided disease in which the mental functions were preserved intact. In many of the patients there was manifest disease in other regions of the brain. Probably very few authorities would be willing to go as far as Phelps in limiting the center of mental control to the left side entirely. To prove that there is a center of mind located in some one part of the brain it would be necessary to show that disease there, and there alone, without disease or disturbance of any other part, is always followed by perversion or abolition of all the mental faculties. But the factors in cerebral disease are so many and so complex that it is frequently impossible absolutely to disprove disease or disturbance except at the point of manifest lesion, and we are, therefore, compelled clinically to assume that, if gross disease in a certain region is always followed by certain symptoms, and gross disease elsewhere is not, that part of the cortex has a certain function (is a center), even though slight disease is present in other parts. This rule has been a safe one in studying the physical symptoms of brain disease. By it the location of the speech centers, the motor centers and certain of the special sense centers have been accurately determined. In studying mind, however, the problem is much more complicated. Mind is not one function, but several, and the material on which mind works has its origin largely in the sensory spheres of the brain. It is altogether improbable that there is a single part of the brain in which all mental processes occur. It is much more probable that mind is the result of the functions of many and large areas of the brain. Inasmuch as mental are more easily disturbed than physical functions, it is especially necessary to disprove the existence of disease elsewhere in attempting to establish a mental center or centers. This is very difficult to do. Tumors, for example, are of little value, except in the very early stages, because a tumor of any size increases intracranial pressure and, indeed, so marked is this, as a rule, that at necropsy all the convolutions are flattened and the sulci obliterated. Again, in the malignant growths and in syphilis it is quite possible that mental symptoms may depend on a general cerebral intoxication. In cerebral hemorrhage and thrombosis the vascular disease is never limited to the spot at which the gross lesion occurs. There is always more or less disease of the entire cerebral arterial system, and it is quite possible that such disease may be the cause of the mental symptoms. Clinically the strongest evidence of a center of mind would be the constant association of complete dementia with traumatic lesions in some one area, because traumatic lesions have less general effects than disease. As a matter of fact, dementia is associated with lesions of very many parts of the brain.

A great deal of experimental work has been done in the endeavor to determine the functions of the prefrontal lobes. Ferrier[3] concludes: "Destruction of the frontal lobes (in monkeys), according to the degree of its completeness, impairs or paralyses the lateral movements of the head and eyes. Though some ocular movements may be excited reflexly by retinal impressions, there appears to be loss of the power of looking at, or directing the gaze toward, objects which do not fall spontaneously within the field of vision. Correlative with this immobility of the head and eyes there is the aspect of uninterest and stupidity, the absence of that active curiosity, which is normally manifested by monkeys, and the mental degradation which seems to depend on the loss of the faculty of attention and all that it implies in the sphere of intellectual operations.

"The symptoms of lesions and disease of the frontal lobes in man, though not sufficient to establish any positive physiological functional relationships, are, however, in accordance with the negative character of experimental lesions, unilateral or bilateral, so far as relates to the sensory and motor faculties in general. But several cases have been recorded in which there has been marked intellectual deficiency and instability of character, not unlike those observed in monkeys and dogs. We have, therefore, many grounds for believing that the frontal lobes, the cortical centers for the head and ocular movements, with their associated sensory centers, form the substrata of those psychical processes which lie at the foundation of the higher intellectual operations. It would, however, be absurd to speak of a special seat of intelligence or intellect in the brain. Intelligence and will have no local habitation distinct from the sensory and motor substrata of the cortex generally. There are centers for special forms of sensation and ideation, and centers for special motor activities and acquisitions, in response to, and in association with, the activity of sensory centers, and these in their respective cohesions, actions and interactions form the substrata of mental operations in all their aspects and all their range." Further on (page 401) he says: "When the lesions were strictly limited (under antiseptic precautions) to the prefrontal regions, I could not satisfy myself of the existence of any appreciable mental deterioration, but in others the same listlessness and purposeless unrest previously observed were apparent in greater or less degree."

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[1] Deutsche Zeitschrift fuer Nervenheilkunde. Bd. 21, 1902, Heft 3-4.

[2] The American Journal of the Medical Sciences, April and May, 1902.

[3] Functions of the Brain. Second edition, p. 465.

Very recently Mr. Shepherd Ivory Franz[4] has published some very interesting experiments on cats from the physiological laboratory of the Harvard Medical School. He taught the animals simple habits and then cut away portions of the brain. His conclusions are: (1) After a bilateral lesion in the frontal lobes the habits are lost. (2) The effect cannot be explained as due to "shock," for other brain lesions are not followed by loss of habits. (3) Unilateral lesions of the frontal areas are usually followed by a partial loss, or, rather, a slowing of the association process. (4) Habits once lost after removal of the frontals may be retained. After a second operation they are again lost, and may be regained a second time. (5) Only newly formed habits are lost after such lesions. Inherited and long standing habits seen to be retained. (6) The emotional condition of the animal is practically the same after as before the operation."

Schäfer states "I have in several instances completely removed, in the monkey, the whole of the inexcitable areas of both frontal lobes without producing the slightest sign of the mental and intellectual dulness and alteration of character which has been regarded as pathognomonic of a lesion of this region." One of his trick monkeys retained its tricks after both frontal lobes were removed. In an experiment by Hitzig, on the contrary, after the removal of the frontal lobe the dog ceased to show any association between the table on which its food was always placed and the food. Loeb, in his Comparative Physiology of the Brain, appears to contradict himself. On page 263 quoting Goltz, and apparently accepting Goltz's opinion as correct, he states "if the anterior parts of both hemispheres be removed, the dog is no longer normal, but idiotic. It no longer reacts in the same way it did before, and it is obvious that its associative memory has suffered. The same is true if both posterior halves of the cerebral hemispheres be removed." On page 275 he writes "I have repeatedly removed both frontal lobes in dogs. It was impossible to notice the slightest difference in the mental functions of the dog There is perhaps no operation which is so harmless for a dog as the removal of the lobes." Bianchi, as quoted by Gordinier[5], found that mutilation of one frontal lobe had no effect upon the behavior or psychical manifestations, but when both frontal lobes were removed decided psychical changes were noted, such as a listless condition with an expression of stupidity. The animals failed to respond to familiar calls, took no notice of the actions of other animals, were easily terrorized and when in danger offered no defence.

The quotations given above show that the results obtained by different experiments are not in complete accord. This is not surprising. The study of mental functions is difficult in man and still more difficult in animals. The interpretation of the conduct of animals in terms of human psychology is justifiable only in a very minor degree. Though the tendency of physiology to-day is perhaps to regard animal psychology as only a simple and abreviated edition of human psychology, this tendency has but little real support. The mind of animals is not simply the mind of man written in words of one syllable. So small is our knowledge of animal psychology that we do not know whether animals possess self-consciousness. All that the most elaborate experimentation could determine would be whether destruction of any given part of the brain destroys the association of certain sensory stimuli and certain actions, or whether it produces conditions of apathy, stupor or restlessness. There is no evidence that animals possess any of the higher psychical faculties.

It has been claimed that the greater development of the prefrontal lobes in man points toward them as the center of intellect, inasmuch as they have very insignificant motor and no sensory functions. But there are other nonmotor and nonsensory parts of the brain of man which also are much more highly developed than the corresponding regions in animals.

A large number of cases of disease in, and injury to, the prefrontal lobes have been reported. In the majority there have been psychical symptoms more or less similar in character, and the great question is to discover their cause. Charles K. Mills[6], in his most recent paper, says, in regard to disease of the prefrontal lobes, "there is interference with higher processes as shown in lack of power of sustained attention, impairment of the faculties of reason, comparison and judgment; mental obtuseness; relative optimism; sometimes mild hallucinations and delusions." Gordinier[7] reports a case of sarcoma, in a right handed man, completely localized to the *centrum ovale* of the right prefrontal lobe and unattended with any symptoms, save of a mental character—a simple dementia. In 1892 I reported a case of sarcoma of the right prefrontal region. There was no mental disturbance, except frequent attacks of coma and possibly occasional convulsions, until six or eight weeks before death, when the patient's mind became sluggish. Bevan Lewis[8] says: "I have repeatedly observed in cases of senile insanity, with excessive wasting of these regions, such as results in a peculiarly pointed frontal lobe, an association during life of extreme torpor and somnolence." He further says, "there are cases in which, as Hughling Jackson teaches, profound dementia accompanies lesions of the posterior parts of the brain, confirming the observation of Rosenthal, that the psychical disturbances resulting from tumors in the posterior lobes are far more frequent than from corresponding growths in the anterior and middle lobes." Gowers says, "in some cases considerable mental change has been observed, various in character, and sufficiently frequent and considerable to be of significance . A very large number of cases are on record of disease and injury of various kinds in this part in which psychical disturbance was the only symptom. It is greater when both frontal lobes are diseased, and sometimes passes away (by compensation) when the lesion is unilateral." Dr. James Hendrie Lloyd, in reporting a case before this society in which there was a large meningeal tumor in the right prefrontal region and another ¼ inch in diameter on the left side, said the most characteristic symptom was slow cerebration. The patient seemed to comprehend the question and yet did not answer it for a long period, and not until he had been urged repeatedly. When the answer came it was correct, but given in few words. This retardation in time reaction Dr. Lloyd considered significant of a frontal lesion.

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[4] American Journal of Physiology, October 1, 1902.

[5] The Anatomy of the Central Nervous System, p. 480.

[6] The Journal of the American Medical Association, October 4, 1902.

[7] The Anatomy of the Central Nervous System, p. 481.

[8] British Medical Journal, September 29, 1883.

In Dr. William Elder's[9] case there was loss of the sense of shame, lack of power of attention, listlessness and apathy, loss of memory and of the power of forming a judgment about anything. Dr. M. Allen Starr believes that disease of the frontal region causes a loss of self-control, change of character and lack of inhibition. He regards it as probable that the processes involved in judgment and reason have for their physical basis the frontal lobes.

Zastrowitz was, I believe, the first to notice that sometimes there is a tendency to silly witticisms and punning, and Oppenheim speaks of the same thing. Bruns[10] opposes the belief in a center of mind and thinks that the more frequent occurrence of mental symptoms in prefrontal disease is due to the fact that tumors may grow longer there than elsewhere without causing death, M. Friedmann[11] relates that a sparrow and a rabbit, small areas of the brains of which were cauterized, became furious in behavior and changed in character. At autopsy there was found a diffuse change in the entire cerebrum. He points out how important it is in drawing a conclusion as to the existence of a mental center to disprove diffuse disease. Anton and Zingerle[12] state that voluntary fixation of the attention necessary for voluntary concentration of thought is much disturbed in double-sided disease of the prefrontal lobes.

In August, of last year, I saw, with Dr. Dancy, a gentleman, 34 years old, an editor of a newspaper. His family and personal history were of no importance. He dated his illness from February of last year, at which time he had a violent attack of headache, with delirium, lasting several days. He recovered completely from this attack and returned to his business. He remained well until June, when he was again seized with headache and delirium, lasting for a day. The headaches now began to be very frequent, but unaccompanied with delirium, and so severe as to incapacitate him, and by the middle of June he was compelled to give up work. Just before I saw him his eyes were examined by Dr. William Zentmayer, who found a slight optic neuritis. In some of the attacks of headache he vomited, but without nausea. When I first saw him there were no objective signs of disease except of optic neuritis and a slight fine tremor of the fingers of both hands on extension, more marked in the ring finger of the right, and middle finger of the left hand. He stood and walked well. There was no tremor of the lips or tongue. There was neither palsy nor ataxia in the legs or arms. Speech was normal, the tongue moved well, and there was no palsy of the face. There was neither muscular wasting, muscular rigidity nor anesthesia. He could read well and understandingly. The knee jerks and plantar reflexes were normal on the two sides. I suspected tumor of the brain and advised his admission to the University Hospital. When he came to the hospital a couple of weeks later his physical condition was the same as when I first examined him, but he presented evidences of beginning dementia. He was a little silly; no longer the shrewd, hard-headed man he had been, but amused by trifles and interested in nothing. He was too optimistic for a man who knew he had a serious disease. It was not the optimism of the man who on rational grounds hopes he may improve, but that of the little child who cannot form a judgment. His power of recollecting recent events was poor. For example, he could not recall what he had had for lunch an hour previously. This probably was partly if not entirely due to lack of attention, for he ate, as he did everything, listlessly. His memory for past events was good. He answered questions correctly; spoke well, but conversed little. He showed no change in the moral sense at any time. He attempted no jokes or puns. His temper was good. He read a little, but took no real interest in books or papers. This condition was not caused by pain, for he suffered very little from it while in the hospital. Lest I give an exaggerated impression of his mental weakness, I must explain that had he been originally an ignorant and stupid man his condition would have passed as normal. It was the degredation from a high class to a much lower one that was important and striking. Many men go through life and do the work, say of a day laborer, with no more intelligence than he presented. After he had been in the hospital a few days he developed a delusion that there was a dead man in the next room. It was useless to try to convince him that he was in error, and for several hours his condition of mingled terror and anger was so severe that he was restrained with difficulty. He did not wish or attempt to injure anyone, but he wished to get away. After being removed to another part of the hospital the delusion slowly passed away or rather ceased to trouble him, though he would never admit it was altogether false. It troubled him actively for two or three days. Later he had another delusion, namely, that somebody was trying to get into his room to injure him. This also passed away after a few days. Under mercury and potassium iodide his headache decreased greatly and was replaced by a feeling of dulness in his head. Mentally there was rather rapid deterioration. Several examinations of his urine showed traces of albumin, but no casts. He had slight fever each night, never above 100°. His blood contained 75% of hemoglobin, 3,400,000 red bloodcorpuscles and 9400 white corpuscles. His lungs and heart were normal. I did not feel justified in recommending an operation, though I thought it more than possible that the tumor was in one or the other of the prefrontal lobes, because I had seen very similar mental symptoms occur in a tumor of the temporosphenoidal lobe of the right side. I, therefore, sent him home. Soon after he began to have some trouble in swallowing, and his speech became a little thick. Four days before death a slight paresis of the left arm and leg appeared, and in a few hours he became unconscious and so remained until he died on the eleventh of September.

Dr. Zentmayer, who made several careful examinations of his eyes, has kindly sent me the following report: "July 9, 1902. Pupils 3 mm. Iritic reactions normal. Exophoria 2½° for distance, and 10° for near. Abduction 12°. No paralyses. Visual acuity R. E., 5/5. L. E. 5/6. Fields of vision contracted for form and color to the extent of 5° for the right and 10° for the left eye. Ophthalmoscopical examination, R. E., media clear. Disc round. Very slight haze of the upper-inner margin. Low degree H. L. E., media clear. Disc round, marked haze of the upper-inner margin. Veins and central lymph sheaths fuller than in the right eye. Under atropine cycloplegia R. E., + 0.25 V=5/4. L. E. + 0.75 V=5/4. July 22, R. E. upper edge of disc hidden and the nasal edge veiled. L. E., well-marked neuritis. Slight paresis of the internal rectus muscle of the right eye.

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[9] The Lancet, February 8, 1902.
[10] Die Geschwuelste des Nervensystems.
[11] Neurologisches Centralblatt, May 1, 1902.
[12] Bau, Leitung und Erkrankung des menschlichen Stirnhirns, 1902.

"Diagnosis, brain tumor. I saw him for the last time on August 15. The neuritis had increased in both eyes, but was still much more pronounced in the left eye, in which there was a retinal hemorrhage at the upper border of the disc. There was no hemiapopsia, and the paresis of the internus which had been present could not be elicited.

"Remarks.—Until the last examination there had been no choked disc, if we interpret this term as signifying a prominence of the disc of 2 D. or 2/3 mm. and the evidence of marked congestion. This condition may have developed quite late, as is at times the case with tumors of the frontal region, the patient living a month after the last examination. The neuritis, while not unilateral, was, however, much more pronounced on the side corresponding to the location of the growth within the brain. The paresis of the right internal rectus developed at the time the optic neuritis was manifested on that side, and was probably due to direct pressure. That is was not detected at the last examination may have been due to the mental apathy of the patient."

The necropsy was made twenty hours after death. We were allowed to open the skull only. The scalp and calvarium were normal. The dura was stretched tense over the brain and was itself normal. The pia stripped easily. All the convolutions were flattened and the sulci were obliterated. In the superior anterior part of the median surface of the left prefrontal lobe was an area about one inch in diameter, which was a little softer than the surrounding cortex. On section there was found an infiltrating tumor involving the white matter only, except at the spot above mentioned and passing back to the roof of the lateral ventricle, which it involved. Practically all the white matter of the superior frontal was involved, very little of the middle, and none of the inferior. The ascending frontal escaped altogether. I have not had time as yet to make a microscopical examination, but the tumor presented the gross appearance of a sarcoma. The anterior part of the lateral ventricle was locally dilated. There was no other gross lesion of the brain.

The case I have reported here would prove little if it stood alone, because the mental disturbance came on so late that it could have been a general instead of a local symptom, and because, though there was no gross disease, except in the prefrontal region, intracranial pressure was very much increased and it could have caused the symptoms. But when it is studied in association with the large number of similar cases in the literature, it adds evidence in favor of the view that the prefrontal region is in closer relation with mental processes than some other parts of the brain. This is not the same thing as to say that the prefrontal region is the center of mind. Whether the left or the right lobe is of predominant importance is not yet decided. Disease in either may cause mental symptoms.

Several writers have neglected the occurrence of mental symptoms in disease of other parts of the brain. The area of the cerebral cortex that can be excluded with a fair degree of certainty from all or nearly all mental processes is not very large. It includes the motor centers on either side of the fissure of Rolando, the center of half vision in the cuneus, the so-called motor speech center in Broca's convolution and the center of common sensation, which is not yet fixed with accuracy, but which is either in, or immediately adjacent to, the motor center. Disease strictly confined to one of these areas never, I believe, causes mental symptoms. The sensory speech centers have quite real relations to mental processes. Though speech may be only the tool of thought and not thought itself, yet surely no abstract reasoning can be carried on if internal speech be destroyed. There remain the great association areas of Flechsig formerly called the silent regions, without motor or sensory functions, and with few or no projection fibers. The prefrontal region is one of them. It is probable that all of them combined form the organ of mind. Disease affecting any one of them may cause symptoms similar to those of prefrontal disease. For example, in a patient with a tumor of the right temporal lobe there was the same coma as in that of the patient here reported. Injuries to the posterior and, indeed, to any part of the skull may cause dementia. But in the cases of traumatic insanity the lesions are always diffuse. If the prefrontal region were the center of mind disease there alone should be common in insanity. As a matter of fact, when organic disease is present in insanity, it is always diffuse and involves the whole cortex, indeed the entire hemispheres.

CASE-BOOK RECORD OF ONE HUNDRED AND EIGHTY-THREE OPERATIONS ON THE MASTOID BONE.

By LEVI JAY HAMMOND, M. D.,
of Philadelphia.
Surgeon to the Samaritan Hospital and Out-Patient Department of the Methodist Hospital.

This report includes one hundred and eighty-three operations on the mastoid bone performed by me during the past dozen years. Excepting a few minor details omitted at the time of operation, the report has been copied from my case-book, histories and records of which were taken at the time of operation, while the subsequent course of the cases was noted when discharged. The continuance of the disease after operation was noted with special care in every case, and it is presumed that all, or at least the greater percentage, who did not reapply for treatment after having been once discharged, remained well; those returning for treatment being four, histories of which are shown in the record. One returned fourteen months later with suppuration following cold-taking, the second returning three months after operation with suppuration from the antrum which necessitated a secondary operation two years later, this resulting in complete cure. In this case it was difficult to decide whether the diseased area had been entirely removed at the time of operation, because of the firm eburnation of the bone and the small amount of pneumatic cells present. The third case was also of the antrum type in which suppuration occurred eight months after operation, but yielded to routine treatment by cleansing in two months. In the fourth case suppuration was present when last seen, several months after operation.

Operations were performed upon both mastoids in two cases; in one, both mastoids were opened at the one operation, while in the other the right ear was operated on twelve days after operation upon the left, though at the time of the first operation the opposite mastoid was threatening. In all the cases (thirty-five in number) in which mastoid involvement had occurred during the course of chronic suppuration from the antrum and attic, the combined operation of opening up the tympanic and mastoid cavities was always done, and in but few of these cases was the postauricular incision closed without drainage, which extended from the tympanic cavity through the mastoid cavity and out at the most dependent part of the incision. Convalescence was obviously much slower in these than in the primary mastoid cases, requiring from five to six weeks.

Since 1898, in all operations done for disease within the antrum and attic without involvement of the mastoid cells proper, the postauricular incision was, with but few exceptions, closed at the time of operation, and drainage was secured from the tympanic cavity through an opening in the soft tissues of the canal, corresponding to the opening in the bony back wall of the canal, the first drainage being, in a number of cases, small rubber tubing which, after its removal, was always replaced by gauze strips, because of their more ready introduction.

In the acute mastoid cases, in which operation was performed before too great maceration and softening of the bony walls of the cavity occurred, drainage was frequently omitted, excepting small strips of gauze which were placed in the canals, recovery occurring on an average in three and a half weeks. When, however, there was excessive maceration from long locked-up pus, convalescence was slower. Recovery should occur in all uncomplicated acute mastoid cases within three weeks, and this will be brought about more surely if here, as in other portions of the body, rigid aseptic precautions be observed, as well as furnishing, at the time of operation, all protection to the soft tissues against trauma, so likely to occur from manipulation. This danger can be lessened to a very great extent by firmly padding the incised soft tissues with sterilized gauze pads. In ten cases in which bacteriological examinations were made, the streptococcus was the predominating pyogenic organism present in the pus from the mastoid, while that from the canal showed extensively mixed infection with the streptococcus, staphylococcus and aspergillus as predominating organisms. Infection in the vast majority of cases occurred through the nasopharynx.

In two cases of this series, however, there was a direct streptococcus infection of the mastoid cells resulting from furuncles along the back wall of the canal. Both of these cases were under my observation from the onset of the attacks, and in both several crops of furuncles occurred, despite prompt efforts to prevent it, before mastoid symptoms developed.

The second patient (No. 182 in the record) recovered from his mastoid operation a few weeks ago, which was performed by me at the University Hospital during the absence of Prof. Randall. This man had been under treatment at the dispensary for more than four months, during which time he had presumably been cured of many crops of furuncles before mastoid pyemia, ultimately developed.

In the management of all cases seen before the presence of pus in the mastoid cells could be demonstrated, prophylactic treatment was instituted; this consisted in exerting efforts toward reducing inflammation by thorough cleansing of the nasopharynx with alkaline solutions, through the nares, and astringent applications through the mouth. The application used in the postnasal region was generally a five-grain solution of silver nitrate. Patients were instructed to gargle with water at a temperature of 115° F., or as near this degree as could be tolerated. Hot syringing was employed through the auditory canal, and heat applied over the entire head, including the affected ear. The patient was put to rest in bed, if possible, given liquid diet and the bowels were kept free by the internal administration of magnesium sulphate.

In many cases this method of treatment will, if seen before infection becomes too extensive, bring about termination of the condition, with nothing further, at most, than a suppurating middle ear, which generally yields to aseptic cleansing in a few weeks. Many patients by this management will escape the necessity for operation. It has been my experience, however, to find in private practice that patients are particularly prone to employ home remedies, which generally permits the inflammation to become so extensive as to necessitate waiving any prophylactic treatment. In all cases, therefore, in which the process goes on to pus formation extending into the mastoid cells, it is good surgery to interfere as early as it is felt to be reasonably sure that pyemia does exist therein, even before perforation of the outer table of the mastoid occurs, liberating the pus into the soft tissues without. The opportunity for early operation, especially in private consultation work, is not so frequent as in dispensary or hospital work, and it is extremely rare to see a patient before there has been rupture of the outer table and pus distinctly present beneath the soft tissues overlying the mastoid.

Preparation of Patient for Operation.

The patient should be placed in bed, if possible twenty-four hours before operation, diet being restricted to milk and bowels freely opened; if a female, the head on the side to be operated on is to be shaved, while in the male the entire head should be shaved. The entire head in both instances should be thoroughly scrubbed with soap and water, then alcohol should be applied, followed by a mercury bichloride, also bichloride dressing over the entire head. Auditory canals are syringed with 1 to 2,000 bichloride solution several times before time of operation. The nasopharynx is also thoroughly cleansed several times with alkaline solution of about the same specific gravity as the blood. (Say 1010.)

When the patient is anesthetized, the dressing about the field of operation is cut away, the remainder being left to cover the entire scalp. The auditory canal is again thoroughly washed with a saturated boracic solution and the field of operation again washed with mercury bichloride, 1 to 2,000.

Technique of Operation.

The side of the head to be operated on is turned uppermost and is made to rest in this position by

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12. Bare. Luitingund likrankung cho manschlichen sternheims, I Thue 192.

placing it within a hollow, padded wooden block. Incision is then made to the bone over the entire mastoid process, from the superior postauricular attachment down to a level with the digastric fossa, three-eighths of an inch back of the postauricular insertion; this allows a margin through which sutures can be readily passed, thus insuring more ready approximation than if the incision be made immediately back of the auricle. The periosteum is then incised close to the back wall of the canal and pushed back without tearing, if possible. Hemorrhage is arrested by picking up the divided blood-vessels with hemostats. When pus is present beneath the superficial soft tissues, it is flushed away. The auricle is then held forward by an assistant, and bichloride gauze is packed around the entire incised area; this serves the purpose of both lessening danger of infection as well as diminishing the amount of trauma which is necessarily inflicted owing to the limited space for operation. If the sinus has broken through the outer table of bone from the mastoid cavity, it is readily located by the presence of a drop of pus in the shape of a bubble. This should be the starting-point in the removal of the outer table and exposure of the mastoid cavity. It is not, however, always to be found, owing, in some cases, to extreme smallness, while in others the rupture may have taken place through the back wall, at or about the mastoid opening into the middle ear. When it so happens, the pus finds its way into the soft tissues overlying the mastoid by dissecting up the membranous portion of the back wall of the canal. This latter condition occurs only when there is either total absence of, or marked diminution in, the number of pneumatic cells. The entire covering of the mastoid should be chiseled away with either a bone gouge, aided at some steps by a fenestrated, sharp, hollow curette, and with bone-cutting forceps. There is advantage in having two of these latter instruments, one curved to the right, the other to the left. Some one, or all of these instruments, may be necessary to open up the cavity completely. At this stage of the operation the cavity is irrigated. In this way there will usually be removed large quantities of pus, broken-down cells and cholesteatomatous material, leaving granulation tissue, softened bone and, frequently, much adherent epithelium. This is curetted away and the cavity again flushed; curettement is repeated until there are no longer any roughnesses or softened areas of bone present. When the antrum has been opened, in addition to the already enumerated debris there are usually present some or all of the ossicles, either whole or in fragments. In the greater number of cases there will be nothing more than the carious remnant. After the toilet is completed in cases in which the upper tympanic cavity has been opened in conjunction with the mastoid cavity, drainage, which consists of either a strip of gauze or small perforated rubber tubing, is passed from the former into and through the latter and brought out at the most dependent part of the postauricular incision.

When the mastoid alone has been opened for acute abscess, the conditions that have influenced me against the use of drainage have been: (a) Absence of obstructive swelling in the auditory canal; (b) duration of the pus within the mastoid cavity and overlying soft tissues. If this has been present but a short while, and there is no infiltration of surrounding tissues, there is much probability that perfect cleansing of the infected conditions can be secured at the time of operation, when drainage can ofttimes be omitted to advantage. In all other cases drainage should be employed.

When the upper tympanic cavity alone is opened, the posterior incision is always closed and drainage secured through the back wall of the canal. This is accomplished by making an opening in the membranous portion of the canal corresponding to the opening through the bone leading into the antrum. (For description, see Transactions of Philadelphia County Medical Society, March, 1900.)

My experience in the treatment of the exenterated cavity by filling it with moist blood-clot has been too limited to justify an opinion; there seems, however, reason to believe that, when perfect toilet of the cavity or cavities can be secured, much more prompt filling in should result. The presence of pyogenic organisms already present at the time of operation, in addition to the difficulties of rendering perfectly sterile the regions accessory to the field of operation, especially through the nasopharynx, makes it, on the one hand, extremely difficult to be assured of perfect asepsis at the time of operation; on the other, highly probable that it will not so remain for a sufficient period to prevent infection and consequently breaking down of the blood-clot, there being no means in my experience of keeping a mucous surface perfectly aseptic with any chemical agent that would not inflict serious harm upon it.

The cases reported up to the present time do not show a larger percentage of primary recoveries after this method of treatment than analogous cases treated in the manner indicated in the report.

Of the one hundred and eighty-three cases, there were:

Males,	105
Females,	78
Age of oldest patient, years,	66
Age of youngest patient, months,	10½
Right side affected,	89
Of these males,	56
Of these, females,	33
Left side affected,	93
Of these, males,	47
Of these, females,	46
Both sides affected, female, 1; male, 1	2
Operated on for chronic suppuration in antrum and attic	37
Of these, males,	17
Of these, females,	20
Operated on for mastoid pyemia without involvement of antrum and attic	114
Of these, males,	68
Of these, females,	46
Mastoid cases in which present attack was first ear trouble complained of,	103
Had had chronic suppuration for periods varying from months to years,	35
Of these, males,	18
Of these females,	17
Operated on for mastoid pyemia, under 21 years of age, males,	25
females,	23
Operated on for antrum disease, under 21 years, males,	9
females,	4
Average period of convalescence after operation on antrum and attic, weeks,	4.9

Average period of convalescence after operation for primary mastoid pyemia, weeks,	3.5
Average period of convalescence from operation for mastoid pyemia associated with chronic suppuration from middle ear, weeks,	5.3

(In 8 cases period of convalescence is not recorded.)

Cases in which pus from mastoid had dissected its way beneath the tissues at the side of the neck (Baetzold cases),	12
Of these, males,	7
Of these, females,	5
Primary mastoids without drainage,	65
Number of deaths,	2

(Both of these patients were females, a child and an adult, In both there was profound coma when they were first seen, and, while post mortems were refused in both cases, there was much reason, from clinical appearances, to believe that death was due to cerebral abscess. If these patients, both of which died a few hours after operation, teach anything, it is that operation should be promptly performed, as soon as pus can be detected.)

This report does not include the histories of five abscesses within the encephalon, seen by myself and due to middle ear inflammation with mastoid pyemia, because in all of the cases the mastoids had been operated on by others, or rather of those that had been operated on at all of this number; but two had had anything like radical operations performed, two had evacuated pus through spontaneous rupture, while the fifth had no further treatment than simple incision over the mastoid, as before stated. My connection with the cases was not for treatment of the mastoids but for the intracranial condition arising from this source, three of which were cerebellar and two located within the middle cerebral fossa, the three cerebellar cases being in children, while both of the middle cerebral cases were in adults.

LA PRESSE MEDICALE.

November 29, 1902. (Volume II, No. 96.)

1. The Respiratory Tract and Infection. A. GOUGET.

1.—While bacteria reach the respiratory tract by inspiration, the lymph- and bloodvessels, the first is by far the most frequent mode of infection. The air expired is absolutely free from microbes, though the sputum expectorated may be full of them. These only enter the air after drying. Such dried bacilli may remain virulent for months. The great majority of the germs inhaled are stopped in the nasal fossæ and mouth. The further down one searches, the fewer become the microbes found. Yet all sorts of bacteria have been found in the lungs post mortem. The bacteria may not be virulent; or the natural resisting powers of the organism prevent infection. In such cases exudate is elaborated, and thus the germs are expelled, or the bacteria may enter the lymphvessels and reach the bloodvessels in time, spreading throughout the entire body. The causes which predispose to infection are inanition, overwork, infectious diseases, etc.; the exciting causes are cold, traumatism, etc. The severity of the lesions resulting will depend on the part affected, the virulence of the infection and the amount of resistance possible. The reaction and the processes resulting are the same as in other parts of the body. The prophylaxis is as important as the treatment. [M. O.]

Health Reports.

Health Reports: The following cases of smallpox, yellow fever, cholera and plague, have been reported to the Surgeon-General, U. S. Public Health and Marine-Hospital Service, during the week ending January 24, 1903:

	SMALLPOX—United States.		C.	D.
CALIFORNIA:	San Francisco	Dec. 28-Jan. 11	10	
COLORADO:	Denver	Jan. 3-10.	7	
DISTRICT OF COLUMBIA:		Jan. 10-17.	2	
	Washington	Jan. 10-17.	14	
ILLINOIS:	Chicago	Jan. 10-17	3	
INDIANA.	Evansville	2 imported, 1 on river steamer.		
	South Bend	Jan. 10-17.	5	
KANSAS:	Wichita	Jan. 10-17.	1	
KENTUCKY:	Lexington	Jan. 10-17.	1	
	Louisville	Jan. 14.	1	
LOUISIANA:	New Orleans	Jan. 10-17.	1	
MAINE:	Biddeford	Jan. 10-17.	15	
	Lewiston	Jan. 10-17.	7	
MASSACHUSETTS:	Boston	Jan. 10-17.	13	3
	Cambridge	Jan. 10-17.	1	
	Chelsea	Jan. 10-17.	1	
	Melrose	Jan. 10-17.	1	
MICHIGAN:	Grand Rapids	Jan. 10-17.	6	
MISSOURI:	St. Louis	Jan. 4-18.	31	
NEBRASKA:	Omaha	Jan. 10-17.	10	
NEW HAMPSHIRE	Nashua	Jan. 10-17.	4	
NEW JERSEY:	Camden	Jan. 10-17.	3	
	Newark	Jan. 10-17.	3	1
	Plainfield	Jan. 10-17.	2	
NEW YORK:	Buffalo	Jan. 10-17.	5	
	New York	Jan. 10-17.	2	1
OHIO:	Cincinnati	Jan. 2-16.	22	
	Cleveland	Jan. 10-17.	16	
	Dayton	Jan. 10-17.	4	
	Hamilton	Jan. 10-17.	1	
PENNSYLVANIA:	Altoona	Jan. 10-17.	1	
	Erie	Jan. 10-17.	4	1
	Johnstown	Jan. 10-17.	8	
	McKeesport	Jan. 10-17.	3	
	Philadelphia	Jan. 10-17.	35	2
	Pittsburg	Jan. 10-17.	19	3
SOUTH CAROLINA	Charleston	Jan. 3-17.	9	
TENNESSEE:	Memphis	Jan. 10-17.	4	
TEXAS:	San Antonio	Dec. 1-31.	3	
UTAH:	Salt Lake City	Jan. 3-17.	45	1
VIRGINIA:	Danville	Jan. 10-17.	9	1
WISCONSIN:	Green Bay	Jan. 11-18.	1	
	Milwaukee	Jan. 10-17.	13	
	SMALLPOX—Foreign.			
AUSTRIA:	Prague	Dec. 20-27.	5	
BARBADOS:		Dec. 19-Jan. 2	9	1
BELGIUM:	Antwerp	Dec. 20-27.	4	1
	Brussels	Dec. 20-27.		2
BRAZIL:	Bahia	Dec. 13-27.	4	
CANADA:	Amherstburg	Jan. 10-17.	2	
CANARY ISLANDS	Las Palmas	Dec. 6-13.	2	
GREAT BRITAIN:	Birmingham	Dec. 27-Jan. 3.	2	
	Leeds	Dec. 27-Jan. 3	7	
	Liverpool	Dec. 27-Jan. 3	48	3
	London	Dec. 27-Jan. 3	14	
	Manchester	Dec. 27-Jan. 3	5	
INDIA:	Bombay	Dec. 9-23.		10
	Madras	Nov. 27-Dec. 12		2
ITALY:	Palermo	Dec. 20-27.	13	1
MEXICO:	City of Mexico	Jan. 4-14.	4	2
RUSSIA:	Moscow	Dec. 13-20.	2	2
	Odessa	Dec. 20-27.	5	2
	St. Petersburg	Dec. 20-27.	21	2
STRAITS SETTLEMENTS:	Singapore	Nov. 8-Dec. 6		12
	YELLOW FEVER.			
COLOMBIA:	Panama	Dec. 29-Jan. 12	9	3
ECUADOR:	Guayaquil	Dec. 20-Jan. 3		22
MEXICO:	Tampico	Jan. 3-10.		6
	Vera Cruz	Jan. 3-17.	9	8
	CHOLERA—Insular.			
PHILIPPINES:	Manila	Nov. 16-Dec. 6	154	126
		Total to Dec. 9, 4533 cases and 3402 deaths.		
PROVINCES:		Nov.16-Dec.6	1358	852
		Total to Dec. 9, approximate, 117,246 cases and 74,505 deaths.		
	CHOLERA—Foreign.			
EGYPT:	Alexandria	Dec. 12-26.	21	16
INDIA:	Bombay	Dec. 9-23.		3
	Calcutta	Dec. 6-13.		35
	PLAGUE—United States.			
HAWAII:	Honolulu	Dec. 31.		1
	PLAGUE—Foreign.			
INDIA:	Bombay	Dec. 8-23.		243
	Calcutta	Dec. 6-13.		18
	Karachi	Dec. 7-14.	17	14

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See Advertising Page 8

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Burial Alive.—The very thought of the possibility of being buried alive is enough to give one the foretaste of a horrible death, and the fear of this possibility has kept the human mind in a state of constant dread. Now and then a case of premature interment is reported in the daily press with all the usual bloodcurdling details, but when such cases are investigated they invariably prove to be based on "hearsay," and to be without any foundation save the fact of disinterment. Yet the fear and apprehension are firmly rooted in the minds of the laity; and especially is this the case in Russia, where a special law exists to guard against the possibility of premature interment. This law provides that no burial shall take place before the expiration of three days. Whatever beneficence the law may possess does not, however, extend to the Jews, for they are permitted to bury their dead at once. As embalming is not generally practised in that country, the keeping of the dead body for three days in a warm room, and among the peasants the only living-room, is as unpleasant as it is unsanitary and even dangerous in the case of a contagious disease. Not content with this provision, it has been proposed and seriously considered by the press to attach a cord connected with a bell to the corpse's hand so that he or she may ring up the watchman should he or she awake from the temporary slumber.

That some physicians fully share with the laity in this fear is shown by a recent paper on the subject, contributed to the *Bolnitchnaia Gazeta Botkina* by Dr. Baloff. He speaks of the horror of premature burial, and even asserts that it occurs far more frequently than we should suppose from the "reported" cases. Without in the least questioning these "reports," he naturally assumes that as the cemeteries are so far removed from human habitation, opportunities for discovering the unfortunate victim are few and purely accidental. He also relates with a great deal of feeling the story he heard from the "people," of how a peasant was buried alive, and how his groans scared the watchman, who ran to the priest, whose wife told him to go home and sleep off his liquor, and so on. He then recommends the establishment of special dead-houses for keeping the dead for three days before interment.

It would not be a matter of surprise nor occasion for comment to have such an article come from the pen of a newspaper reporter who is perhaps suffering from nightmares, but a physician should be the last person to indulge in such "bugbear" stories. He should know, in the first place, that not a single authenticated case of premature burial has been established, although, of the millions of the dead remaining unburied for 3 days in Russia, at least one should have arisen at the critical moment. In the large hospitals all over the civilized world the dead are kept for hours before interment or autopsy, and not a single case has been reported from any of these institutions. A physician should also know that there are certain unmistakable signs of somatic death which a careful physician can detect, if he takes his time and uses a stethoscope, and that complete suspension of respiration and the circulation for several hours is sufficient to establish the fact of death, without it being necessary to wait until decomposition sets in. A mistaken diagnosis can only be the result of gross and criminal carelessness, of which no physician should be guilty.

The Value of Kernig's Sign.—We print elsewhere a letter from Dr. Joseph Sailer in which he takes us to task for our recent animadversion on the value of Kernig's sign. We welcome any comments on the subject—pro or con—for we think this alleged sign stands in need of a very sharp criticism.

As a sign, Kernig's sign is thus far not much of a sign of anything. It *may* be present in cases of meningitis, and again it may *not*. Likewise, it *may* be present in a large variety of other affections, and again it may *not*. In other words, it is so "promiscuous" that its asset as a symptom of definite value is still largely problematical. Some good clinicians regard Kernig's alleged sign as overrated in importance, and misleading. The fact that it is often misleading is the most serious indictment against it. It was originally proclaimed as a sign of meningitis, and it is so identified with this disease in the professional mind that we venture to assert that the mere mention of it will instantly suggest to most clinicians the idea of meningitis. Against this we protest. The fact cannot be too strongly insisted upon that Kernig's sign is not necessarily pathognomonic of meningitis.

Some writers have urged that the same kind of criticism can be brought against other and well-approved signs—such, for instance, as the abolition of the knee-jerk. But to this we demur. The abolition of the knee-jerk is a far more significant symptom than Kernig's sign. The abolition of the knee-jerk in a person previously healthy is always a very sure sign of some pretty definite change in the nervous system—a change which, as a rule, is not far to seek. It may be a multiple neuritis, a posterior sclerosis, or, in cases of grave injury, a total transverse lesion of the spinal cord. But it is something that can be found without much doubt. There is no such significance about Kernig's sign.

This alleged sign is an example of a tendency now somewhat too common in medicine—a tendency to hunt out all sorts of little odds and ends of symptoms, and to give each of them the name of some aspiring clinician. We agree with Dr. Sailer that we cannot afford to ignore any signs that may offer us help in our obscure art of diagnosis—but we must insist that such signs shall be trustworthy.

The Internal Secretions.—We have recently been furnished by the author, Dr. Charles E. de M. Sajous, with the preface of his book entitled "The Internal Secretions and the Principles of Medicine." The work, which will soon be published and ready for distribution, represents the work of all the spare moments of a busy practitioner for fourteen years. We have, in this preface, the setting forth of ideas which to us are entirely new. Briefly, the work is intended to show that the oxygenation of the tissues of the body is dependent upon the activity of the adrenal system, which consists of the suprarenal body, the anterior lobe of the pituitary body and the thyroid body. The secretion of the suprarenal body is considered to be the substance which combines with oxygen and, circulating in the bloodplasma, reaches all the somatic cells. In this scheme the erythrocytes are mere carriers of oxygen, and it is the bloodplasma that supplies the individual cells. The anterior lobe of the pituitary body is connected with the adrenals through the solar plexus, the splanchnic nerves and the cervicothoracic ganglia of the sympathetic system, and is considered, in this scheme, to be the governing center of the suprarenal body; the functional efficiency of the anterior lobe of the pituitary body, in turn, being controlled by the thyroid secretion, iodine in organic combination. From the application of the principles indicated in the above summary the author was led to the belief that all symptoms of infection or poisoning are manifestations of overactivity or insufficiency of the adrenal system. The physiological action of remedies was also traced to the anterior lobe of the pituitary body. Further studies along the lines suggested by the above-mentioned results led to the conclusion that the posterior lobe of the pituitary body is the chief functional center of the nervous system. The pancreas and the spleen together were found, partially in confirmation of older views, to pour a powerful proteolytic ferment into the splenic vein. This ferment passes thence to the general circulation through the portal vein and plays a leading part in all immunizing processes, its main function in the bloodstream being to destroy toxic albuminoids. Enough has been said to show that the forthcoming work opens up a broad field for further investigation.. The ideas are most suggestive and not at all unreasonable. We hope the work will be received with the favor that its interesting preface indicates is its due.

Serum-Therapy.—The onward march and activity of investigators in this interesting domain of medicine are, indeed, surprising, and, while most of the recent work executed in this field of research is in the infantile or experimental stage, we believe that the borderline of some valuable discoveries is not far distant. The work done by the different investigators in this department of medicine is to be particularly commended, for the employment of serum-therapy is, in nearly all instances, in infections, or diseases of a high mortality. Hence, the worth of a serum, when once established, is obviously of the utmost significance. The most recent investigations are being executed in a field which, we believe, will develop a bountiful harvest, and the efforts of the men devoted to this line of investigation are eminently praiseworthy. Among the active investigators and the departments in which they are interested are: Vassal, Novy and others in the study of antiplague serum; Sears, Goldsborough and others in the consideration of the serum-treatment of pneumonia; Chipman and Lambinon, Cooper and others in the subject of antistreptococcic serum. The treatment of typhoid fever with antityphoid serum has been somewhat unsatisfactory, and this failure is based on the hypothesis that the disease is seemingly a bacteriemic condition rather than a toxemic one. This thought led Chantemesse to develop a serum possessed both of bactericidal and antitoxic properties, and from its use he reports good results. McFarland, Flexner and Noguchi have executed some interesting and valuable experiments with antivenomous serum. Lastly come the commendable investigations of Ceni, of Reggio-Emillo, Italy, on the serum-treatment of epilepsy. Ceni has performed some decidedly interesting experiments in this field and, according to his reports, he has obtained some satisfactory results.

While some of the work here enumerated is as yet surveyed by the critical and probably, in some instances, by the sceptical mind, we believe that the path being traversed by these judiciously thinking men will lead to gratifying and beneficent results.

The Enzymes of Fresh Milk.—In a recent number of the *Oesterr. Chemiker Zeitung,* Prof. Neumann Wender gives a review of the principal investigations concerning the substances in milk which have either digestive powers or are capable of oxidizing or deoxidizing action. It has long been known that milk will produce marked color reactions with many organic bodies especially in the presence of hydrogen dioxide or its analogues. These actions are usually not obtainable from milk which has been heated to the boiling-point, but are still observed in milk that has been heated to the common pasteurizing point. One of the earliest investigators in this field was Babcock of Wisconsin, who in 1889 expressed the opinion that the action was due to the presence of a small amount of blood fibrin in cows' milk. Numerous attempts have been made to isolate these enzymes, but generally only impure products have been obtained. Wender believes that the researches indicate the presence of three enzymes in cows' milk, as follows:

Milk trypsin or galactase. This is a proteolytic enzyme. It dissolves casein and is rendered inactive by exposure to a temperature of 76° C. (about 169° F).

Milk-catalase. This can decompose hydrogen dioxide and similar compounds. It is rendered inactive by exposure to a temperature of 80° C (176° F.)

Milk-peroxydase, an anærobic oxydase, that is, a body that has the power to decompose peroxides and carry the oxygen over to other substances. This is the substance which produces the reaction when milk, hydrogen dioxide and tincture of guaiacūm are mixed, by which a deep blue is obtained. This enzyme is rendered inactive by exposure to a temperature of 83° C (181° F.)

These data are of medical interest because they throw light upon the changes that take place when milk is boiled. It has been determined by clinical experience that boiled milk is less nutritious, but the explanation has been based generally on the observed changes in the condition of the main constituents (*e. g.* coagulation of the lactalbumin), but it is now evident that the damage to the enzymes is an important factor. It will be of interest to ascertain how far the common milk-preservatives restrain the normal action of these enzymes, and, further, how far the processes for preparing commercial condensed milk modify them.

The study of enzymes is one of the most promising fields of inquiry. Enough is already known to indicate that they are a connecting link between living and nonliving matter.

A Synthetic Alkaloid.—At a meeting of the New York section of the American Chemical Society, in December last, Dr. Hugo Schweitzer reported that the Farbenfabriken of Elberfeld are about to put upon the market a synthetic product identical with theophylline, an alkaloid existing in tea-leaves. Dr. Schweitzer's paper appears in the current number of the *Amer. Jour. of Pharmacy,* and we take from it the following particulars. The new product is not a mere imitation or isomer of the natural alkaloid, but is identical with it. It will, however, be sold under the trade name "theocin" for distinction. The manufacture involves twelve synthetic operations. The natural product costs $93 per ounce, the artificial will be supplied at $2.30 per ounce. It is obtained in colorless needles, melting at 268° C. and not very soluble in cold water, but more soluble than theobromine. It resembles this latter alkaloid more than it does caffeine. Its clinical applicability is principally as a diuretic. It is announced that synthetic theobromine will soon be offered. In view of the many intricate problems in organic synthesis that have been satisfactorily solved, it seems reasonable to hope that synthetic morphine and quinine may be obtainable before long.

A Scientific Study of Mont Pelée.—Professor Angelo Heilprin, of Philadelphia, has published a large book on Mont Pelée and the Tragedy of Martinique, which is likely to remain one of the most authoritative works on that great disaster. From the medical standpoint the book is interesting as showing how opinions have fluctuated, in the brief space of little more than half a year, about the exact nature of the death-dealing blast that destroyed the city of St. Pierre.

Professor Heilprin was originally one of those scientists who believed that the blast from Mont Pelée was composed, in part at least, of an inflammable gas. The exact nature of this gas has always been subject of dispute, but hydrogen or some mixture of hydrogen has usually been invoked. The difficulty in accepting this theory lay in the fact that the victims at St. Pierre seemed rather to have been scalded than burnt. Their clothing, for instance, was in many instances not destroyed, and the flesh was not affected in places where it had been protected by clothing.

Since his earlier exploration of Pelée, Professor Heilprin has witnessed at close range the second disastrous eruption (on August 30) and he has seen reason to change his opinion. This second eruption was also a lateral explosion, and killed about 1,200 people. Professor Heilprin was but a short distance from the crater, and the next day visited the destroyed villages. He thus assured himself that the cause of death was superheated steam charged with red-hot sand and "bombs." "The inhaling of an atmosphere of intense heat," he says, "of many hundreds of degrees, in places with a temperature possibly much exceeding one thousand degrees, means practically almost instantaneous death." This view seems to be more in accord with the opinions of geologists, that steam is the great motor agent in volcanoes.

Professor Heilprin, by his persistence and his accurate and prolonged observation, has gained the right to be regarded as one of the first authorities on the great volcano in Martinique.

The Book-Worm.—Among all fabled monsters the book-worm has heretofore taken rank with the sea-serpent. This insect has been the subject of jest, of speculation, of exaggeration and of malediction. Poetry in abundance has been written about it, but until a comparatively recent date science has been sceptical about its very existence. No longer, however, can this elusive worm be regarded as a mythological creature. There is a genuine book-worm, an insect that preys upon books; and science has identified and described it.

The book-worm is a small insect, of the beetle class, and its name is *Sitodrepa Panicea.* It is the only insect that has a scholarly reputation, for it lives among books and is not bored by them (but *vice versa*). Dr. Frederick P. Henry, the Honorary Librarian of the College of Physicians of Philadelphia, has written a most diverting paper on the book-worm (*Medical Library and Historical Journal,* January, 1903) in which he takes the reader on an excursion through all the literature of the subject.

Dr. Henry was himself sceptical about the existence of such an insect as the book-worm, until early in 1901, when a bitter experience convinced him that this insect was a realist in literature. The College of Physicians had purchased the library of the late Dr. Hough, and when the books—mostly old medical tomes of the fourteenth, fifteenth and sixteenth centuries—were unpacked, they were found to have been devastated by this bibliophilous insect. The *Sitodrepa Panicea* is described by Chittenden, of the U. S. Department of Agriculture. It is an omnivorous devourer of books, for it not only eats them but also most other things.

The tendency of all writers on the book-worm to drop into poetry, is one of the most astonishing evidences of the literary quality of this inspiring bug. Even our friend Dr. Henry has not escaped this contagion, and his muse has preserved this insect in the "liquid amber" of the following verse:

Sitodrepa Panicea!
Whether worm thou art, or flea,
Matters not, for, culpa mea!
Thy *existence* is my shame.
Had I not my books neglected,
They had never thee protected;
Now, alas! too late ejected,
I can only curse thy name.

Easy said, but hard as German,
Thou polysyllabic vermin,
Is thy name, so long in learnin',
So obnoxious to my verse.
Shall I call thee Sito, Pani,
Drepa, Cea, Pite or Sani,
Or some word in Hindustani?
Any name will do to curse!

The Personal Equation in Railroad Accidents.—The dying engineer, to whose alleged oversight the recent frightful wreck on the New Jersey Central Railroad, near Plainfield, has been imputed, is reported to have confessed that he was not at the lever of the throttle for some minutes just before the collision occurred. If this confession is authentic, it will open the eyes of the traveling public to what may sometimes be going on in the cab of a locomotive at full speed. That an engineer can deliberately leave the throttle, with his engine going at sixty miles an hour, in order to repair some minor break in an injector, will be startling news to many people. This revelation of human foolhardiness impels us to inquire mentally, How often may such a thing be done and nobody be killed—and nobody the wiser?

An engineer who "knows the road with his eyes shut" (as Davis was said to have done) and who for every day in the year has "the right of way over all other trains," may presumably come to feel that he and his train are protected by a Special Providence. Familiarity with danger breeds contempt. What a man has done often, he can continue to do indefinitely, red signals to the contrary notwithstanding. An engine will run without a man always holding the lever.

Medical men see something of this kind of fatalism in their own calling at times. They should reflect that it is just at the psychological moment when vigilance is relaxed by custom, that they may be on the brink of disaster. In the face of such human fatuity as this ill-fated engineer displayed, what can all human block-systems and red signals avail?

An Antivivisection Argument.—The newspapers tell a grewsome story of how a party of Indians were taken last week to see the Chicago stock yards, and how the sights in Armour's slaughter-houses were too much for them, and one Indian fainted at the sight of so much blood and three others were taken sick at the stomach.

We wonder now that the antivivisectionists do not seize upon this incident and use it as an argument against the slaughter of animals for food. The story is sufficiently sensational and horrifying for their purposes. No more revolting glimpse of the cruelty of civilized man to the lower animals can be imagined. Such carnage far surpasses in brutality and extent the alleged cruelties of the scientific vivisectors. But the antivivisectionists will not be likely to point a moral with this tale, for they have not yet renounced their right to have roast beef for dinner.

The only logical and consistent antivivisectionists in the world are the Brahmins of India. These Hindoos hold all animal life equally sacred, and think it a sin to eat flesh. We do not understand why the American antivivisectionists should occupy a lower moral plane than the Hindoos. But our flesh-eating zoophiles will not renounce their carnivorous habits, and they continue to patronize the slaughter-houses, a sight of which can make even an Indian sick.

Current Comment.

AN AMERICAN MEDICAL HISTORICAL SOCIETY.

From one of our contributors, Dr. Eugene F. Cordell, of Baltimore, we have received the suggestion that the time is ripe for the establishment of an American Medical Historical Society. The idea has been broached to a number of physicians and surgeons interested in medical history and has received the most hearty endorsement. Certainly, the interest now being taken throughout the country by the profession in matters relating to the history and bibliography of medicine warrants the opinion that there is a demand for such a national society.

A national American Medical Historical Society would not encroach upon a field already covered by any one of the national medical societies, of which it cannot be said there is a dearth. The work of the New York Medico-Historical Society (founded 1864), of the Johns Hopkins Hospital Historical Club (founded 1889) and of other similar organizations has attracted widespread attention and has been of value not confined to any one locality. All of these have paved the way for the establishment of a national society, the scope of whose work would doubtless interest a large number of the members of the medical profession. We solicit from our readers throughout the country communications expressing their views on this subject.

—*Medical Library and Historical Journal.*

CONDEMNED BY HIS SUCCESS.

The cures of a quack are his condemnation, not his justification, for the fact that he does cure sometimes shows that he is not using a mere placebo—an inert substance or harmless procedure—but is employing an active agent that must work injury in all cases for which it is not particularly adapted. Whoever administers the same remedy for every disease—and that is the characteristic of all quackery—hides a hundred victims for each patient whose recovery he vaunts.

—*New York Times.*

Correspondence.

KERNIG'S SIGN.

By JOSEPH SAILER, M. D., of Philadelphia.

To the Editor of the **Philadelphia Medical Journal:**

I wish to enter a protest against your editorial in the issue of January 24 of the current year, entitled "The Uselessness of Kernig's Sign." In that editorial you take the position that, because Kernig's sign is not pathognomonic of meningitis, it is absolutely useless in diagnosis. The investigations regarding the existence of Kernig's sign have been very extensive. In an article published in *The American Journal of the Medical Sciences* last year, I had occasion to review the literature of most of them, and I think there can be no doubt that in the great majority of cases of acute meningitis Kernig's sign has been present. It is true that probably in the majority of cases of tuberculous meningitis it is either not present or imperfect, and that it is often found in other conditions such as subdural hemorrhage, acute infectious diseases, hemiplegia, etc. It is obvious that in the greater part of these cases the other symptoms of meningitis are usually lacking, and that the presence of the sign causes no doubt regarding the true diagnosis, whereas its great value is as an additional confirmation of the existence of meningitis in cases in which it has been suspected, but its existence is not certain. We have very few pathognomonic signs, and diagnosis is usually made by the careful grouping and balancing against each other of nonpathognomonic symptoms. Among these, I am firmly convinced, Kernig's sign holds an important position, and that to speak of it as "absolutely useless" is not only a mistake but may be seriously misleading. Diagnosis is sufficiently difficult as it is, without our throwing away anything that can possibly be of assistance.

LORD BYRON'S LAMENESS.

By HENRY LEFFMANN, A. M., M. D., of Philadelphia.

To the Editor of the **Philadelphia Medical Journal:**

The prevailing fashion of attempting to determine the diseases of the departed great, suggests that a few words concerning Lord Byron's lameness may be opportune. That he suffered from some trouble that required a special shoe, or shoes, is well known. He alludes to the matter in a letter written in 1803, when he was about fifteen years old, and there is a story that on one occasion his mother, in a moment of passion, alluded to his deformity, to which the boy answered, "I was born so, mother." It would seem that any deformity in a person so conspicuous in Europe would be definitely ascertained. The prevailing idea is that he had club-foot. His father, in the only extant allusion to the boy, makes such a statement. From the recently issued extensive and critical edition of Lord Byron's works, published by John Murray, the following note is taken which shows how uncertain human testimony, even by well-informed persons, may be.

"The nature and extent of Byron's lameness have been the subject of a curious variety of opinion. Lady Blessington, Moore, Galt and the Countess Albrizzi never knew which foot was deformed. Jackson, the boxer, thought it was the *left* foot. Trelawney says that it proceeded from a contraction of the back sinews, and that the *right* foot was most distorted. The lasts, from which his shoes were made by Swift, the Southwell bootmaker, are preserved in the Nottingham museum, and in both the foot is perfect in shape. The last pair of shoes modelled on them was made when the poet was about nineteen. Mrs. Leigh Hunt says that the *left* foot was shrunken, but was not a club-foot. Stendal says the *right* foot. Thorwaldsen indicates the *left* foot. Dr. James Millingen, who inspected the feet after the poet's death, says that there was congenital malformation of the *left* foot and leg, with club-foot. Two surgical boots, made for the use of Byron, when a child, are in possession of Mr. Murray; both are for the *right* foot, ankle and leg, and, assuming that they were made to fit the foot, they are too long and thin for a club-foot. Mrs. Byron, in a letter written when the boy was three years old, says: "George's foot turns inward, it is the *right* foot, he walks quite on the side of the foot."

The editor of the edition states that Byron suffered from infantile paralysis, affecting the inner muscles of the *right* foot and leg, but does not give any professional authority. Perhaps, after all, Byron's lameness was due to eye-strain!

Reviews.

The American Text-Book of Obstetrics. In two volumes. Edited by Richard C. Norris, M. D.; Art Editor, Robert L. Dickinson, M. D. Second Edition, Thoroughly Revised and Enlarged. Two handsome imperial octavo volumes of about 600 pages each; nearly 600 text-illustrations and 49 colored and half-tone plates. 1 volume. Cloth, $3.50 net; sheep or half morocco, $4.00 net. W. B. Saunders and Company, Philadelphia and London.

This well-known book appears in a new form. The publisher tells us that by reason of the extensive additions in the present edition and in order to facilitate ease in handling, it has been found advisable to present the book in two volumes. The work is so well known, and the editorial management of Dr. Norris is so complete that there is little that can be said in criticism and much in commendation. As in the former edition the illustrations are numerous and to the point, and we note that there have been added a number of other cuts to illustrate the subjects that have been added or enlarged. We fail to find any mention of the recent suggestion of spinal cocainization. This is but one instance of Dr. Norris's careful editorial management. Spinal anesthesia, while 18 months ago attracting considerable attention in the obstetric world, has rapidly fallen into disuse because of the evident dangers attendant upon it. Bier, himself, the originator of the method, has discontinued its use, and those who in this country at first enthusiastically advocated its adoption, have largely followed his example. Malignant deciduoma has not been treated of in the present volume as fully as the importance of the subject would command. The operative portion of the work is most complete, and the newest methods with the most perfect antisepsis are described in full. Symphysiotomy is not recommended as generally as heretofore. The author of this section, Professor Jewett, states, and we think very properly, that the limitations of symphysiotomy cannot yet be regarded as absolutely settled. More extended experience will be required to determine fully the place which the operation shall finally hold in obstetric surgery. It will be noticed that Dr. J. Clarence Webster has been added to the list of contributors. It is with deep regret that the editor recalls the death of Drs. Theophilus Parvin, James H. Etheridge and Charles Warrington Earle, who were included in the list of contributors in the first edition. Dr. Webster has rewritten the chapters formerly written by Dr. Etheridge, while Dr. Norris has partially rewritten and revised those of Drs. Parvin and Earle. The continued excellence of these sections is, therefore, assured. The section on the pathology of the puerperium is especially valuable and complete, and the illustrations in this chapter are most instructive. Especial attention has been given throughout the work to the physiology of pregnancy and of the fetus. The newer information concerning the placental functions, however, and the pathology of extra-uterine pregnancy are not given as fully as might be desired, but with the minor exceptions mentioned the book is an excellent presentation of modern obstetrics and in its new form will continue to hold its position in the estimation of the medical profession. [W. A. N. D.]

A Text-Book of Histology and Microscopic Anatomy of the Human Body; Including Microscopic Technique. By Ladislaus Szymonowicz, A. O. Professor of Histology and Embryology in the University of Lemberg. Translated and Edited by John Bruce MacCallum, M. D., Johns Hopkins University, Baltimore. Illustrated with 277 engravings, including 57 plates in colors and monochrome. Philadelphia and New York. Lea Brothers & Co. 1902.

In the preface to the work before us for review, Dr. MacCallum explains his selection of Szymonowicz's text-book on the ground that it includes the best results of recent investigation. That the book is fully modern is not to be denied, and it gives, as the translator says, the most recent views on discussed histological points.

The work begins by describing the cell and its various properties, and then discusses the elementary tissues, such as epithelium, connective tissue, muscle, the nervous tissues and the blood. The author includes endothelium among the epithelial tissues, and describes it as being composed of "epithelial cells of mesoblastic origin." He does not admit that it occupies a separate group between the epithelial tissues and the connective tissues, as is done by many histologists. Among the connective tissues, an additional member, known as reticulum, is introduced, first described by Mall. This tissue holds an intermediate place between yellow elastic tissue and white fibrous tissue. In the description of the muscle-fibers there is no mention made of M. Heidenhain's explanation of the alternating light and dark bands or of the dotted line in the light band. The description of the nervous tissue and of the blood is excellent, and gives the latest generally accepted views in concise phraseology. The histology of the various organs is then discussed, beginning with the organs of the circulation, of the lymphatic system, the digestive system, etc. Among the more recent investigations, the results of which have been incorporated into the work, are Mall's studies of the histological unit of the spleen; Müller's description of the division of the bronchi; Sabin's investigations of the brain stem, and the studies of many authors on spermatogenesis. The descriptions of the bone marrow, of the special sense organs and of the nervous system, are particularly good.

A chapter is devoted to microscopic technique; there is a good index, and the illustrations are excellent. Besides the many drawings by the foreign artist who originally illustrated the book are to be found some by American artists, which compare favorably. There are several interesting reconstructions illustrating the bloodsupply of different organs. [J. M. S.]

A Manual of Surgery for Students and Practitioners. By William Rose, M. B., B. S., Lond., F. R. C. S., Professor of Clinical Surgery in King's College, London, and Senior Surgeon to King's College Hospital, and Albert Carless, M. S., Lond., F.R.C.S., Surgeon to King's College Hospital, and Teacher of Operative Surgery in King's College, London; Examiner in Surgery in Glasgow University. Fifth Edition, William Wood & Co., New York.

The Manual of Surgery by William Rose and Albert Carless was first published in 1898; since then four editions have been issued. This, the fifth, appears within twelve months of the fourth edition. The book is one of the best of its class published, not only because the material is well classified and the chapters singularly complete, but also because it is interwoven with sound common sense. Considerable modifications have been made in order to bring the work up to date, but vague fancies and untried novelties have not been included at the expense of the real and essential. The illustrations are well executed, especially the skiagrams, which are remarkably clear. The paragraphs on diagnosis, a subject often slighted by the operating surgeon, are better than one usually finds, and the pathology, as well as the bacteriology, of the various diseases has been adequately set forth.

In operating, the authors practise wet antisepsis. They sterilize their instruments, ligatures and sea sponges in carbolic acid solution (1-20), and dress the wound with double cyanide of mercury and zinc gauze moistened with a 1-40 carbolic lotion. While we should not recommend this technique, it is only natural, as the authors observe, that they, who have had the privilege of working with Lord Lister and seeing his excellent results from the antiseptic method of treatment, should still cling to that line of procedure. Antisepsis can be carried out, no matter where the operation shall take place, whereas the aseptic plan may be defeated at any moment by some slight inadvertence or oversight. It is also natural that, being Englishmen, the writers should advise medical treatment in the milder forms of appendicitis, in which the temperature does not rise above 101°; operation should be undertaken, in their opinion, when, in the graver cases, the symptoms have not commenced to abate at the end of 48 hours, and in cases of general peritonitis, pointing abscess, persistent distension of the abdomen, hiccough and continued high pulse.

On page 278 it is stated that ligature of the abdominal aorta has never ben attempted for aneurysm. Boston will be sorry to learn (p. 1184) that Morton first demonstrated the properties of ether in Philadelphia. In conclusion we suggest that a chapter on the Röntgen rays be added to this valuable Manual of Surgery. [F. T. S.]

Saunders' Medical Hand-Atlases. Atlas and Epitome of Diseases of the Mouth, Pharynx, and Nose. By Dr. L. Grunwald, of Munich. From the Second Revised and Enlarged German Edition. Edited, with additions, by James E. Newcomb, M. D., Instructor in Laryngology, Cornell University Medical School; Attending Laryngologist to the Roosevelt Hospital, Out-Patient Department. With 102 illustrations on 42 colored lithographic plates, 41 text-cuts, and 219 pages of text. Philadelphia and London: W. B. Saunders & Co., 1903. Cloth, $3.00 net.

To say that this atlas equals in excellence the Atlas on Diseases of the Larynx by the same author is to praise it, and this we unhesitatingly do. The plates are numerous and lifelike, each one is accompanied by a clear description of the condition represented, and in this way the objective signs of the important pathological changes of the mouth, pharynx and nose are adequately presented. These typical cases will prove of use to the specialist both in pursuing his own study and in affording material for demonstrating to students when clinical cases are lacking. The epitome, which is translated into good, readable English, is of interest as giving in a practical way the views of a very able man. The general practitioner will do well to read the first chapters on physiology and general pathology. In these chapters the evils of obstructed respiration are graphically set forth; the grave and far-reaching dangers to the lungs and other organs and to the general health are convincingly stated, and the principles of hygiene and preventive measures by which these evils may be avoided broadly indicated. Naturally everyone will not agree with all the details of the author's plans of treatment, and yet scarcely anyone, who is interested in this part of the subject, can fail to find much that is suggestive and in other ways of value. [W. G. B. H.]

American News and Notes.

PHILADELPHIA AND PENNSYLVANIA.

Phipps Institute for the Study and Treatment of Tuberculosis.—As Governor Pennypacker signed the Berkelbach Bill, repealing the former Act which prohibited the erection of a consumptive hospital in a built-up portion of the city, January 28, nothing further prevented the opening of this institution, in its temporary quarters at 238 Pine street, Philadelphia, February 2. The medical staff at present consists of 3 physicians.

The Macalester Farm Transferred to the City.—The 58 acres in the Thirty-third ward, known as the Macalester Farm, were transferred to the City of Philadelphia, January 30, for $116,000. It is upon this site that the new municipal hospital is to be located. The plans for the new buildings are being kept secret. It is expected that work will be begun in 6 weeks.

Pennsylvania State Board of Health.—A meeting of the City and Borough Health Boards, west of the Alleghenies, will be held at Johnstown, February 12, for considering measures to stop the spread of smallpox.

McKinley Memorial Hospital Abandoned.—At a meeting held January 29, it was unanimously decided to sell the ground owned by the McKinley Memorial Hospital for Contagious Diseases, and to settle all accounts, thus virtually ending the movement, started 8 months ago, to erect a private hospital for the treatment of patients with contagious diseases. The assets amount to $12,666.99, which will be placed in a bank until some other association is formed for the same, or almost the same, purpose. The site recently purchased at Narberth will be sold at auction, March 17.

Dr. Keen Again Honored.—At the Founders' Day celebration of Northwestern University, held in Chicago, January 28, Dr. W. W. Keen, of Philadelphia, professor of surgery at Jefferson Medical College, received the honorary degree of Doctor of Science. The recommendation for this degree was made by the unanimous vote of the council of Northwestern University. Dr. Keen operated at the Mercy Hospital, Chicago, from 9 to 11 A. M., on that day.

College of Physicians, Philadelphia.—Dr. H. C. Wood, chairman of the committee on plans, has made the statement that it has not yet been determined whether the present home of the college, at Thirteenth and Locust streets, will be remodeled or whether another site will be purchased for the erection of a new building. Already $20,000 have been subscribed toward the fund for complying with Mr. Carnegie's offer of $50,000.

Board of Health, Lancaster.—It has been announced that the Lancaster Board of Health will soon establish a bacteriological laboratory.

Jefferson Medical College.—Dr. Harvey Cushing, of Baltimore, will deliver a lecture on the "bloodpressure reaction of acute cerebral compression, a sequel to the Mütter lecture," February 12, at 8 o'clock, P. M., before the W. W. Keen Surgical Society. Members of the medical profession in Philadelphia are invited to attend.

Carnegie Institute Research.—To aid the research work of Dr. Simon Flexner and Dr. Hideyo Noguchi, of Philadelphia, it is announced that the Carnegie Institute has made a grant of $2000. The investigations, on the toxical action of snake bites, will be carried on in the laboratories of the University of Pennsylvania Medical School.

The Health of Philadelphia.—During the week ending January 31, 325 cases of typhoid fever were reported, with 30 deaths, as compared with 294 cases, with 35 deaths, during the week previous. The majority of these cases occurred in the First, Twentieth, Twenty-ninth, Twenty-fourth and Twenty-eighth wards. There was also a great number of cases in the Fifteenth, Twenty-sixth, Thirty-third, Twenty-second, Thirty-sixth and Thirty-ninth wards. There was also an increase in the number of smallpox cases reported, 29, with 4 deaths, as compared with 13, with no deaths, in the preceding week. There was a decrease in the number of scarlet fever cases, as well as in those of diphtheria. Several schools have been closed on account of the occurrence of smallpox in the city.

Society Meetings Next Week.—The following societies will meet at the College of Physicians, Philadelphia, at 8.15 P. M.; Monday evening, February 9, Section on Medicine, College of Physicians; Tuesday evening, February 10, Pediatric Society; Wednesday evening, February 11, Philadelphia County Medical Society, and Thursday evening, February 12, Pathological Society.

NEW YORK AND NEW JERSEY.

New York State Medical Society.—At the ninety-seventh annual meeting of the New York State Medical Society, held in Albany the last week in January, the Committee on Hygiene made its report upon tuberculosis and the recommendations toward ending that scourage. A resolution was adopted deploring any weakening of the present tenement-house laws, and urgently requesting the Legislature to permit no change to be made that would in any way decrease the amount of light and air available for the people living in such houses, or in any way take a backward step in regard to their sanitary conditions. Tuberculosis was declared epidemic in New York city, there being from 8,000 to 20,000 cases annually. The society advised that in the effort to check the ravages of the disease every senior student in every grammar school and high school should be required to pass an examination in the method of preventing the spread of tuberculosis. Societies for the prevention of tuberculosis should be organized in every community. Public lectures in each school district should be frequently given by one who understands the facts and has the gift of teaching them to minds of ordinary intelligence. By these educative efforts much could be done to teach the teachable the sanitary science of every day living. The Society recommended compulsory registration by physicians of every case of tuberculosis, the opening of dispensaries for the treatment of the poor and the establishment in every city of a receiving hospital for patients suffering from tuberculosis. The State was urged to hasten the building of the hospital, for which an appropriation of $100,000 was secured 2 years ago.

Smallpox at Snow Hill, N. J.—There are at present 23 cases of the disease in this village, containing 500 inhabitants. The 2 schools have been closed on account of the disease, which was at first diagnosed chicken-pox. Snow Hill is very near Haddonfield.

Yellow Fever at New York City.—The steamer *Bernard*, which reached New York from Brazil, February 1, reported a death from yellow fever during the voyage. Two members of the crew, who had been ill since January 25, were removed to Swinburne Island Hospital for treatment. Both men are on the road to recovery. The steamer has been thoroughly disinfected.

New York's Mortality.—During 1902, 125,160 persons died in the State of New York, making a death-rate of 17 per 1000 of population. This amount was 5000 less than the total mortality for 1901. January showed the greatest mortality and November the least. The infant mortality was very low, almost 5000 less than the average for the 5 preceding years, and was unusually low last summer. Smallpox developed in 135 places in the State. The mortality from it was the same as in 1901. There were over 8000 cases of death from pneumonia, over 5000 from Bright's disease and over 4000 from influenza. During the past 29 years, in the City of New York, there have been 14,358 cases of smallpox, with 4239 deaths. After free vaccination was inaugurated in 1875, the number of cases reported rapidly diminished until there were but 5 cases in 1878. This shows the great value of vaccination.

Stony Wold Sanatorium for Tuberculosis.—At the annual meeting of the trustees of the Stony Wold Sanatorium for the care of Women and Children with Tuberculosis, held in New York, January 29, the chairman announced that the new buildings in the Adirondacks were nearly completed. She reported that $14,000 have been raised by the 17 auxillary associations in New York City, and that other contributions, including the gift of $20,000 from Mrs. Henry Siegel, now reached $100,000.

Typhoid Fever in Ithaca, N. Y.—The hospitals in Ithaca are now filled with typhoid fever patients, and there are over 200 cases in the city. The Health Board blames the present epidemic upon the impure city water. An investigation is now being made to determine whether there are typhoid bacilli in the drinking water or not. Many of the cases are exceptionally mild in form.

NEW ENGLAND.

Foot and Mouth Disease in New England.—At the meeting of the Massachusetts Association of Boards of Health, January 29, Dr. D. E. Salmon, in charge of the work of stamping out the foot and mouth disease, stated that 2727 head of cattle were infected in Massachusetts, 2340 of which had been killed, together with 217 swine and 47 sheep and goats. During the epidemic herds were affected in New Hampshire, Vermont, Massachusetts and Rhode Island, in all 3466 head of cattle. Of these, 2787 cattle, 279 swine and 121 goats were killed. The cost of eradicating this disease will amount almost to $300,000. Dr. Salmon characterized this outbreak as the most virulent epidemic that he has ever seen.

Newport Hospital, Newport, R. I.—The new Vanderbilt ward will be opened in May. This building, the gift of Mrs. Vanderbilt, in memory of her late husband, will cost over $250,000 before it is completed. The building is fireproof, has electric elevators, and is to be completely equipped, even to linen and silverware. The furniture is being manufactured especially for the wards.

Bequests.—By the will of the late Mrs. R. C. Ames, $5000 were left to the Massachusetts General Hospital and $5000 to the Boston Home for Incurables.

Diphtheria at Newport, R. I.—An unusually large number of cases of diphtheria, including adults and children, has been noted during the last 2 weeks. As it was feared that the Sunday school of a church was a possible source of contagion, this is to be closed for several weeks. It was believed that the Sunday school books might have spread the disease.

Death of Dr. Wyman.—Morrill Wyman, A. M., M. D., LL. D., died January 30, at his home in Cambridge, Mass., aged 90 years. Born July 25, 1812, he was graduated from Exeter Academy in 1827, from Harvard College in 1833, and from the Harvard Medical School in 1837. In 1836 he was house physician at the Massachusetts General Hospital. From 1853 to 1856 he was adjunct professor of theory and practice of medicine in the Harvard Medical School. In 1875 he was elected an overseer of Harvard College and was given the degree of LL. D. in 1885. He was also a member of the American Academy of Arts and Sciences. Before being graduated from the Harvard Medical School, he assisted Dr. W. J. Walker, of Charlestown, a well-known surgeon of that time. Dr. Wyman was the first man in America to perform paracentesis thoracis. In 1893 Dr. Wyman presented to the city of Cambridge the medical library formerly belonging to Professor Tiedemann, of Heidelberg. He was at one time consulting physician to the Massachusetts General Hospital and to the Cambridge Hospital.

SOUTHERN STATES.

Army Medical School, Washington, D. C.—Plans are now being prepared for the instruction of officers of the medical branch of the National Guard in the Army Medical School in Washington. This school was established in June, 1893, with 5 newly commissioned assistant surgeons. The class now numbers 40. The course consists of a study of hygiene in all its branches, of air, and water and their impurities, clothing, food, exercise, barracks and hospital construction, sewerage and drainage, sanitary chemistry and practical bacteriology. The young officer is made acquainted with the diseases especially apt to attack troops, those caused by the aggregation of men and wounds caused by weapons used in modern warfare. He is taught how to manage a hospital, to command, instruct and discipline his assistants and the medical corps, and instructed in methods of army business, regulations and modes of supply, so that he may readily and effectively apply his professional and special knowledge to the work committed to him. The student is shown the use of the Röntgen rays; is taught theoretically and practically how to examine recruits, report on the sanitary condition of posts or camps, conduct sick calls and prepare certificates for discharges, especially in reference to the question of pension.

The Health of Baltimore.—During the week ending January 31, 2 cases of smallpox were reported. There were but 5 cases of typhoid fever, 40 cases of diphtheria and 204 cases of measles reported. One of the cases of smallpox occurred in the only unvaccinated man quarantined in the house in which a case of smallpox had appeared 10 days before.

Springfield Hospital for the Insane, Sykesville, Md.—During 1902, 55 male and 102 female patients were admitted, 69 of them having been transferred from Bayview Asylum as chronic incurable cases. Forty-two of those admitted were of foreign birth. Sixty-six of them were single, 61 married. Among the occupations of patients that of farmer heads the list, laborer comes next and clerk third among the males; in the female department the housewife leads, the domestic is second and the seamstress third. The age of the youngest admitted was 16 and the oldest 90. The death-rate was 5.88%, almost the same as for 1901. At the last meeting of the board of managers, the plan of erecting a new building for epileptic patients was recommended.

The Death of Dr. Morris.—Dr. John Morris died at the Baltimore City Hospital, January 29, aged 79 years, of old age. Born in Lancaster county, Pa., February 6, 1824, Dr. Morris first studied law in Baltimore. In 1841 he became a teacher, and then began to study medicine. In 1848 he assisted Dr. F. B. Hintze, in Baltimore, receiving a license to practise medicine in Maryland in the same year. He was graduated from Bellevue Medical College, in New York City, later. He then became interne of the Rotunda Hospital, Dublin, Ireland, where he was made a licentiate. In 1851 he was elected to the Legislature, where he remained 3 years. In 1855, during the epidemic of yellow fever in Norfolk and Portsmouth, Va., he was presented with a gold medal by the citizens of Norfolk for his services in combating yellow fever. He contracted the disease, but recovered after a desperate illness. He was postmaster of the city of Baltimore, in 1857. On April 19, 1861, at the time of the attack upon the Sixth Massachusetts Regiment, Dr. Morris treated a large number of wounded Northern soldiers. He had been president of the Medical and Chirurgical faculty of Maryland, of the Maryland Inebriate Asylum, of the State Lunacy Commission, of the Baltimore City Plumbing Board, and of the Maryland State Board of Health. In 1875 he was a delegate to the British Medical Association in Edinburgh, to the Industrial Medical Congress in Brussels, and to the French Scientific Congress at Nantes. His last public appearance was at the meeting of the American Public Health Association at Philadelphia in 1897.

MISCELLANY.

The Cause of the Spread of Cholera in the Philippines.—The last report made by Dr. J. C. Perry, in Manila, gives the total number of cases of cholera reported, up to December 9, 1902, as 4533 cases, with 3402 deaths, in Manila; 117,246 cases, with 74,505 deaths, in the provinces; but this number does not represent more than 2/3 of the actual number of cases and deaths from cholera in the island. He believes that the recent increase in the epidemic was due principally to native celebrations, to which many came from the surrounding districts. Another factor was the coming to Manila of refugees from the provinces. Then the disease is spread by the small boats of the natives which defy quarantine restrictions. Mindanao, Surigao and Zamboanga have had a great number of cases.

Bubonic Plague in Japan.—The epidemic of bubonic plague at Tokio is increasing. Ten cases occurred and 22 suspects were in quarantine January 10. Six deaths have already occurred.

Bubonic Plague in Mazatlan.—The State Department has announced that a searching investigation, by authorities, leaves no doubt that rats among vegetables shipped directly from Chinatown, San Francisco, conveyed bubonic plague to Mazatlan. On January 28, no deaths occurred; January 29, 3 deaths occurred; January 31, 2 deaths occurred. During those days no new cases were reported, and only 2 patients were sent to the hospital from the observation station. Over 100 persons have been discharged from observation and 50 houses were burned, January 28. During the month of January, 165 deaths occurred from the plague. It is stated that at least 300 people, about 1/6 of the population of the city, have left Mazatlan since the plague appeared.

Yellow Fever in Guayaquil, Ecuador.—Reports dated February 2 state that there are about 50 cases of yellow fever in Guayaquil. During January, 99 persons died of the disease. The rainy season is soon expected, which will probably cause an improvement in the situation.

The Jinrikisha Heart.—Dr. Ashmead, medical director of the Tokio Hospital, recently stated that the jinrikisha man of Japan runs 35 or 40 miles a day at top speed. His life, as a professional, averages 5 years. His heart shows hypertrophy and dilatation of the left ventricle, and there may also be chronic aortitis, aortic insufficiency, aortic aneurysm, or aneurysm of the left ventricle. The causes of these conditions are tuberculous and syphilitic joints and violent and prolonged physical exertion. He considers the jinrikisha an instrument of death and, from an humanitarian standpoint, hopes that it will not be introduced into America at the St. Louis Exposition.

Smallpox in the United States.—Between December 27, 1902, and January 23, 1903, 3841 cases of smallpox, with 137 deaths, were reported, as compared with 9532 cases, with 198 deaths, for the same period in the preceding year.

Obituary.—Dr. William Gibson, at Alexandria, Va., January 28, aged 73 years.—Dr. Sydnor Jeffries, at Warsaw, Va., January 25, aged 88 years.—Dr. Morrill Wyman, at Cambridge, Mass., January 30, aged 90 years.—Dr. John Morris, at Baltimore, Md., January 29, aged 79 years.—Dr. Marbury Brewer, at Baltimore, Md., January 24, aged 72 years.—Dr. James M. Ridge, at Camden, N. J., January 30, aged 77 years.—Dr. Pembroke M. Womble, at Baltimore, Md., January 30, aged 77 years.—Dr. Henry Addison Mandeville, at South Oange, N. J., January 31, aged 44 years.—Dr. Fairfax Schley, at Frederick, Md., February 1, aged 79 years.—Dr. B. E. Jeter, at Coyner's Springs, Va., January 30, aged 84 years.—Dr. Harry Helfrich, at Allentown, Pa., February 1, aged 99 years.—Dr. Samuel Gray, at Laurel, Md., January 30, aged 72 years.—Dr. Samuel D. Sanders, at Georgetown, Texas, January 22, aged 80 years.—Dr. Thomas Jefferson Grove, at Petersburg, W. Va., February 1, aged 74 years.

GREAT BRITAIN, ETC.

Typhoid Fever in London.—Recent experiments, made because of the frequency of typhoid fever in London, tend to show that typhoid bacilli survive extreme cold. It was discovered, however, that when frozen in liquid air the bacilli became extremely brittle, so that they could be triturated into an exceedingly fine powder and their cellular character thus destroyed. It is then possible to experiment with antidotes upon their poisonous contents, and it is hoped, before long, that this method will lead to the discovery of a treatment which will destroy the germs of typhoid in the human body. The Medical Officer of Health has recently issued an alarming report, condemning the vicinity of the Thames as being contaminated with sewage. Oysters, cockles, sprats, white bait and smelts must, therefore, be viewed with suspicion.

Insane Asylum Afire.—Early in the morning of January 27, one wing, consisting of five wooden buildings, in the Colney Hatch Insane Asylum, near London, was totally destroyed by fire. Of the 600 women in the burning building, 52 perished.

London's Low Birth-Rate.—The registrar of London has recently issued figures showing that the birth-rate in London was tending to become stationary, and that England, like France, seems to have among its residents a greater number of other nationalities than was formerly the case. The birth-rate per 1000 of population was 29, the lowest rate since registration began. The death-rate, on the other hand, was 17 per 1000, the lowest since 1840.

Scientific Research in India.—Mr. Henry Phipps, of New York, who is traveling in India, recently gave Lord Curzon the sum of $10,000, to be devoted to some practical object or in some scientific research for the benefit of India.

The Origin and Cure of Cancer.—Mr. T. S. Timmis has given the sum of $50,000 for the systematic investigation of the origin and cure of cancer. The investigations will be carried on at the Liverpool Royal Infirmary and in the new laboratories of experimental medicine in University College, Liverpool.

CONTINENTAL EUROPE.

Suicide in European Armies.—Recent statistics show that suicide is declining in all the armies of Europe except that of Russia, where 13 out of every 100,000 men regularly commit suicide every year. In the other great military countries the proportion of suicides is higher than in Russia, but shows a constant tendency to decrease. In France the suicide-rate is now 18 per 100,000; in Italy, 34 per 100,-

000; in Germany, 36 per 100,000 and in Austria, 45 per 100,000. In the Foreign Legion branch of the French army, the greatest number of suicides was noted, 99 per 100,000. On the other hand, there were only 14 in each 100,000 in the Guards. Suicide was observed to be more frequent in the cavalry than in the infantry, and in the artillery than in the engineers.

A Medical Explorer.—Dr. Jean Charconson, the well-known nervous specialist, of Paris, is now organizing an expedition to go to the Polar regions, including a scientific trip to Iceland, Spitzbergen and Nova Zembla. The expedition will be subsidized by the French Academy of Sciences. It is believed that Dr. Charconson will be accompanied by Mr. Gerlache, who was at the head of the recent Belgian Antarctic expedition.

Physicians Who Are Senators in France.—The many physicians who are French senators include among their number Dr. T. Rousel, who is 87 years old, Drs. Saillard, Allen and Frézoul, Labrousse, Dénoix, Goujan, Pozzi, Cornil, Ouvrier, Dellestable, Gauthier, Villard, Gérente, Vagnat, Lacombe and the Prime Minister, Dr. Combes.

Notes.—There are 587 different languages spoken in Europe, but 90% speak the seven principal languages.—In Germany 70% of male and 68% of female cancer patients suffer from cancer of the digestive organs.—In Germany only 413 out of 1000 males reach the age of 50 years, while more than 500 out of 1000 females reach that age.—Dr. Nagel, an eminent German oculist, has been investigating the effects of wearing veils and has examined the cases of 88 women whose eye-sight has been injured by them. The result is generally brought about in 4 years.—A German specialist estimates that one out of every 10 persons has gall-stones.—Sweden's last census records the lowest death-rate yet attained by a civilized nation. During the last ten years it averaged only 16.49 per 1,000.—In the provinces of Helsingland, in Sweden, 50 new cases of leprosy have been detected during the past year.—A large factory in Jena, Germany, utilizes its surplus hot water in such a way as to afford the laborers nearly a thousand baths a week.—A commendable ordinance has been issued in Finistère, forbidding the use of old paper, journals, etc., as wrappings for food, owing to the possibility of spreading disease in this way.—Cremation has become so popular in Paris that the Municipal Council has decided greatly to increase the number of the city's crematories.

The Death of Dr. Saenger.—Dr. Max Saenger, professor of obstetrics and gynecology in the German University of Prague, died January 12, 1903, at Prague, aged 50 years. Born in Bayreuth, March 14, 1853, he studied medicine at Würzburg and Leipsic, having been graduated at Leipsic in 1876. He became assistant in the Pathological Institute in 1878, under E. L. Wagner and Brenner, and assistant in Credé's clinic until 1881, when he started the practice of obstetrics and gynecology. His first publication was upon Cesarean section, in which article he advocated conservative methods, considering Cesarean section preferable to craniotomy and embryotomy upon the living child. As early as 1881 he performed the serious major operations, doing total vaginal extirpation of the uterus soon after Thiersch. He was also one of the first to attempt mechanical disinfection, with sand, before operating. In 1883 he founded a gynecological polyclinic, solely for students and physicians. From 1884 to 1887 Credé permitted him to operate at his clinic. In 1890 he opened a modern sanatorium with 25 beds, for the treatment of gynecological conditions. In 1891 he became extraordinary professor of obstetrics and gynecology in Leipsic; in 1897 Royal Saxon Sanitary Councillor; and in 1889, when he moved to Prague to take charge of the obstetrical and gynecological department in the German University, ordinary professor. He was president of the Leipsic Obstetrical Society, of which he was a member for 21 years. He was also an honorary member of almost all the prominent obstetrical and gynecological associations of Europe. His works include over 200 valuable contributions upon gynecology and obstetrics. Since 1889 he has been one of the editors of the *Archiv für Gynecologie*; from 1878 to 1896, of the *Jahresberichte über die Fortschritte der Geburtshilfe und Gynecologie*; in 1894, with A. Martin, he founded the *Monatsschrift für Geburtshilfe und Gynecologie*; and with von Herff he published an *Encyclopaedie für Geburtshilfe und Gynecologie*. He had been troubled by some serious nervous illness for over 2 years, having traveled about Europe recently in search of health.

The Latest Literature.

BRITISH MEDICAL JOURNAL.

January 17, 1903. (No. 2194.)

1. Observations Arising out of the Geographical Distribution of Stone and Calculous Disorders. REGINALD HARRISON.
2. A Demonstration on the Operation of Internal Urethrotomy and of a Urethrotome. C. B. LOCKWOOD.
3. Total Extirpation of the Prostate; Freyer's Operation. R. C. ELSWORTH.
4. A Case of Bullet-Wound of Bladder and Both Hips; Operation; Recovery. H. GOODMAN.
5. A Clinical Lecture on Two Cases of Chorea Gravidarum. D. BERRY HART.
6. Ovariotomy Seven Years after Vaginal Hysterectomy. G. GRANVLLE BANTOCK.
7. Removal of an Ovarian Fibroma from a Patient, Aged 73 Years, who was in Good Health 4 Years and 7 Months after the Operation. F. J. McCANN.
8. Notes of Ten Cases of Hysterectomy for Fibroid Disease. T. H. MORSE.
9. Rupture of the Uterus, with Recovery. C. B. PASLEY.
10. A Case of Transplanted Uterine Fibroid Giving Rise to Intestinal Obstruction. E. P. PATON.
11. Gangrenous Fibroid Polypus of the Uterus. JOSEPH SCOTT.
12. A Case of Ruptured Ectopic Gestation. J. G. MOFFAT.
13. Two Cases of Mitral Stenosis Complicated by Pregnancy. G. A. WLKES.

1.—The etiology of 2 kinds of calculi is positively known, i. e., those formed on foreign bodies and those formed on an ovum or debris of the bilharzia. Structural obstruction of the urinary outflow is also a factor in the production of **urinary calculi**. The manner in which stone is formed is best explained by Rainey's theory relating to molecular coalescence. In addition to the waters of the various spas, sodium salicylate, sodium benzoate, urotropin and borocite have been used for the purpose of preventing recurrence of stone after operation. [F. T. S.]

2.—Lockwood publishes a clinical lecture on **internal urethrotomy**. He has no faith in dilatation for the permanent relief of stricture of the urethra; it is always attended with great danger of sepsis. The ideal urethrotome should be small enough to pass strictures of small caliber and it should cut accurately from behind forward. Lockwood uses an instrument of his own construction, which consists of a staff with a groove in it and of a flexible guide which screws on the end of the staff. The flexible guide is made of metal and may be sterilized by heat. The groove allows urine to flow from the bladder so that no doubt may exist as to the position of the staff. After the urine has been seen, a small knife is pushed along the groove and made to project behind the stricture. In order to assure a permanent result, the fibrous ring should be completely severed and not merely notched. After division of the stricture an Otis's dilating urethrotome is inserted and the passage enlarged until a No. 28 French bougie may be passed into the bladder with ease. On the tenth day after operation, the urethra is cocainized and a No. 28 French bougie passed. After this the bougie is passed once a weeek for a month, then once in 2 weeks, then once a month, then once in 3 months, then once in 6 months and last once a year. [F. T. S.]

3.—Ellsworth reports a case of **total extirpation of the prostate** by Freyer's method, which consists in total removal of the gland by enucleation through a suprapubic cystotomy. The specimen removed weighed 3½ ounces. The result was entirely satisfactory. [F. T. S.]

4.—Goodman reports a case of **bullet-wound of the bladder** followed by recovery. The bullet entered above the right trochanter and made its exit behind the left sacrosciatic notch. Urine escaped from the wound of exit. Eight days after operation an external urethrotomy was performed and a soft rubber catheter placed in the bladder. Both fistulæ closed within 2 weeks. [F. T. S.]

5.—Hart remarks that **chorea** is one of the most distressing **complications of pregnant** woman that can be experienced. The immediate cause of the disturbance is unknown. The therapeutics includes the induction of abortion and drug-treatment. The good effect of inducing abortion is well recognized, but how it exactly acts is as yet unknown. The drug-treatment cannot be considered satisfactory, and is open to the comment that we are employing drugs, the action of which we know little, on a disease, the pathology of which we know infinitely less. Of the drugs employed probably paraldehyde and chloral or trional are the best. Antipyrine has given good results in certain cases. Hart reports 2 cases, both of which recovered. [W. A. N. D.]

6.—Bantock describes an operation of **ovariotomy performed 7 years after a vaginal hysterectomy.** His object in publishing this case is to call attention to a doctrine which has recently become current, namely, that the ovaries play an important part in the female economy, and to the practice arising therefrom of leaving one or both ovaries in operations involving the removal of the uterine body, on the ground that the patients are thus spared the inconveniences supposed to attach to the menopause. He doubts the advisability of this practice. [W. A. N. D.]

7.—McCann reports the removal of an **ovarian fibroma** from a patient, aged 73 years, who was in good health 4 years and 7 months after the operation. He remarks that ovarian cysts have been removed from patients who were much older than this in numerous cases. It is rare, however, to find fibroid tumors of the ovary in older women. [W. A. N. D.]

8.—Morse, after discussing the operation of **vaginal hysterectomy for cancer,** describes 10 cases of hysterectomy for fibroid disease of the uterus. The histories of the cases are given in full. [W. A. N. D.]

9.—Pasley describes the case of a primipara, aged 28, upon whom he performed cephalic version, turning a transverse into a head presentation. In so doing, **rupture of the uterus occurred.** An assistant was called in who sutured the vagina and perineum, and without other treatment the patient made a recovery, notwithstanding that examination showed a boggy mass around the fundus uteri which was undoubtedly bloodclot. The mass disappeared in a little over a week. [W. A. N. D.]

10.—Paton describes a case of **transplanted uterine fibroid** which gave rise to intestinal obstruction. Operation was performed, but the patient died a few hours later. Transplantation of an ovarian cyst does not seem to be very uncommon, but the transplantation of a fibroid is very rare. Twisting of the pedicle of the fibroid rapidly terminates in gangrene of the tumor, but that connection may take place to other parts and complete separation follow is mentioned by various authors. [W. A. N. D.]

11.—Scott records a case of **gangrenous fibroid polypus** of the uterus in a Persian woman, aged 32. The tumor measured 10 inches in circumference. [W. A. N. D.]

12.—Moffat reports the case of a **ruptured ectopic gestation** in a woman, 29 years of age. The symptoms closely resembled those of biliary colic. [W. A. N. D.]

13.—Wilkes reports 2 cases of **mitral stenosis complicated by pregnancy,** both resulting fatally. He remarks that in mitral stenosis the compensation ultimately depends on the integrity of the right ventricle. In severe cases apart from pregnancy, the right heart utilizes most of its reserve force. A breakdown of the compensation is almost inevitable when such cases are called upon to meet the greater demands of pregnancy and parturition. [W. A. N. D.]

LANCET.

January 17, 1903.

1. Two Lectures on the Anesthetization of the So-Called "Difficult" and "Bad" Subjects. Lecture II. FREDERIC W. HEWITT.
2. A Clinical Lecture on the Intracranial Complications of Septic Ear Disease. FREDERIC EVE.
3. A Lecture on Chronic Obstruction of the Cecum and Ascending Colon. W. ARBUTHNOT LANE.
4. Some Observations on Cyanosis. G. A. GIBSON.
5. Two Cases of Cesarean Section for Obstruction due to Fibroid Tumors. ARTHUR H. N. LEWERS.
6. Diffuse Carcinomatosis of the Stomach and Intestines. A. W. NUTHALL and J. G. EMANUEL.
7. On the Results of 50 Cases of Abdominal Hysterectomy for Fibroid Disease of the Uterus: With Remarks on the After-History of the Patients and on the Artificial Menopause. C. J. BOND.
8. A New "Film" Dressing for Wounds. PEYTON T. B. BEALE.
9. The Restoration of the Inferior Turbinate Body by Paraffin Injections in the Treatment of Atrophic Rhinitis. R. LAKE.
10. The Variability and Virulence of the Pneumonococcus. H. SINIGAR.

1.—The first class of **"bad" and "difficult" subjects for anesthetization** discussed in this second lecture of Hewitt's are those whose respiratory tract is in some way encroached upon, or whose respiration is hampered by pathological or other conditions. It is stated that it is more important, as a rule, to test the freedom of a patient's respiration, particularly through the nose, than to listen to the heart before giving an anesthetic. In these cases asphyxiation anesthetics or methods of administration should be avoided, for instance, pure nitrous oxide administered to a patient with angina Ludovici might act as a direct poison. Generally speaking, chloroform or a mixture of chloroform and ether should be given to patients of this group, but in exceptional cases ether may be preferable. In cases of goiter, chloroform is the only permissible anesthetic. In certain cases of bronchitis, empyema and such in which cyanosis and respiratory distress exist before anesthetization, the combination of oxygen with ether is a good one. These patients should be anesthetized in the posture in which respiration is most comfortable, and as little movement as possible should take place during the operation. If chloroform is carefully and gradually given in cases of bronchitis and empyema, anesthesia is, as a rule, attended with no great difficulty. Lengthy administration of an anesthetic in these cases is bad. Patients who have been confined to bed for a considerable time, owing to some constitutional disease are not, as a rule, bad subjects for anesthetization. In cases of advanced forms of heart affections Hewitt considers the administration of pure nitrous oxide to be contra-indicated. Regarding so-called "nervous" patients, it is stated that the nitrous oxide-ether sequence is well suited to them. If chloroform is given it should follow ether. Reference is made to the great difficulties encountered in anesthetizing alcoholics. In extreme cases of alcohol indulgence nitrous oxide may be found practically useless as an anesthetic. In a number of cases Hewitt has met with nearly as much difficulty in anesthetizing patients addicted to the excessive use of tobacco as he has in those addicted to alcohol. In these cases he has been unable to devise any method of administration or combination of anesthetics which is perfectly satisfactory. The greater difficulty arises in cases in which there is found a combination of the difficulties already discussed: For instance, when an excellent muscular development is complicated by nasal obstruction or excessive smoking or drinking. The best plan, as a rule, in these cases is to employ the chloroform-ether sequence, or, if the ether be badly borne, the ether-chloroform sequence. Should the anesthetist desire to administer nitrous oxide and ether, it is essential first of all to insert a mouth prop. It is very necessary in these cases of combined difficulties to provide for and maintain an oral airway throughout. In closing, Hewitt refers to patients who exhibit peculiar idiosyncrasies under certain anesthetics. [J. H. G.]

2.—Eve describes the **intracranial complications of septic ear disease** in a clinical lecture, referring first to pachymeningitis externa and then to extradural abscess. He mentions the slight character of the symptoms frequently met with in the latter condition. In five cases a rigor was present in none. When there is an extradural collection of pus upon the anterior surface of the petrous bone, its presence may be revealed by observing the dripping of pus through an opening in the roof of the attic upon examination with the otoscope. In many cases of thrombosis of the lateral sinus the prominent symptoms are referable to the occurrence of septic embolism in the lungs, and in others the condition is manifested by a profuse diarrhea, meteorism, abdominal pain, extreme exhaustion and a general condition which may be mistaken for enteric fever. Occasionally the thrombosis may be complicated by a meningitis, the symptoms of which mask the sinus lesion. The only distinctive local signs of septic thrombosis are cord-like induration in the course of the internal jugular vein and tenderness at the apex of the posterior triangle resulting from the clotting or inflammation of the posterior cervical veins which communicate with the sinus. The symptoms which may be considered characteristic of sinus thrombosis are only present in the majority of cases when the disease has reached a stage at which treatment is almost hopeless. In any case in which there is pyrexia with vomiting, drowsiness or incontinence of urine, the lateral sinus should be exposed. Before clearing out the sinus after its clotting has been demonstrated, the internal jugular vein should be exposed and ligated. Eve refers to a number of cases illustrative of the various forms of meningitis, resulting from middle ear disease. The lethargy found in cerebral abscess, whether in the temporo-sphenoidal lobe or in the cerebellum, is considered one of the most valuable symptoms in diagnosticating this condition. The temperature is usually characteristic also, falling, as it does, to normal or below normal from a septic type which accompanies mastoid inflammation. Although a slow pulse is the rule in this condition, Eve has seen a number of cases in which it has been rapid. He reports a number of cases illustrating abscess in the temporo-sphenoidal lobe and also in the cerebellum. Rotary movements toward the opposite side are frequent in cerebellar abscesses. Paresis of the upper extremity on the same side occurs more rarely. The diagnosis of the exact intracranial condition is often difficult, because a number of lesions are frequently combined in the same patient. [J. H. G.]

3.—Lane describes a condition of the **hepatic flexure of the colon** which gives rise to **chronic obstruction of the cecum and ascending colon.** The obstruction is brought about by the development of a mesentery which is attached to the outer surface of the cecum, ascending colon and hepatic flexure. When the cecum becomes at all distended, its movement in an inward and outward direction brings about a kink at the hepatic flexure which renders the passage of feces through it extremely difficult. The mesentery is strongest at its upper part at which it is reflected from the surface of the posterior abdominal wall externally to the kidney and from that organ as well. In the recumbent position the obstruction due to kinking of the hepatic flexure is relatively small as compared to the mechanical disability which exists in the erect position and especially when the cecum is loaded. Before he recognized this condition of obstruction of the hepatic flexure Lane had frequently cut down upon and examined the right kidney without discovering any lesion. Some of these cases were relieved because the tense omentum had been released. It is also stated that the condition under discussion has frequently led to the operation of appendectomy, and Lane says that he has operated the second time upon patients whose appendix had been removed when this condition was the real cause of the trouble. The condition is frequently associated with movable kidney, and when this is true both conditions need to be remedied. [J. H. G.]

4.—Gibson contributes **some observations on cyanosis.** He points out that the one constant factor in the production of cyanosis—diminution of oxygenation—may be brought about by respiratory affections or may be due to circulatory disorders. About 8 years ago he advanced the hypothesis, in describing some observations on cyanosis in congenital heart disease, that, the function of the corpuscles being lessened, the wear and tear which they undergo is reduced, and the duration of their individual existence increased, and, in this manner, a numerical increase is brought about. He presents short accounts of 2 cases. The first is that of a tradesman, 48 years of age, who was very cyanotic as a result of myocarditis and arteriosclerosis. Edema of the lungs and albuminuria with anasarca were also present. Blood obtained from an artery showed hemoglobin, 125%; erythrocytes, 5,130,000; and leukocytes, 5,980 per cmm. Blood from a vein contained 135% of hemoglobin, 5,300,000 erythrocytes and 6,250 leukocytes per cmm. A comparison of arterial and capillary blood on a subsequent observation showed, arterial: Hemoglobin, 120%; erythrocytes, 5,268,000; and leukocytes, 6,100 per cmm. Capillary: Hemoglobin, 130%; erythrocytes, 6,830,000; and leukocytes, 11,620 per cmm. The second case was that of a boy, 16 years of age, who suffered from deep cyanosis which was only explicable by the diagnosis of mediastinal pericarditis. The patient also had enlargement of the liver, increase in the size of the spleen, hydrothorax, ascites, albuminuria and anasarca. Examinations of the patient's subcutaneous blood were frequently made and showed an amount of hemoglobin varying between 80 and 100%; the number of erythrocytes fluctuated between 8,000,000 and 8,800,000 per cmm., and that of the leukocytes between 5,000 and 8,500 per cmm. A drop of blood obtained from a temporal artery and another from a small tributary of the temporal vein gave the following results: Artery: Hemoglobin, 93%; erythrocytes, 7,000,000; and leukocytes, 6,875 per cmm. Vein: Hemoglobin, 115%; erythrocytes, 10,000,000; and leukocytes, 7.400 per cmm. Capillary: Hemoglobin, 93%; erythrocytes, 8,500,000; and leukocytes, 8,500 per cmm. Under treatment the edema subsided and the patient improved greatly. The blood returned to its normal state. The author thinks that these observations lend support to the view which he advanced some 8 years ago, that in cyanosis there is a general increase throughout the whole circulation in the amount of hemoglobin and in the number of erythrocytes, while the condition of the leukocytes is less constant. He remarks that another point of great interest is that the increase in hemoglobin and erythrocytes, while universal, is not uniform, and in this interesting fact lies the exposure of a possible source of fallacy in attempting to estimate blood conditions. The remaining part of his paper is devoted to a consideration of the effect of inhalations of oxygen upon cyanotic conditions based upon 2 cases with results that seem to indicate that the inhalation of oxygen is barren of result. [F. J. K.]

5.—Lewers believes that in the majority of cases in which **fibroid tumors complicate pregnancy** no special treatment is required. The course of the pregnancy is unaffected, labor occurs naturally, and no unfavorable symptoms arise during the puerperium. In a certain relatively small proportion of cases the presence of fibroid tumors in association with pregnancy constitutes, a serious danger both for mother and child. He reports 2 cases of Cesarean section for obstruction due to fibroid tumors, both of which did well. [W. A. N. D.]

6.—Nuthall and Emanuel report 3 cases of **diffuse carcinomatosis of the stomach and intestines,** a condition which they believe has not previously been described. In the first case the parts affected were the pyloric half of the stomach, the small intestine in places and the entire colon, while the cecum was free from growth. In the second case the entire stomach was infiltrated, the small intestine in places and the whole colon, the cecum again being free. In the third case the entire stomach, the small intestine in places, the cecum, the colon and the rectum were involved. In each case the growth in the stomach and large intestine could be described as "leather bottle" in character. In all the cases the great omentum and the mesenteric and retroperitoneal glands were free from growth. In each case the growth was a glandular carcinoma arising in the deep layers of the gastric mucous membrane and undergoing colloid degeneration. [J. H. G.]

7.—The decision as to **operation in cases of fibroid of the uterus** must, according to Bond, depend on the danger to life and the amount of disablement, ill health and suffering which are caused by the disease. The social condition of the patient is also a factor to be considered, and since a comfortable invalid-life is incompatible with poor circumstances, the operation of hysterectomy should be performed. In a patient of a better social condition the very serious moral, mental and physical effects of long-continued invalid-life are not sufficiently appreciated. In nearly all cases in which the disease causes disablement or in which hemorrhage, pain and pressure are sufficiently severe to threaten ultimate serious damage to the general health, the possibility of cure by operation should be laid before the patient. The operation of abdominal cervical hysterectomy, as now carried out, has a lower mortality in capable hands than is sometimes represented (4%), and is comparable with that of ovariotomy. Myomectomy is a conservative operation of much value and should be practised in the case of single and accessible tumors. [W. A. N. D.]

9.—Lake refers to a number of cases in which he has **successfully employed paraffin injections to restore the inferior turbinate body in the treatment of atrophic rhinitis.** Brindel has also reported a number of cases treated in this way. Lake employed a white paraffin with a melting-point of 105°. [J. H. G.]

10.—Sinigar gives a short **account of an epidemic** which occurred last winter amongst the staff and patients of Leavesden Asylum, which furnishes clinical evidence of variability in virulence of the pneumococcus under natural conditions. Altogether 13 nurses, 17 male attendants and 43 female patients were attacked; the exact number of male patients attacked was not recorded. The virulence of the affection from a clinical standpoint was at first of low virulence, causing short indefinite illness which resembled influenza, then it gradually increased in severity causing a more protracted illness with occasional bronchial symptoms and ending in a case of lobar pneumonia in a nurse. When the maximum virulence was reached, most of the cases were true lobar pneumonia with a high mortality. [F. J. K.]

MEDICAL RECORD.

January 31, 1903.

1. The Open Air Treatment of Syphilis. EDWARD H. DOUTY.
2. A Case of Disease of the Acoustic Nerves, Causing Profound Deafness, Accompanied at a Later Stage by Pleuritic Effusion and Fibroid Phthisis; Recovery. D. B. St. JOHN ROOSA.
3. The Principles of Protection against Röntgen Light Dermatitis. CARL BECK.
4. Maritime Quarantine Without Detention of Noninfected Vessels from Ports Quarantined Against Yellow Fever. EDMOND SOUCHON.
5. On the Solarization of the Nude Body by the Sun and Electric Arc-Light Rays, and the Physiological and Physical Influence of These Rays upon Iron Preparations after Their Internal Administration. J. MOUNT BLEYER.
6. A Treatment for Spina Bifida, with the History of a Case. FREDERIC GRIFFITH.

1.—Douty recommends **the open air treatment for early cases of syphilis.** He has found that syphilitic patients do extraordinarly well in certain Alpine heights. He mentions that the percentage of syphilitics among phthisical men is high, probably ranging from 30-50%. He further holds that the stamping out of tuberculosis cannot be accomplished without directing means to stamp out the other and often greater scourge—syphilis, and that, while syphilis is plentiful, tuberculosis will also flourish. He contends that we should do well if we did exactly the same with early cases of syphilis as with early cases of tuberculosis. [T. L. C.]

2.—Roosa reports an interesting **case of disease of the acoustic nerves, causing profound deafness, accompanied at a later stage with pleuritic effusion and fibroid phthisis, with ultimate recovery.** The case was that of a man, 49 years of age, who developed deafness after he had received a severe wetting. The author attributes the deafness to exposure and to quinine which the patient took after being exposed. He contends that the deafness was at first due to congestion and later to anemia of the auditory nerves. During this illness he developed an attack of pleurisy on the left side from which he convalesced slowly. He then developed tuberculosis of the lungs which the author states was of the fibroid form. It appears that he recovered from the pulmonary affection and that his hearing was gradually restored to its normal state. [T. L. C.]

3.—Beck describes **the principles of protection against Röngten-light dermatitis.** He points out that short exposures are the best safeguard against injury. He discusses the various contributing factors in the production of this dermatitis, namely, the construction of the tube, the penetrating power of its light, the distance from the irradiated body, the position of the object, the number of interruptions and the size of the secondary coil. Röntgen light idiosyncrasy, he thinks, does not require much consideration so far as exposures for diagnostic purposes are concerned, since the length of exposure is short. When the rays are employed for therapeutic purposes, the possibility of individual susceptibility deserves attention. He then reports a number of case-histories. His article is illustrated. [T. L. C.]

4.—Souchon discusses **maritime quarantine without detention of noninfected vessels from ports quarantined against yellow fever.** He summarizes the principal regulations as follows: (1) A resident medical inspector shall be appointed for each port. (2) Vessels shall have no communication with the shore and conversely, except through the laborers. (3) Vessels shall carry only fruit and specified articles of freight. (4) Vessels carrying passengers shall carry a marine medical inspector on board. (5) Passengers shall not be received on board unless their clothing and baggage have been previously disinfected. (6) Vessels not carrying passengers shall not be disinfected at the Mississippi River Quarantine Station. (7) Vessels with passengers shall be disinfected; and the passengers shall be detained long enough to make 5 days from the last port touched, but the vessel shall not be detained. (8) Vessels from infected ports shall all carry marine medical inspectors, those not carrying passengers as well as those carrying passengers. (9) They shall all be disinfected at the Mississippi River Quarantine Station. (10) Passengers from infected ports shall be detained at the Mississippi River Quarantine Station 5 days after the arrival at the station, but the vessel shall not be detained. (11) Infected vessels shall be disinfected and shall be detained with all on board 5 days at the Mississippi River Quarantine Station after the completion of the disinfection, and the removal of the last case of yellow fever from the vessel. (12) Agents may send lighters down to the station to bring the fruit to the city. (13) The detailed regulations define precisely the duties of each of the officers of the Board of Health and those of the fruit companies, thereby excluding all pleas of ignorance of the exact meanings of the Board. [T. L. C.]

5.—Bleyer contributes an article **on the solarization of the nude body by the sun and the electric arc-light rays, and the physiological and physical influences of these rays upon iron preparations after their internal administration.** His researches show that all the per-salts of iron are converted into proto-salts by exposure to sunlight and the electric arc-light rays when in combination with organic matter. He found that in over 100 tuberculous and anemic patients, to whom the different iron salts and organic preparations of iron were administered, and the patients placed daily in the way of the sun's and electric arc-light rays, the blood counts showed marked improvement in the number of erythrocytes and hemoglobin to enormous amounts as compared with previous counts in cases treated by the older methods. By the method referred to, the hemoglobin increase was most conspicuous. [T. L. C.]

6.—Griffith reports a **case of spina bifida successfully treated.** The treatment consisted in puncturing the sac with a small trocar and cannula and drawing off 6 ounces of watery fluid. The puncture was then enlarged with scissors into an incision parallel with the spine, opening the sac completely. He next trimmed away the sides of the walls upon either side until they could be brought loosely together. He did not attempt osteoplastic work on account of the poor condition of the patient during anesthesia. The walls were brought together with thin catgut, and the wound was dressed with gauze held by strips of adhesive plaster, passing 2/3 around the body. The operation was performed with the child held in an inclined position, head down about 45°, and patient was put in bed in the same relative position. On the second day the position of the child was changed, and on the fourth day the dressing was removed and a gauze dressing braced with thin wooden strips and padded with cotton applied, the whole being held by plaster-strips and bandages. The child did well after the operation. On the fifth day after the operation the mother accidently let the child fall from her arms and death occurred in a few hours. [T. L. C.]

MEDICAL NEWS.

January 31, 1903. (Vol. 82, No. 5.)

1. The Limitations of the X-Rays in the Treatment of Malignant Tumors. WILLIAM B. COLEY.
2. A Plea for a Neurological Hospital in New York. L. PIERCE CLARK.
3. The Negro as a Criminal and His Influence on the White Race. LOUIS EDELMAN.
4. Affections of the Labyrinth Resulting from General and Organic Disease. THOMAS R. POOLEY.
5. Is Any Diseased Condition Necessarily Self-Limited? EDWIN R. MAXSON.

1.—Coley says that it is unfortunate that at the present moment so little distinction is made between the so-called "clinically cured **cases treated by the X-rays** and the cases regarded as cured by the surgeon. If these results are compared with cases treated by operation, no surgeon would think himself justified in regarding them as cured until at least 3 years had elapsed without recurrence. If these operated cases were judged by the same standard as that used in the X-ray cases, it would be fair to say that 90% could be counted as cured by operation, inasmuch as this percentage remains free from recurrence fully as long as the cases of X-ray cures that have been reported. [T. M. T.]

3.—Edelman believes that much harm is done by sending young boys and girls to the penitentiary for petty crimes. There coming in contact with hardened criminals, as they do, naturally breeds the infectious poisons, and after being released they remain criminals and a menace to society. [T. M. T.]

4.—Pooley enumerates those diseases which are the most frequent in occurrence and in which are found **complications of the inner ear** as follows: (1) Cerebral anemia and hyperemia; (2) hemorrhagic pachymeningitis; (3) cerebrospinal meningitis; (4) lesions of the cerebral bloodvessels; (5) cases of tumor of the brain; (6) syphilitic growths; (7) diseases of the spinal cord; (8) influenza; (9) mumps; (10) typhus, typhoid fever and variola; (11) malaria; (12) Bright's disease. [T. M. T.]

NEW YORK MEDICAL JOURNAL.

January 31, 1903.

1. The Treatment of Acute Septicemia by the Intravenous Infusion of a Solution of Formaldehyde with Report of a Case. CHARLES CLIFFORD BARROWS.
2. Rectal Fistula Curable Without Operation. A. ROSE.
3. Report of a Case of Intestinal Obstruction due to Meckel's Diverticulum. J. S. PRICE.
4. Fourteen Cases of Smallpox from the Buffalo Epidemic of 1901-1902. D. E. WHEELER.

1.—Barrows contributes a special article on the treatment of **septicemia** by the intravenous **injection of formaldehyde.** He says intravascular antisepsis appeals to the mind of every scientific observer of septic conditions of the blood. An intravascular antiseptic or germicide must be destructive to bacteria and at the same time not injure the patient. He claims that formaldehyde possesses this specific influence. He has proved this to be so by various experiments on animals. He speaks of the work done by Maguire, who used solutions upon himself as strong as 1-500 without any hemolytic changes. Barrows then reports a case of septicemia treated by formalin injections. He used an aqueous solution, 1-5,000 and obtained a satisfactory result. In conclusion, he recommends that formalin in normal salt solution would be better than aqueous solution, although no hemolysis follows the infusion of formalin in distilled water. However, theoretically salt solution is preferable. [P. B. B.]

2.—Rose reports a case of fistula in ano **cured by irrigation with carbonic acid gas.** The method employed is described in detail. He says that he reports this case in order to induce other men to test its value in this and other ulcerative conditions. [P. B. B.]

3.—Price reports a case of **intestinal obstruction** caused by **Meckel's diverticulum.** The patient was a colored woman, 40 years of age, in whom the obstruction had existed for 4 days. She was operated upon and made a satisfactory recovery. The favorable outcome, he says, was undoubtedly due to the open method of treatment. [P. B. B.]

4.—Wheeler reports 14 cases of **smallpox** occurring during the **Buffalo epidemic** of 1901 and 1902. He calls particular attention to the mildness of the epidemic, the absence of general malaise and of secondary fever. Of 409 cases reported only 6 ended fatally. Most of the cases reported occurred in Polish children, usually those under 5 years of age. These children form a large class of the unvaccinated people in Buffalo. Each case-history is accompanied with photographs showing the character and appearance of the eruption. [P. B. B.]

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

January 29, 1903. (Vol. CXLVIII, No. 5.)

1. Chylous Ascites. Report of a Case Due to Total Occlusion of the Thoracic Duct. PERLEY P. COMEY and WM. W. McKIBBEN.
2. Lesions of Tibial Tubercle Occurring During Adolescence. ROBERT B. OSGOOD.
3. The Side Chain Theory. ADDISON S. THAYER.
4. The Open Air Treatment of Syphilis. E. H. DOUTY.

1.—Comey and McKibben report a case of **total occlusion of the thoracic duct** and say that it is due to (1) pressure on the duct from without by tumors, enlarged glands or aneurysms; (2) the growth of tumors in the walls of the duct; (3) inflammatory stricture; (4) the impaction of adult filariæ; (5) thrombosis of the left innominate vein or the duct itself; (6) the backward pressure of blood in the subclavian vein occasioned by tricuspid insufficiency. [T. M. T.]

2.—Osgood states that **adolescent tibial tubercle,** from its situation and mode of development, is susceptible to injuries, especially in athletic subjects. The lesions are usually caused by a violent contraction of the quadriceps extensor. Fracture and complete avulsions are rare, cause loss of function and are easily diagnosed, usually clinically and always by means of the X-rays. Avulsions of a small portion and partial separation of the tubercle are more common. They do not cause complete loss of function, but, without treatment, long-continued serious annoyance. The diagnosis should be made by a combination of the clinical and X-ray pictures, and before the latter are accepted as evidence both knees should be skiagraphed and accurate technique observed. [T. M. T.]

3.—Thayer gives an important distinction between the action of a toxin, like that, for instance, of diphtheria, and the action of a bacterium or a foreign bloodcell. By direct affinity a molecule of toxin is attracted to the side chain of a cell; but neither a foreign bloodcorpuscle nor a bacterium can become attracted except through the mediation of another body which acts as a sort of fixer or mordant or coupler, by means of which the cell ferment, which is normally present in protoplasm, is able to take part in the production of an antibody. [T. M. T.]

4.—Douty believes that **open air, rest, high feeding, graduated exercise** and, if possible, a **bright, dry, bracing climate**, all desirable in the treatment of consumption, are as important in enabling an individual to escape the eventual horrors of syphilis (with the help of small doses of mercury maintained for many years). [T. M. T.]

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

January 24, 1903.

1. Surgery of the Stomach. ARTHUR DEAN BEVAN.
2. Acute Articular Rheumatism. Statistics of a Series of 270 Cases from the Service of Dr. Osler in the Johns Hopkins Hospital. THOMAS McCRAE.
3. Salicylates in Acute Rheumatism. JAMES J. WALSH.
4. Typhoid Fever in an Infant Under One Year of Age. E. F. BRUSH.
5. The Clinical Results of Serum-Therapy. EDWIN ROSENTHAL.
6. The Use of Gelatoglycerin Bougies in the Treatment of Acute Earache in Young Children. GEORGE L. RICHARDS.
7. A Contribution to the Surgery of the Gall-Bladder and Ducts. ALEXANDER HUGH FERGUSON.
8. Venereal Prophylaxis that is Feasible. LUDWIG WEISS.
9. Determinate Factors in the Cause of Insanity. EUGENE G. CARPENTER.
10. Preliminary Note on an Experimental Research into the Means of Controlling the Bloodpressure. GEORGE W. CRILE.
11. Vacation Notes. G. FRANK LYDSTON.

1.—In this article Bevan presents a brief **review of the history and the present status of the surgery of the stomach.** The surgery of the stomach is discussed under 4 heads—operations for malignant diseases, operations for benign pathological conditions, operative treatment of wounds of the stomach and removal of foreign bodies. Each of the various operations is briefly discussed, and the author concludes making a plea for a wider application of surgical procedures to lesions of the stomach. Disappointing as is the surgery for malignant disease, yet it is to-day our only ray of hope in these cases. Certainly the surgery of benign lesions has given us brilliant results and accomplished much good. It is capable of doing much more than it is doing to-day. In almost every community patients afflicted with ulcer of the stomach die from obstruction, perforation or hemorrhage, who could be saved by timely operative procedure. These patients are entitled to the benefits of modern surgery, and they can obtain it if the surgeon can convince the general practitioner of the possibilites for good in such radical treatment. These cases are on the borderland between medication and surgery, and the best results, the greatest good can be obtained only by the helpful co-operation of surgeon and physician; not by indiscriminate operating, nor by protracted routine medical treatment, but by the judicious selection of the treatment required to cure the individual case. [J. H. G.]

2.—See **Philadelphia Medical Journal**, June 21, 1902, page 1099.

4.—See **Philadelphia Medical Journal**, June 21, 1902, page 1110.

5.—See **Philadelphia Medical Journal**, June 21, 1902, page 1110.

6.—See **Philadelphia Medical Journal**, June 21, 1902, page 1111.

7.—See **Philadelphia Medical Journal**, June 21, 1902, page 1101.

8.—Weiss contributes an article on **venereal prophylaxis that is feasible.** He draws the following conclusions: (1) Prostitution is the main source of venereal diseases. Its suppression during the present moral evolution of the race is impossible. (2) Moral regulation of vice solely is a desirable ideal, but impossible of realization. (3) Regulation as practised in continental countries is impracticable here on constitutional grounds, and on the ground of its limited hygienic value. (4) Moral efforts (social, economic, educative and legislative) combined with sanitary measures are promising of results. (5) As sanitary efforts under existing circumstances can step in only after infection has already taken place, a liberal supply of hospitals and dispensaries with free treatment must be provided for purposes of treating and sterilizing sources of contagion. (6) Individual prophylaxis is at present the only feasible means of preventing in part the spread of venereal diseases. (7) It is the duty of every physician to recommend it. (8) The Section on Cutaneous Medicine and Surgery of the American Medical Association should strive to bring about a uniform nomenclature, and the Association should institute through this section a propaganda of action in the different States to bring about under its auspices a national meeting similar to the International Conference for the Prophylaxis of Venereal Diseases which meets again this year in Brussels. [F. J. K.]

9.—Carpenter discusses **the determinate factors in the cause of insanity.** He considers at some length the factor of heredity as a causal basis, and he writes that at least 75% of 100 cases examined by the author exhibited various signs of anatomical defects. He then discusses the part played by alcohol and drugs, syphilis, cerebral trauma, tuberculosis, progressive degeneration, toxemia, kidney lesions, acute infections and nervous exhaustion in the production of insanity. [F. J. K.]

10.—Crile contributes a **preliminary note on an experimental research into the means of controlling the bloodpressure.** He discusses the action of various drugs and their value in controlling the bloodpressure and points out that uniform mechanical pressure on the limbs and trunk by means of a pneumatic rubber suit gives a definite control on the bloodpressure of from 25 to 40 millimeters. With this method the patient may be placed in any posture during operations, as the pneumatic pressure creates an artificial peripheral resistance, causing the blood to flow back to the heart regardless of the posture of the patient. He also contends that adrenalin in his experiments gave a definite control within certain limits over the bloodpressure—raising even twice as high as normal. In its use, however, great caution must be observed. [F. J. K.]

January 31, 1903.

1. Some Unappreciated Causes of Anemia in Childhood. W. C. HOLLOPETER.
2. Retropharyngeal Abscess in Infancy. JOHN LOVETT MORSE.
3. Spontaneous Hemorrhage in Newborn Children. ISAAC A. ABT.
4. Conservatism in the Treatment of Acute Mastoiditis. SARGENT F. SNOW.
5. Treatment of Chronic Purulent Otitis Media. D. A. KUYK.
6. The Teeth as a Cause of Pathological Conditions in the Throat, Nose and Ear. KATE W. BALDWIN.
7. Notes on the Detection and Quantitative Determination of Sugar in Urine. A. B. LYONS.
8. The Present and Future Therapy of Orthopedic Surgery. NEWTON M. SHAFFER.
9. Primary Carcinoma of the Nasal Chambers. WM. EDGAR DARNALL.
10. Vacation Notes. G. FRANK LYDSTON.

4.—Snow advocates **a certain degree of conservatism** in the **treatment of acute mastoiditis**, taking what he calls a "middle ground" attitude. By this he does not mean inactivity, the results of which are replete with disaster. Ultraconservatism he describes as a crime. Extension to the mastoid cells does not follow if free drainage through the drum is obtained early. He advises a free incision in the drum, the knife starting near the lower margin of the posterior half, carried well through to the inner wall, up and out through the attic to bone tissue, and cutting then deeply out along the posterior superior wall of the external canal. The latter portion of the incision not only drains the attic but relieves the periosteal tension. This is called the tympano-Wilde incision. Snow reports 45 consecutive cases treated in this way in each of which the indications usually laid down for the external operation were present. He believes that there was undoubted involvement of the mastoid and pus in the cells of not a few of these patients. Great stress is laid upon the necessity for early and free drainage of the drum. [J. H. G.]

5.—Kuyk recommends a **conservative plan of treatment** in cases of **chronic purulent otitis media.** It is suggested that, when there is no evidence of mastoid involvement, these cases should be given a prolonged trial under the so-called "dry" treatment. He states that in many cases a cure has resulted from simply cleansing the cavity and using dry air. [J. H. G.]

6.—Baldwin reports 9 cases which emphasize the part played by diseased teeth in the production of pathological conditions in the throat, nose and ear. [F. J. K.]

8.—Shaffer reviews the **history of orthopedic surgery** as a specialty and urges its practice as a distinct speciality entirely separated from general surgery and pleads for scientific advancement in the mechanical treatment of deformities. [J. H. G.]

9.—Darnell reports a case of **carcinoma** of the **nasal cavities** which he believes originated in the middle turbinated bone. The extension of the growth was particularly rapid. Carcinoma of the nasal cavities is rare, this being the seventy-ninth case reported. [J. H. G.]

AMERICAN MEDICINE.

January 31, 1903.

1. A Note on the Anatomy of the Perirenal Fatty Tissue. W. W. KEEN.
2. Twelve Cases of Malignant Disease Treated by the Röntgen Rays. HENRY PERKINS MOSELEY.
3. Some Notes on Pollacci's New Method of Detecting Albumin in the Urine. GORDON LINDSAY and WILLIAM J. GIES.
4. Tuberculous Peritonitis. A. E. HALSTEAD.
5. Chronic Bilateral Parotiditis Among the Insane, with a Detailed Account of Five Cases. DOUGLAS SYMMERS.
6. Tea and Coffee Intoxication. EMIL KING.

1.—Keen contributes a note on the anatomy of the perirenal fatty tissue. He discribes 2 layers of perirenal fat which have not been previously described in any of the text-books on anatomy or surgery. The outer layer he names the transversalis layer of fat which is thinner than the internal and is continuous with the transversalis fascia; the internal layer, the proper perinephric fat or fatty envelope, surrounding the kidney itself, is more or less adherent to the fibrous capsule. [T. L. C.]

2.—Moseley reports 12 cases of malignant disease treated by the Röntgen rays. From these and other cases the author draws the following conclusions: (1) The small superficial cases of malignant disease seem to be most susceptible to this method of treatment. (2) The relief of pain is a very prominent feature of the Röntgen ray treatment and is often noticed after the first exposure. In cases that have not progressed too far it is almost possible to promise the anesthetic effect. (3) It is impossible to determine from our present knowledge without trial what cases will be favorably influenced by treatment, but patients should be warned not to be too hopeful. (4) The danger of burning is a real one. Patients should appreciate the possibilty of it before treatment is started, although with precautions it may be avoided. In hospital work, when the operator is doing much Röntgen ray work, the greatest precaution should be exercised in the care of his own face and hands. The apparatus should be arranged so that all changes in the tube necessary to be made while it is running can be accomplished by switches or mechanical devices so placed that the operator can control them at a distance of 12 or 15 feet from the tube. [T. L. C.]

3.—Lindsay and Gies contribute **some notes on Pollacci's new method of detecting albumin in the urine.** The composition of the reagent is:

A. 1 gm. tartaric acid.
5 gm. mercuric chloride.
10 gm. sodium chloride.
The above to be dissolved in 100 cc. water.
B. Solution A 5 cc. formaldehyde (40% solution).

Pollacci's method appears to be a most sensitive test for albumin. In conclusion they summarize as follows: (1) Pollacci's reagent readily precipitates various proteids—simple, compound and albuminoid. (2) The test is too delicate for ordinary clinical purposes, since the normally occurring urinary proteids are precipitated by the reagent. (3) Various nonproteid substances occurring in the urine in health and disease are probably also precipitated by the reagent. (4) The latter possesses little or no advantage over Spiegler's fluid. [T. L. C.]

4.—Halstead contributes an article **on tuberculous peritonitis.** He reviews the etiology, discusses the diagnosis and points out that tubercle bacilli can only rarely be demonstrated in the tuberculous ascitic fluid, nor does inoculation of the guinea-pig give positive results in all cases. The percentage of cures after laparotomy in tuberculous peritonitis varies from 25-85%. He reports the cases of 2 patients with tuberculous peritonitis who were operated upon. The first was of particular interest because death, which occurred 36 hours after the operation, was probably due to toxemia of some sort, subsequent upon operation. The second was one of extensive abdominal tuberculous disease which manifested itself in an acute onset closely simulating acute appendicitis; complete recovery from the disease followed as evidence by return of health. [T. L. C.]

5.—Symmers discusses **chronic bilateral parotiditis** among the insane with a detailed account of 5 cases. All of the patients presented mental symptoms, and all were over 30 years of age. Three were almost unquestionably syphilitic, and all showed stigmata of degeneration. He points out that there is only one condition which may simulate chronic bilateral parotiditis, namely, symmetrical hypertrophy of the masseter muscles. This condition is easily differentiated, however, when the patient exercises these muscles in the act of masticating for the sensation imparted to the palpating finger is that of marked firm resistance, while in the relaxed state slight resistance is encountered. [T. L. C.]

6.—King discusses **tea and coffee intoxication.** He contends that poisoning by tea and coffee is relatively frequent, and that it is often overlooked. He cites the physiological action of caffeine and thein. Individuals who suffer from these forms of chronic intoxication show the following symptoms: Mental and physical lassitude, sleeplessness, headache or neuralgia, loss of appetite and dyspeptic manifestations, constipation in tea drinkers and some disturbance of the heart's action. He remarked that irregular heart action is one of the most constant features and is almost pathognomonic of this condition. He reports 2 cases of this inebriation. [T. L. C.]

MUENCHENER MEDICINISCHE WOCHENSCHRIFT.

December 9, 1902. (No. 49.)

1. Diagnostic Significance of the Leukocytes in Abdominal Typhoid and Surgical Suppuration. A. KUHN.
2. The Behavior of the Leukocytes in Appendicitis. S. COSTE.
3. A Method of Operation for the Correction of Extreme Bowing of the Legs. M. REINER.

4. Experimental Contribution to the Treatment of Perforation or Rupture of the Gall-Bladder. L. BALDASSARI and A. GARDINI.
5. Adrenalin. LEHMANN.
6. The Estimation of Boric Acid and Borax as Substances for the Preservation of Meat. R. BOEHM.
7. Report upon the Result of Vaccination in the Kingdom of Bavaria During the Year of 1901. L. STUMPF.
8. Our Midwives. E. ANGERER.

1.—Kühn has studied the leukocytes in typhoid fever and found that in uncomplicated cases they vary between 2,000 and 5,000. **Leukocytosis** is one of the earliest and most certain of all symptoms of typhoid fever, septicema and miliary tuberculosis. In the former, leukocytosis is often absent, and in the latter leukopenia is occasionally found. Chemotactic substances injected into human beings inoculated with typhoid fever produce a leukocytosis which is usually due to an increase in the lymphocytes. The more severe the infection, the less the leukocytosis. Thirty-three cases of different conditions are tabulated in which careful examination of the leukocytes was made. There is some analysis of the literature and then of the cases. It appears that in infectious processes leukocytosis is only of diagnostic value when there is an acute progressive condition. As soon as the suppuration ceases to spread and the abscess becomes encapsulated, unless there is a leukocytosis of 20,000 or 30,000, no significance can be attached to the blood-count. Therefore, leukocytosis is merely a contribution to our other methods of examination. (The paper is still unfinished). [J. S.]

2.—Coste has observed 29 patients with **appendicitis** in all of whom he had carefully **counted the blood** with the Thoma-Zeiss counting apparatus. Of these 29 patients 15 were subjected to operation, and the correctness of the diagnosis was confirmed. He classifies the cases in 3 groups as follows: (1) Those in which the clinical symptoms indicated a pure appendicitis without recognizable exudate; (2) those in which there was dulness and (3) those in which there was purulent peritonitis. In the first group there were 11 patients, none of whom showed marked leukocytosis, excepting the fourth, in whom the number of white cells on the third day amounted to 18,000 and then rapidly diminished. In the second group there were 14 patients in whom there was distinct dulness in the region of the appendix, in 3 patients the symptoms were mild, and no leukocytosis was present, excepting in one in whom there was a maximum count of 9,000. In the fourth patient the leukocytosis reached 12,000 on the fourth day and then rapidly diminished. In the remaining 10 patients of this group there was always the possibility of an abscess. Alteration in the number of the leukocytes was of the greatest value in the prognosis. In those patients in whom it was low, expectant treatment was employed, and in several operation was performed during the interval with entire success. In these patients the appendix was usually found surrounded by scar tissue. In 3 patients in whom the leukocytosis was increased, operation was performed and abscesses were found. The third group included 4 cases. In all of these there was general diffuse peritonitis, and in 3 the leukocytes were only moderately increased. In the fourth patient a localized peritoneal abscess was found. In all of these patients the temperature was low, there was paralysis of the intestines, great restlessness and rapidly progressing collapse. Coste concludes that in patients with acute appendicitis in whom the number of leukocytes remains normal or shows only a transient and insignificant increase the course is usually mild. In all of these patients, of course, there may be perforation of fecal concretions giving rise to peritonitis. This is not indicated by an increase in the number of leukocytes, but by an increase in the severity of the symptoms. When there are more than 22,000 leukocytes in a cmm. of blood, an abscess can be diagnosed with certainty. When there is purulent peritonitis, the number of leukocytes is only increased when the organism still possesses sufficient resistance. If the number of leukocytes suddenly diminishes it is an unfavorable prognostic sign. [J. S.]

3.—Reiner discusses the **methods for correcting curvature of the legs.** He believes that osteotomy is indicated independently of the degree of deformity, when the diaphyses show unusual hardness (eburnation), or when, independently of the consistency of the diaphyses, there is an angular deformity, correction can only be obtained by rapid separation of the bones. He believes in the principle formulated by Lorenz, that in all patients the skeleton should be preserved at the expense of the soft parts, if necessary. He suggests the following method of operation, which he has used in a number of cases: First the periosteum is incised on the concave side of the angular deformity, because it is often thickened and offers considerable resistance to the straightening of the bone. The osteotome is then placed on the concave side of the angle and cuts almost through the shaft of the bone. The bone is then broken, the deformity reduced and, if necessary, the resisting soft parts dissected. The limb is then straightened and extension applied. He prefers instrumental to manual extension, because a sufficient amount of power can always be obtained. In order to prevent decubitus of the soft parts, it is advisable to overflex at first, in order to diminish the spring of the bone. He gives several photographs showing the results in 3 cases of extreme deformity, and X-ray pictures of the bone. The advantages of his method of operation are that the usual wedge-shaped incision of the bone, which causes some shortening, is avoided, the subsequent extension by means of weights is unnecessary, and, when the bandage is placed upon the limb at the time of the operation, the mobile treatment is possible. [J. S.]

4.—Baldassari and Gardini have attempted to prove by experiments upon dogs whether it is possible to **repair loss of substance in the gall-bladder by transplantation of portions of the mesentery.** All the operations were done under extreme aseptic precautions, and were entirely successful, the dogs apparently recovering by the second day. The animals were killed at various periods after the operation, and good adhesions between the flap and the wall of the gall-bladder found. This operation may prove advantageous in all patients in whom there has been loss of substance of the wall of the gall-bladder. It renders possible a freer separation of adhesions in this region. [J. S.]

5.—Lehmann has endeavored to discover whether it is possible to substitute for injection of gelatine in hemorrhage, injections or local applications of adrenalin. In one case he excised one of the lobes of the liver in a rabbit and applied cotton soaked with a solution of adrenalin to the bleeding surface for an hour and a half. There was no result. In a second case before removing the lobe he injected some of the solution with a hypodermic syringe; in the course of 7 or 8 minutes the lobe to be removed appeared to be entirely empty of blood, and during the operation not a single drop appeared upon the surface. In these cases 3 or 4 minutes after the lobes were removed hyperemia occurred, without, however, secondary hemorrhage. Lehmann believes that **preventive injections of adrenalin** may be of advantage in operations upon vascular organs. [J. S.]

6.—Boehm believes that, if any **substance is used for the preservation of food,** it should be known to be absolutely noninjurious to the human organism. **Boric acid and borax** are very mild, but they do produce eruptions upon the skin after prolonged employment. The fact, that no toxic symptoms have been observed in human beings who have eaten food preserved by these acids, is not a sufficient proof that these substances diminish the assimilation of nutriment in the intestinal tract. The fact that in these experiments more boric acid perhaps was administered than would be ordinarily taken with food is not of itself satisfactory, because in all preserving establishments the quantity employed would probably not be carefully regulated. The fact that certain combinations of boric acid occur in plants is not proof that such combinations are advantageous to the human economy. Poisons also occur in plants. [J. S.]

7.—Stumpf, in continuation of his article upon **vaccination**, states that in the Palatinate 98.47% of all cases vaccinated took. The results were somewhat better with the lymph prepared in the government institutions than with the lymph obtained from private firms. The changes in technique have been in the direction of procuring better asepsis. Absolute alcohol is becoming the favorite substance for sterilizing the instruments, although lancets made of platinum and iridium which could be sterilized in the flame were employed. When steel lancets were employed they were first boiled in water or soda solution, then packed in sterilized gauze and, after employment, placed in various antiseptic solutions. Other instruments were sterilized in the same manner. Asbsolute alcohol was generally employed for cleaning the arm. The opinion of the physicians regarding the advantage of protective covering varied considerably; some favoring it, others having discarded it. Stumpf is vigorously opposed to the reduction of the number of inoculations in each case from 4 to 2. He believes that the degree of immunity obtained by the small number is not so great. There appears to be some relation between the size of the pustules and the vigor of the child. There were numerous cases of auto-infection, and others in which there was an abnormal development of pustules. A number of cases of generalized vaccinia occurred appearing either as a diffuse erythema or as nodules, spots or blisters over the whole body. Occasionally gangrene of the tissues surrounding the pustule occurred. [J. S.]

8.—Angerer has collected some statistics regarding the midwives in the district of Weilheim, in Germany. He finds that, of the 26 midwives active in this district, 24 are more than 50 years of age; 12 of these have never had any education in antisepsis. The number of births attended by each woman in a year varies from 10 to 240. Their earnings range from 100 to 900 marks per year. Many of these women have charge of districts containing less than 1,000 inhabitants. In the majority of cases these women are well-trained. The most important improvement that Angerer suggests is that those women who were educated before the introduction of antisepsis should have thorough instruction in this branch. [J. S.]

BERLINER KLINISCHE WOCHENSCHRIFT.

December 29, 1902. (39 Jahrgang, No. 52.)

1. A Case of True Nanosomia. D. von HANSEMANN.
2. The Staining of Nerve-Cells Without Previous Fixation. A. M. LUZZATTO.
3. A Contribution to Tropical Surgery. HANS ZIEMANN.
4. Alopecia Areata. E. RICHTER.
5. Adrenalin Chloride With Chloretone in Rhinology. BAEZA.

1.—Von Hansemann describes a **dwarf** called the "bird's head man," because Virchow compared his head to that of a bird. He is now 22 years old and a little over 92 cm. high (37 inches). He has developed a beard and pubic hairs since Virchow examined him 11 years ago, but his testicles have not descended. Dwarfs are either proportional or disproportional, this case coming under the former class. The condition is physiological, not pathological. These dwarfs may be normal at birth, but stop growing in infancy or childhood (nanosomia infantilis); or they are small at birth, maturing but always remaining small (**nanosomia primordialis**). This small size may even be noted in the embryo, before birth, as investigations upon aborted embryos show. This man is almost perfectly proportioned, but altogether in miniature. He is intelligent, speaking 3 languages. A radiograph shows that his long bones are absolutely devoid of epiphyses. He is the first dwarf in his family, but his mother has born 3 similar dwarfs since, with normal children between, 12 in all. The other dwarfs all died in infancy. [M. O.]

2.—**Nerve-cells are rarely stained without having been fixed before staining.** Luzzatto has used single or mixed stains upon fresh tissues, with or without adding normal salt solution. With single stains Nissl's granules are well stained. With mixed basic stains the neuroglia is well differentiated from the nerve-cells. The neuroglia shows protoplasm and neuclei; nucleoli and granulation are plainly visible in the nerve-cells. Luzzatto believes that the reaction is much more sensitive without previous fixation of the tissues. His results and technique are described in full. [M. O.]

3.—Ziemann reports a case of **Cesarean section performed** upon a white woman of 36, the wife of a missionary in West Africa, **by a midwife, with horizontal section of the abdominal wall, without anesthesia.** A living child was delivered and, as the **uterus contracted** well, **it was not sutured.** She closed the wound with catgut sutures, the entire operation taking but three-quarters of an hour. There was much hemorrhage. Ziemann arrived 31 hours later, and found the patient in excellent condition, though a trifle anemic. There was neither fever nor any other signs of sepsis. **Convalescence was rapid and perfect.** The child died of dysentery when 6 months old. [M. O.]

4.—Richter reports a case of **alopecia areata** in a woman of 52, with facial neuralgia. After a review of the literature, he concludes that the cause of alopecia areata is not an infection, but some neurotrophic influence. Division of the second cranial nerve experimentally causes it; besides, thallium acetate applications cause neurotrophic affections of the entire body. And with atrophy of the fibers of the sympathetic nerves in certain regions alopecia results, especially when the trigeminus is affected. From his observations he believes **alopecia areata always to be neurotrophic** in character. [M. O.]

5.—Since adrenalin is insoluble in water, **adrenalin chloride** is prepared by dissolving it in normal salt solution **and** ½% **chloretone** (chloroform and acetone) is added, making it locally antiseptic and anesthetic. Hemorrhage is stopped, and it **makes operation bloodless.** It also decreases swelling, by removing the blood, and can be used in spray form by the patient at home. It is given internally cautiously, since it increases bloodpressure and is dangerous in elderly patients with diseased arteries. Its value has been noted in coryza, hematemesis, hematuria, metrorrhagia, opium poisoning, otitis media, laryngeal tuberculosis, ulcerating cancer of the breast, chronic hypertrophic rhinitis, tonsillitis, etc., and in all nose and throat operations. [M. O.]

WIENER KLINISCHE WOCHENSCHRIFT.

December 25, 1902. (XV. Jahrgang, No. 52.)

1. Congenital Labyrinthine Anomalies in Animals. G. ALEXANDER.
2. Congenital High Position of the Scapula With Partial Defect of the Trapezius and Movable Kidney, in a Boy of Twelve. CARL HOEDLMOSER.
3. Subcutaneous Injections of Gelatine, in Childhood. ZUPPINGER.
4. Traumatic Cyst of the Pancreas, With Recovery After Operation. KARL PICHLER.
5. Gastrotomy for Hemorrhage Following Traumatic Rupture of the Gastric Mucous Membrane. FELIX VON WINIWARTER.

1.—Alexander reports his **experiments upon cats and Japanese mice with congenital anomalies of hearing.** Congenitally deaf cats have but little pigment. While in cats there were many anatomopathological labyrinthine changes noted, in the mice there were also disturbances in the specific gravity apparatus, vertigo, etc. The minute morphological details are described in both animals. The mice showed a marked congenital peculiarity. [M. O.]

2.—Hödlmoser reports in full an interesting case of **congenital high position of the scapula**, with absence of the lower portion and shortening of the trapezius muscle on the same side, and right-sided movable kidney, in a boy of 12. Besides, he showed spastic symptoms in the extremities, which suggested the juvenile form of progressive muscular atrophy. Many details are given, and the entire literature is cited. Photographs illustrate the article. [M. O.]

3.—Zuppinger reports a number of cases of **hemorrhage in children stopped by the subcutaneous injection of gelatine**, in solutions of from 2% to 10%. The results were immediate and excellent. It is advised in scurvy, epistaxis, purpura, melena, etc. Ordinary gelatine is not to be used, but sterilized, purified gelatine. His technique is given in detail. [M. O.]

4.—Pichler reports a case of **traumatic cyst of the pancreas** in a man of 37, following a kick in the abdomen. The cyst was punctured, evacuated and packed with iodoform gauze after laparotomy. There was glycosuria before and after operation, but this disappeared eventually with recovery. The wound discharged for almost 4 months before it finally closed. He recovered completely. The literature is quoted. [M. O.]

5.—**Gastrotomy** was performed upon a man of 20, who was severely injured playing foot-ball, because of persistent **hematemesis.** The operation disclosed that the **hemorrhage was due to traumatic rupture of the gastric mucous membrane.** He recovered gradually on account of the great anemia and the odd gastric symptoms which followed operation. [M. O.]

January 1, 1903. (XVI. Jahrgang, No. 1.)

1. Cicatricial Stricture of the Esophagus. MOSETIG-MOORHOF.
2. A Contribution to the Study of Sialolithiasis. FRIEDRICH HANSZEL.
3. Pearly Disease and Human Tuberculosis. FRITZ SCHANZ.

1.—Mosetig-Moorhof reports 5 cases of **impermeable stricture of the esophagus following cicatricial contraction,** in all of which it became necessary to perform gastrotomy; in one case, even, a gastric fistula had to be made twice, to permit the ingestion of food. The case-histories follow, the cause of the condition being the **hurried swallowing of lye** in every case. The passage of bougies failed in all cases. These 5 patients were young persons, observed within 3 years. [M. O.]

2.—Hanszel reports 3 **cases of sialolithiasis** occurring in women of 76 and 28 and a man of 42, who noticed increased flow of saliva without any known cause. Then a tumor appeared in the angle of the lower jaw, which changed in size from time to time. By operation a calculus was found and removed from the submaxillary gland in 2 cases, from the salivary duct in the other. All 3 stones were composed of calcium phosphate and carbonate. The condition probably follows local inflammation, is accompanied with periodic, repeated pains, with stasis of saliva, and the swelling constantly changes in size. The literature is fully reviewed. [M. O.]

3.—Schanz states that, though it may be proved that both **human tubercle bacilli** and **those found in the pearly disease of cattle** are identical, nevertheless the 2 diseases may be different; for the same bacillus may cause 2 different disease conditions. Unknown factors probably determine the sort of changes to follow the presence of the tubercle bacillus, whether phthisis, lupus, pearly disease, etc. [M. O.]

BOLNITCHNAIA GAZETA BOTKINA.

September 25, 1902. (Vol. XIII, No. 39.)

1. On the Question of Insuring the Inferior Hospital Personnel Against Disease, Invalidism and Death. A. B. ARAPOFF.
2. On the Formation of Cartilaginous and Bony Tissue in the Tonsil. N. V. PETROFF.
3. Binary Syphilis and Hereditary Syphilis. V. F. VELJAMOVITCH.
4. Medical Students in Krakoff. ST. RUDZKY.

1.—Arapoff urges the justice of insuring the nurses in the hospitals against sickness, invalidism or death which may be the result of the discharge of their duties. [A. R.]

2.—Petroff had occasion to examine the **tonsils** of a patient who died of acute pulmonary tuberculosis, having suspected that the tonsils were the primary seat of infection. The suspicion was verified by the discovery of **tubercular foci in the tonsils.** In addition he also observed deposits of **cartilage** within the tonsils. This led to a further investigation of the subject. He removed the tonsils from 22 cadavers of both sexes and of varying ages. Of the 40 tonsils examined he found both cartilage and bone in 11, cartilage alone in 10 and bone alone in one. In all, a fibrous degeneration was present. The author ascribes this tendency to the formation of cartilage and bone in the tonsils to a chronic inflammation with proliferation of connective tissue and deposit of lime salts. [A. R.]

3.—Will be abstracted when concluded.

October 2, 1902. (Vol. XIII, No. 40.)

1. Two Cases of Pregnancy with Twins, One of them Developing in the Tube and the Other in the Uterus. V. A. VASTEN.
2. On the Casuistics of Pemphigus Vegetans (Neumann). V. I. MURAVSKY.
3. On the Favorable Action of Quinine in Puerperal Fever. V. M. BURLAKOFF.
4. Binary Syphilis and Syphilitic Heredity. V. F. VELJAMOVITCH.

1.—Vasten reports 2 cases of concomitant **tubal** and **uterine gestation.** The patients were multipara and of middle age. Operation was performed in both to remove the extra-uterine pregnancy. One woman aborted soon after the operation, while the other went on to term, giving birth to a boy weighing 3550 gm. [A. R.]

2.—Muravsky reports a case of **pemphigus vegetans** in a peasant, 41 years old. The patient had a good family and personal history. The vegetating and partly ulcerated papules covered the region of the anus and genitals as well as the mucous membrane of the mouth. He was at first treated for syphilis, but the failure of the treatment led to a correct diagnosis of the affection. The disease grew progressively worse, involving new cutaneous surfaces, and the patient finally died. The autopsy revealed, in addition to the cutaneous lesions, fatty degeneration of the internal viscera and tuberculosis of the apices. The author believes that the rapid course of the disease, the fever, at first intermittent and then remittent, the gradual decline in strength, the cachexia and the fatty degeneration of the internal organs, all point to the **infectious nature** of the malady. [A. R.]

3.—Burlakoff obtained very good results from the use of **quinine in puerperal fever,** in doses 0.3-0.5 gm. until symptoms of cinchonism appeared. He described a case of puerperal fever demonstrating the value of the drug. [A. R.]

4.—Veljamovitch attacks the position of Prof. Tarnovsky who claims that syphilis is more destructive to the progeny than it is to the individual. The author maintains that **the contrary is the case** and that a relative **immunity** which is increased with subsequent infection is transmitted to the offspring. It is by assuming the existence of this immunity that he explains the survival of the human race after successive infections with syphilis, as well as the fact that binary syphilis, i. e., syphilis contracted by the offspring of a syphilitic parent, is, as a rule, very mild. He goes so far as to suggest the possibility of "syphilization" of young men at the ages of 14-15 (?) in order that their progeny may be immune from the disease. [A. R.]

October 9, 1902. (Vol. XIII, No. 41.)

1. In Commemoration of Rudolph Virchow. L. V. POPOFF.
2. Endothelioma of the Serous Membranes. I. I. SCHIROKOGOROFF.
3. A Case of Ulcerative Cholecystitis in Typhoid Fever with Perforation. P. I. GUNDEGGER.

2.—Schirokogoroff describes the pathological findings in a case of **endothelioma** involving the serous surfaces of the pleura, peritoneum, most of the organs covered by the latter, and the lymphatics. [A. R.]

3.—Gundegger reports a case of **cholecystitis** occurring in the course of an attack of **typhoid fever** which was complicated by perforation and subsequent diffuse peritonitis. An operation was performed, but the patient died 2 days later. [A. R.]

JAHRBUCH FUER KINDERHEILKUNDE.

October, 1902. (Vol. 56, No. 4.)

21. The Physiology of Infancy. CAMERER.
22. Pneumococcic Peritonitis in Childhood. M. STOOSS.
23. The Question of Congenital Rachitis. C. ESCHER.

21.—Camerer has tables showing the average excretion of carbon, hydrogen, nitrogen, oxygen, ash and water, determined by chemical examination of the feces and urine, in the average breast-fed infant, gaining 25 grams daily upon 800 grams of milk a day. For normal assimilation, foods hold the following value, tissue containing calcium, carbohydrates, albumin and fats. Tables show the increase in calories and in growth following the ingestion of such food. Cows' milk is improper for infants, because the amount of nitrogenous food in it is not assimilable. Therefore, it must be diluted, and carbohydrates should be added. Camerer found 2% of albumin in mother's milk at the second month of lactation, 1.5% at the sixth month, and 1.94% as a mean for 162 analyses. At the end of the second week a normal infant first weighs more than at birth. For normal growth (from the second to fourth week) an infant needs 5 grams of nitrogen and ash-containing food, 4 grams of fat and 20 grams of water daily. Camerer discusses **the physiology of infancy** in full. [M. O.]

22.—Stooss reports 4 cases of **pneumococcic peritonitis in children**, with recovery after laparotomy. In 3 cases the purulent peritonitis was circumscribed; in one it was diffuse. It must be differentiated from typhoid fever, appendicitis, tubercular and septic peritonitis. Several other case-histories follow, of patients with septic peritonitis due to streptococci and to enterococci. The pathological anatomy is described. Infection may occur from the intestine, female genitalia or pleura, most often from the first. The prognosis in encysted peritonitis is good, especially with early operation; it is poor for diffuse peritonitis. [M. O.]

23.—Escher reviews the literature of **congenital rachitis** in full, finding rachitic changes in but one out of 25 cadavers examined, in a child aged 4 months, with increase in the zone of calcification near the axial medulla. In no case had the cartilage changed into osteoid tissue. Nor was any one of 105 living newborn children rachitic. In normal infants there is a suggestion of a rosary, but the enlargement is not a round knob as in rachitis, but simply a slight increase in the thickness. Craniotabes was also absent, as were osteoid prominences of the frontal and parietal bones. Escher's investigations prove that congenital rickets, if it exists, is very rare, since in his thorough investigations he was unable to find one case. [M. O.]

1902. (Vol. 56, Supplement to No. 4.)

17. The Ferments of Milk. ERNST MORO.
18. Further Observations Upon the Quantity of Food Taken By Breast-fed Infants. EMIL FEER.
19. Observations Upon the Quantity of Food Taken by Breast-fed Infants, With Reference to the Energy Quotients. WILLY BEUTHNER.
20. Congenital Heart Disease. L. M. SPOLVERINI and D. BARBIERI.

17.—Moro reviews the work done upon **the ferments of milk.** The first ferment found in milk was diastase or amylase, a hydrolytic ferment. Other hydrolytic ferments found were trypsin and pepsin, proteolytic ferments; fibrin ferment, a coagulating ferment; and lipase and a salol separating ferment, lipolytic ferments. The oxydative ferments found were oxydases and glycolytic ferments. Methods of differentiating these are given in full. Their presence is probably not of significance in increasing or decreasing the nutritive value of milk. Experiments with infants showed that, while they gained in weight constantly upon breast milk, when this was sterilized, destroying the ferments, the increase in weight was almost imperceptible. This may, however, have been due to changes in the lactalbumin due to the heat. [M. O.]

18.—Feer reports the case-histories of 7 more **breast-fed infants,** fed 5 or 6 times daily, and weighed carefully before and after nursing. The energy quotient increased from the second to the seventh week, then decreased up to the twentieth week. The ability to increase in body growth is greatest in the first week, gradually decreasing afterward. Freer's tables show, on the average, the greatest body weight at the eighth week; the greatest amount of food taken at the seventh week; and the highest quotient of growth in the third week. [M. O.]

19.—Beutner also reports the case-histories of 3 **breast-fed infants,** having collected 21 published cases. The mean weight of these infants decreased 100 grams by the sixth day of life, but by the fourteenth day it had passed that at birth. The energy quotient increased to the seventh week and then decreased again. Thus his investigations agree with those of Feer in the article preceding. [M. O.]

20.—Spolverini and Barbieri report 7 cases of **congenital heart disease.** 4 of pulmonary stenosis, with an abnormal tricuspid valve besides, in one case; 2 of persistent ductus Botalli; and one of atresia of the mitral valve. The history, pathological description, photograph and probable function are discussed in each case. [M. O.]

November, 1902. (Vol. 56, No. 5.)

24. The Functions of the Infantile Stomach in the Diseases of Digestion. T. von HECKER.
25. Persistent Ductus Arteriosus Botalli. K. DRESLER.
26. The Weight of Infants. H. NEUMANN.
27. The Pathology of Measles. MAX BRUECKNER.

24.—In an extensive article, von Hecker reports 54 cases of children, ranging from 2½ months to 4 years, with **digestive diseases.** The gastric juice was examined 119 times, both qualitatively and quantitatively. Of the children 6 had dyspepsia; 11 acute gastro-enteritis; 6 acute enteritis; 5 acute colitis; and 26 chronic gastro-intestinal disorders. Absorption occurs more rapidly under than over 4 years of age. **Absorption is most affected in acute gastro-enteritis,** next in dyspepsia. The **stomach** is least affected in acute dyspepsia and enteritis; **most affected in acute gastro-enteritis and chronic diseases.** The detailed technique of the methods of examining the gastric juice in children follows. [M. O.]

25.—Dressler gives the full case-histories of 3 children with **persistent ductus arteriosus Botalli.** He concludes that the diagnosis is, as a rule not only possible. but that it should always be made from careful auscultation and percussion and good radiographs. [M. O.]

26.—Neumann has collected statistics showing **the weight of 665 babies,** 52% of them being females. The table shows that the figures given by Camerer for normal infants are not reached by these foundlings, most of whom are illegitimate. This failure in weight is most marked after the fifth month, as is shown diagrammatically. [M. O.]

27.—Brückner reports in detail the histories of 2 children with **myelitis complicating measles,** with good recovery resulting. A full review of the literature follows. He found 19 cases, 4 only in adults. The condition is rare and is accompanied by cerebral, spinal or peripheral paralysis. The most common form is diffuse myelitis. The condition probably depends upon the toxic action of the microbe of measles. Recovery is the rule. [M. O.]

December, 1902. (Vol. 56, No. 6.)

29. A Rocking-Chair for Rachitic and Weak Infants. ALOIS EPSTEIN.
30. The Milk Secretion in the Mother and Child. WILHELM KNOEPFELMACHER.
31. Wound Scarlatina With Burns. CARL LEINER.
32. Isolysins in the Infectious Diseases of Childhood. CARL LEINER.
33. Meningitis in the Newborn Infant. LUDWIG GOLDREICH.
34. The Swelling of the Peripheral Lymphglands in Injury. ARTHUR BAER.
35. The Functions of the Child's Stomach in Digestive Diseases. T. von HECKER.

29.—Epstein describes a **rocking chair for rachitic and weak children** from one to 3 years of age, for preventing the occurrence of rachitic deformity. The value of this chair is well shown by a photograph. Several case-histories are given to show the good results achieved upon it. It may also be used for paralysed or deformed children. [M. O.]

30.—**Milk** is often found **in the mammary glands of newborn infants** of both sexes. Knöpfelmacher's **experiments failed to show any relation between the milk secretion in the mother and child.** Yet he believes that this secretion is due to the same cause in both mother and child. His experiments, which gave negative results, follow. [M. O.]

31.—Leiner reports 3 cases of **true scarlet fever in children, following burns.** The eruption was typical, as was desquamation. There was sore throat in one case, stomatitis in 2, and direct contagion to the mother in one. Leiner concludes that burns either are a direct means of entrance for scarlet fever infection, or increase the disposition to contract scarlet fever. [M. O.]

32.—Leiner's experiments gave a **positive hemolytic reaction** in but 7 out of 78 cases of **infectious diseases in** children. All 7 reactions were noted in children with diphtheria, and may have been due to antitoxin. The experiments permit of no conclusion of either diagnostic or prognostic value. [M. O.]

33.—Goldreich reports a case of **meningitis in a child, 2 days old**, with death. The autopsy showed purulent meningitis, pleurisy, bronchitis, jaundice, ecchymoses in the epicardium, and general hyperemia. The cause of the suppuration was the colon bacillus. The infection probably followed aspiration of the fetal liquid which contained colon bacilli. Bronchitis resulted, with secondary meningitis. [M. O.]

34.—**Swelling of the peripheral lymphglands in children is a most common condition.** This is a chronic inflammation, as opposed to acute adenitis. It may be due to infectious diseases, general or local irritation, skin disease, insect bite, chapped lips, dental caries, adenoids, bronchitis, intestinal catarrh, etc. The glands are not very large, nor is abscess formation frequent. Several case-histories without discoverable cause follow. In some cases, therefore, enlarged lymphglands are physiological, not pathological. [M. O.]

35.—The table of von Hecker's 54 cases is given in full, with many detailed statistics. [M. O.]

ZEITSCHRIFT FUER ORTHOPÆDISCHE CHIRURGIE.

1902. (Vol. X., No. 4.)

19. Congenital Dislocation of the Hip. L. HEUSNER.
20. Paralytic Dislocations. VICTOR MARTIN.
21. How to Measure Pes Valgus. KARL NIENY.
22. A Case of Congenital Defect of the Right Fibula With Congenital Dislocation of the Left Ankle. OSKAR SCHMIDT.
23. Flatfoot and Scoliosis. SIGMUND LOEBEL.
24. Changes in the Growth of the Vertebræ After Tuberculous Spondylitis. OLGIERD JALOWIECKI.
25. Duchenne's Valgus Theory. M. van der BEEK.
26. The Favorite Site of the Scoliotic Curve in the Vertebral Column. WILHELM SCHULTHESS.

19.—In an extensive article on **congenital dislocation of the hip**, Heusner states that the condition is found 7 times more frequently in girls than in boys. The pathological condition, the relations of the dislocated femur, ligaments, etc., are all described in detail. The case-histories of 8 cases follow in full, with several photographs. The literature is quoted and the entire treatment given. The Schede apparatus for forcible reduction is described, and the results of this treatment are shown in several photographs. This differs from the Lorenz method in that much more force is exerted. [M. O.]

20.—Martin reports the case-histories of 2 children with **paralytic infrapubic dislocation of the right femur**, with the details of operative treatment, and photographs illustrating the results. The history of a case of paralytic dislocation of the **humerus**, and another affecting the elbow-joint, **bilateral subluxation of the ulna** following anterior poliomyelitis, follow. [M. O.]

21.—After noting the difference between **pes valgus**, pronatus or abductus and pes planus or valgus adolescentium, static flatfoot, Nieny describes with full details his **apparatus for measuring flat foot**, with photographs. The condition is not a true deformity, since the bones are unaffected. Massage and gymnastics can cure the condition, with a support added. [M. O.]

22.—Schmidt reports the rare case of a boy of 2 years with **congenital absence of the right fibula and congenital dislocation of the left ankle.** These conditions are well shown in radiographs. The changes noted at 5 years of age follow, with recent radiographs. [M. O.]

23.—Loebel has studied the **relations between flatfoot and scoliosis**, examining 114 cases. He concludes that flatfoot and scoliosis are very often found together, since flatfoot accompanied 71% of the cases of scoliosis. It is not of etiological importance. Various interesting points are brought out. [M. O.]

24.—Jalowiecki studied the vertebræ from a patient afflicted with **Pott's disease**, and describes the histology of his specimen with minuteness. He agrees with Zschokke that it is natural that elastic material should be opposed to traction, while hard substance results from pressure; for his specimen showed the increase of the elastic material from the great traction, at the expense of the firm material. [M. O.]

25.—According to Duchenne, **pes valgus** is due to loss of power in the peroneus longus muscle with partial or total paralysis, or to contracture of this muscle. This condition he has often cured by localized faradization of the muscle. In the case described and treated by van der Beek both the theory and treatment are substantiated. In other cases the transplantation of tendons may be necessary for effecting recovery. [M. O.]

26.—Schulthess has examined 1140 cases of **scoliosis** to determine the favorite site of spinal curvature. As a result he found more scoliosis convex to the left than convex to the right, 60% to 40%. On the left side the majority of those convex were about the eleventh or twelfth dorsal vertebra; of those convex to the right, at the seventh dorsal vertebra. In complicated cases of scoliosis the curves were about even to either side, affecting the dorsal and lumbar vertebræ. Many interesting technical statistics follow. He concludes that the vertebræ show a tendency to form more curves convex to the left than convex to the right. Most cases of scoliosis are complicated dorsal scolioses. [M. O.]

ARCHIV FUER KINDERHEILKUNDE.

1902. (Vol. 35, Nos. 1 and 2.)

1. Investigations of the Viscosity of Sputum and Its Relation to Cough, Especially in Pertussis. LEOPOLD NEUMANN.
2. Cyclical Albuminuria. LEO SCHAPS.
3. The Gastric Secretion of Infants. ADOLPH H. MEYER.
4. Situs Inversus With Transposition of the Large Bloodvessels. PAUL GEIPEL.

1.—Neumann has investigated the **viscosity and the amount of sputum** in 9 children with coughs, 7 of them **with pertussis**, collecting his results in regular, tabulated form. The amount of sputum is most in the forenoon, but its viscosity is unchanged by the time of day. In 2 cases much sputum was expectorated; in 3 others very little. There is, then, no constant relation between the amount of sputum expectorated and the viscosity; nor is there any ratio between the viscosity of the sputum and the intensity of the attack of pertussis. The viscosity of the expectorated sputum seems to increase as the intensity of the attacks decreases. In light attacks the sputum is very tough; in severe attacks, it is very liquid. [M. O.]

2.—After reviewing the literature, Schaps reports in detail the case-histories of 35 children with **cyclical albuminuria.** Most of them were from 5 to 15 years of age, and girls were 4 times as frequently affected as boys. They were thin, pale children, with scanty muscular development and constipation. Palpitation and signs of heart weakness were noted in 20 children. The condition can undoubtedly lead to nephritis, yet the prognosis, as regards life, is good. In 5 families 10 cases of the affection were noted. In most cases (23 out of 35) some infectious disease had occurred before cyclical albuminuria was observed. This was measles in 15 cases. The hypertrophy and dilatation of the heart, noticed with adolescence, seems to have some etiological relation to the disease. [M. O.]

3.—Will be abstracted when concluded.

4.—Will be abstracted when concluded.

ARCHIVES OF PEDIATRICS.

October, 1902. (19th. Year, No. 10.)

1. Diphtheria, With and Without Antitoxin: 159 Cases. CHARLES GILMORE KERLEY.
2. Some Remarks on Intubation in Diphtheria. JOHN H. McCOLLOM.
3. Chronic Parenchymatous Nephritis in a Child Treated by Renal Decapsulation. (Edebohls' Operation). AUGUSTUS CAILLE.
4. Analysis of Human Milk the Basis of the Artificial Feeding of Infants. ARTHUR V. MEIGS.
5. The Effects of Acid Fermentation Upon the Curd of Milk. WALTER G. MURPHY.
6. A New Sign of Pleuritic Effusion in Children. SAMUEL W. KELLEY.

1.—Kerley attributes the good results obtained in cases of **diphtheria treated with antitoxin** to the early use of the remedy. In addition, it is necessary always to know when more antitoxin is required. The early use of not less than 3,000 units of antitoxin has reduced the death-rate in diphtheria to a very small percentage. This amount should be repeated if improvement is not promptly observed. When there is visible membrane, the physician should inject at once and take a culture afterward. In croup he should inject if there is inspiratory and expiratory obstruction. The patient should be seen at 12-hour intervals, and reinjection should be made if the membrane is not disappearing. A child under one year of age should receive 2,000 units at a dose; while a child over one year should receive 3,000 units at a dose. [J. M. S.]

2.—McCollom details the results of **intubation in diphtheria** as observed in the South Department of the Boston City Hospital. Since the opening of this department there have been 12,000 intubations; eliminating those patients who died within 12 hours after admission, the death-rate was 25%, which the author attributes to early operation and large doses of antitoxin. When the patient can have constant watching, intubation is better than tracheotomy because there is very little shock, because the parents will consent to intubation more readily than to tracheotomy, and because the chances for bronchopneumonia are much less. The author is convinced that stenosis of the larynx in an adult can be relieved better by intubation than by tracheotomy. The feeding of the patient after intubation is of great importance; the author prefers the esophageal method. He has given up all forms of treatment of laryngeal stenosis other than intubation. He usually allows the tube to remain in for 3 or 4 days. [J. M. S.]

3.—Caillé reports the case of a child who had **chronic parenchymatous nephritis.** The child had several acute exacerbations and was finally operated on, **the capsules of both kidneys being split and removed.** The improvement following the operation was quite noticeable. The author would advise the inspection of the kidneys through a lumbar incision in cases in which acute nephritis, not secondary to heart lesions, does not clear up within a reasonable time, say 6 months; and would furthermore advise decapsulation of one or both kidneys should they appear swollen and enlarged with the hope of preventing an acute nephritis from becoming chronic. [J. M. S.]

4.—As a result of the **analysis of human milk,** Meigs states that that fluid never contains more than 1% of casein. It ought to be decided whether it is best that artificially fed infants should have the strength of their food increased at frequent intervals as is generally advised. More analyses of human milk should be made and, if it is found that the percentage of casein contained in it is uniformly low, the question as to the advisability of increasing the strength of the food of a bottle-fed baby can be decided. [J. M. S.]

5.—Murphy has studied the **effects of acid fermentation upon the curd of milk.** He is of the opinion that when we can have at our disposal a milk free from acid fermentation the results in infant feeding will be better than they are at present. [J. M. S.]

6.—**One of the symptoms** which indicates the early stage **of pleurisy** is the attitude of the patient, who lies upon the affected side or bent toward that side or pressing that side. Kelley has observed that in children, when the effusion appears, the patient instinctively turns and prefers to lie upon the back or to be propped up high in bed. He considers this **a reliable sign of an effusion** of considerable bulk in children and an effusion poured out with a degree of rapidity. He does not know whether the sign is present in adults or not. [J. M. S.]

November, 1902. (19th. Year, No. 11.)

1. The Management of the Fat Percentage in Feeding Difficult Cases. THOMPSON S. WESTCOTT.
2. The Proteids of Milk. HENRY DWIGHT CHAPIN.
3. Recurrent Vomiting in Children, With Report of Four Cases. HENRY LARNED KEITH SHAW.
4. Bronchitis and Bronchopneumonia in Children. E. W. MITCHELL.
5. Pneumonia in Children. J. P. BARBER.
6. A Case of Congenital Rachitis. MAURICE OSTHEIMER.

1.—In cases of **chronic gastric catarrh** or **chronic high intestinal catarrh,** in which underfeeding becomes necessary for a considerable time, Westcott obtains the most satisfactory results by the use of whey mixtures, in which the deficiency of proteids in ordinary modifications is supplemented by a high percentage of lactalbumin. In many of these cases unusually **low percentages of fat** must be given, and for this purpose dilutions of milk without cream in conjunction with a fat-containing whey offers the most expeditious means of increasing caseinogen and of keeping the fat percentage within the bounds of digestive tolerance. [J. M. S.]

2.—Chapin points out that, until the composition of the different **proteid bodies found in milk** is discovered and some uniform methods of separating them are agreed upon, comparing milks by analyses made by different methods may lead to erroneous conclusions. Whey and cream mixtures may not be such close imitations of mother's milk as has been supposed. At present the comparison of milk analyses for proteid is of little use, except by showing total proteid and thus the potential food value. The primary object in infant feeding is to increase the number of cells in the body. These all contain phosphorized proteids. Albumin does not contain phosphorus, so, theoretically, it is not fitted for the sole proteid of a diet for any animal. With the present limited knowledge, it is a question whether it is wise to attempt to introduce into practical infant feeding, methods that call for mixtures of different forms of proteid supposed to exist in milk. [J. M. S.]

3.—In the condition known as **recurrent vomiting in children,** the vomiting is the most striking and characteristic symptom. This may be mild or very severe and is usually accompanied with nausea and unproductive retching. Thirst, abdominal pain and constipation are also common attendants on the condition. The temperature is slightly, if at all, elevated. The urine, as a rule, contains an excess of uric acid either preceding or during the attack; and indican is often present. Albumin and casts are inconstant. The disease may last from a few hours to 7 or 8 days. Recovery is almost instantaneous. In the treatment of the disease the indications are to give the stomach absolute rest and to get the bowels to act. For the former purpose morphine hypodermically or chloral by the rectum are of value. Marfan obtained good results in the latter indication by the use of large rectal injections of normal salt solution. Four cases are reported. [J. M. S.]

4.—One of the most troublesome classes of patients is formed by those children who are constantly taking cold. In the treatment of these children Mitchell advises: (1) Building up the constitutional vigor, and (2) isolation and pure air. A large proportion of the **children that are subject to bronchitis** have adenoids and enlarged tonsils which are prone to infection and inflammation. These growths, therefore, should be removed. The author believes that the chief work in these cases must be in the education of the mothers in regard to the feeding, clothing, bathing and exercising of their children. Apartments are kept too warm; sleeping-rooms are not ventilated sufficiently and too much clothing is worn. The following drugs may be used: Cod-liver oil, iron, potassium iodide, arsenic, dydriodic acid and syrup of the iodide of iron. In the treatment of **bronchopneumonia** the cottonjacket is preferable to the poultice. In severe or protracted cases, alcoholic stimulants are of great value. For the control of temperature hydrotherapy is the best measure and the hot bath, temperature 105°, is the most valuable because it lowers the temperature, quiets the nervous symptoms and brings the blood to the surface. This bath may be given every 2 or 3 hours for 10 or 20 minutes. In cases of bronchopneumonia which become subacute or chronic, creosote is of great value. Strychnine is often invaluable as a heart stimulant. [J. M. S.]

5.—Barber has records of 165 cases of **pneumonia in children under 5 years of age** in his private practice. Of these, 17 were diagnosed lobar pneumonia and 148 bronchopneumonia. Of the former, one died; of the latter, 12 died; a mortality of 8.1%. Seventy-seven per cent. of the cases ended before the tenth day, and of these only 3 died. [J. M. S.]

6.—Ostheimer reports a case of **congenital rachitis.** [J. M. S.]

REVUE MENSUELLE DES MALADIES DE L'ENFANCE.

October, 1902. (T. 20, No. 10.)

1. Concerning Some Fatal Cases of Sydenham's Chorea. RICHON.
2. Malignant Diphtheritic Anginas Observed in 1901 and 1902. A. B. MARFAN.

1.—Richon reports the case of a girl, aged 6 years, who in the course of a simple **chorea**, more marked by the intensity of the psychical symptoms than by the violence of the movements, presented an apoplectiform seizure and died in coma within 24 hours. He reports the case of a boy, aged 11 years, who was nervous and who, in the course of a mild infection, presented violent gesticulations without psychical troubles. This child died in 11 days. At the autopsy a mitral endocarditis was discovered of rheumatic appearance. There were no macroscopic lesions in the nervous system; but lesions of the different groups of cells were found in the spinal cord. Also, the case of a girl, aged 14 years, who was emotional and who developed a chorea which became aggravated after 2 months' duration, and in 10 days there were febrile phenomena and mitral endocarditis without cerebral symptoms. At the autopsy a mitral endocarditis and bronchopneumonia were demonstrated, but no apparent lesions of the central nervous system. He then reports the case of a girl, aged 11½ years, who had mild chorea with endocarditis. The child had a serious nervous family history. Two months after the beginning of the chorea the patient had an attack of grave septicemia with endocarditis, from which she died in 9 days. At the autopsy a vegetating mitral endocarditis was found. Finally, he reports the case of a boy, aged 12 years, without rheumatic history, who died from mitral obstruction following chorea, and that of a boy, aged 8 years, who died from pericarditis, hypertrophy of the heart and left brachiocephalic thrombosis. [J. M. S.]

2.—From March 1, 1901 to March 1, 1902, Marfan saw 1,303 patients with diphtheria, of whom 271 died—a mortality of 20.79%. He thinks, from a study of these cases, that the **malignity of these diphtheritic anginas** is due in great part to the association of the diplococcus metadiphtheriæ with the bacillus of Löffler. When he has a case of malignant diphtheria to treat he cleanses the throat every 3 hours with 5% hydrogen dioxide and drops a few drops of 1-40 mentholated oil into the nose once or twice a day. He gives a draught of caffeine, ether and brandy. The patient is put upon a strict milk diet. When there are signs of metadiphtheritic cachexia he uses strychnine sulphate and sparteine sulphate to support the heart, replacing these with caffeine if the pulse becomes soft, and every other day he injects about 40 cc. of artificial serum. [J. M. S.]

November, 1902. (T. 20, No. 11.)

1. Alimentary Régime of Nurslings Suffering From Digestive Troubles. A. B. MARFAN.
2. Umbilical Fungus in the Newborn. R. FROELICH.

1.—In nurslings dyspepsia is neither exclusively gastric nor intestinal; it is almost always gastro-intestinal, and the same may be said of catarrh and of inflammation. Furthermore, digestive disorders of nurslings are notable for the gravity of certain of their forms and by the frequence with which nearly all of them affect the general state, particularly nutrition and growth. Marfan divides these **digestive disturbances** into, (1) Functional disorders, constipation and gastro-intestinal dyspepsia; (2) inflammatory diseases, simple gastro-intestinal catarrh, cholera infantum, follicular or dysenteriform enterocolitis, mixed forms; (3) chronic functional troubles with inflammatory exacerbations, chronic dyspepsia with intermittent catarrh; and (4) disorders of nutrition consecutive upon digestive troubles, simple atrophy and cachectic atrophy. He then gives diet lists which are suitable for the treatment of all these conditions. The lists are complete and do not lend themselves readily to abstracting. He says that a water diet is the best treatment for vomiting of gastric origin in the nursling. He also recommends this diet in cases of cholera infantum, giving almost as large a quantity of water as the child had been taking of milk. This diet will cause the fermentations and the putrefactions in the gastro-intestinal tract to disappear. This diet may be continued for 12 to 48 hours, as the case requires. [J. M. S.]

2.—Froelich reports the case of a child who had a voluminous **prolapse of Meckel's diverticulum**. The patient was a boy, 5 years old, who presented an **umbilical fungus.** These umbilical fungi may be in the nature of a simple granuloma; they may consist of a prolapse of Meckel's diverticulum or of the intestine; or they may be due to the remains of the urachus. [J. M. S.]

December, 1902. (T. 20, No. 12.)

1. Appendicitis and Febrile *Embarras Gastrique*, Hydatid Cyst of the Omentum With Twisted Pedicle. BROCA.
2. Infantile Scurvy and Sterilized Milk. NETTER.

1.—Broca reports the case of a boy, aged 7½ years, who complained of fever, rapid pulse, constipation and distended abdomen. The boy had not vomited. A diagnosis of **appendicitis** was made. He also reports the case of a boy, aged 4 years, in whom appendicitis was diagnosed; but when operated on an **hydatid cyst of the omentum with a twisted pedicle** was found and removed. [J. M. S.]

2.—From a study of **infantile scurvy**, Netter concludes that this disease is distinct from rachitis; that it often follows the exclusive use of sterilized milk; and that the chances of its occurrence are greater when the milk has been subjected to a very high temperature for a very long time. Milk pasteurized at 70° C. is less likely to produce scurvy than milk sterilized at 100° C. A future heating of pasteurized milk renders that milk capable of producing scurvy. Fresh milk contains 1% of citric acid in the form of neutral, amorphous calcium citrate. Under the influence of cooking this is converted more or less into crystalized citrate which is much less soluble and which becomes precipitated. Recognizing the evident antiscorbutic power of citric acid, it is proper to attribute the preventive power of fresh milk wholly or partially to its content of citrates. The sterilization of milk, which reduces its proportion of citric acid to ½ or 1/3, removes from that fluid antiscorbutic materials of the greatest importance. [J. M. S.]

ARCHIVES DE MEDECINE DES ENFANTS.

November, 1902. (Vol. V., No. 11.)

1. Statistics Upon the Infants in the Maternity Pavilion, Paris. C. PORAK and G. DURANTE.
2. Intracranial Angioplastic Sarcoma. FOLLET and SACQUEPEE.

1.—Will be abstracted when concluded.

2.—Follet and Sacquépée report in detail the case-history of a girl of 9, ill but 3 months with intractable vomiting, followed by death from exhaustion. She was hysterical and rather backward for her age. She had convulsions, followed by unconsciousness, and vomited everything, growing extremely thin. She was very thirsty, had enuresis and constantly bit her nails. The autopsy showed a tumor the size of a nut, between the cerebrum and the pituitary body, which on examination proved to be an angioplastic sarcoma. **Intracranial angioplastic sarcoma** is very rare. Its growth may have been influenced by the evident hereditary degeneracy present. The vomiting was distinctly nervous in type. [M. O.]

December, 1902. (Volume 5, No. 12.)

1. Infantile Statistics from the Maternity Pavilion. C. PORAK and G. DURANTE.
2. Polyneuritis in Childhood. M. PERRIN.
3. Dextrocardia from Pleuropulmonary Sclerosis. PAUL MOIZARD.
4. Pneumonia Simulating Appendicitis. JULES COMBY and JOSEPH ZIELINSKI.

1.—Porak and Durante have collected statistics from 2,228 **weak infants treated** in the past 4 years **in Paris**, in an extensive article. Of these, 1547 died, a total mortality of 69%. One-third entered in a moribund condition; another third died in one week after admission, leaving a mortality of 44%. Infection is most common, especially septicemia; and the multitude of methods of entrance of bacteria is noted. The low temperature of these infants is raised by incubators, baths, cotton, hot water bottles, etc. Without any deformity, the lack of cellular development in these babies explains their lack of resistance to infection. Autopsy followed death in every case. Many suggestions are made for improving the treatment of newborn weak infants in Paris. [M. O.]

2.—Perrin reports a case of **septic polyneuritis,** in a boy of 4, epileptic, following septic infection after diphtheria. A review of the literature shows the causes of polyneuritis in children to be alcohol, arsenic, carbonic acid gas and the infectious diseases. In this case the illness lasted months and complete recovery followed. The condition is much less frequent in children than in adults; the diagnosis is not difficult; the prognosis is good and the treatment similar to that of polyneuritis in adults. [M. O.]

3.—Moizard reports the case-history of a boy of 15, with **dextrocardia due to pleuropulmonary sclerosis.** He had right-sided empyema 10 years before, followed by sclerosis, the contraction pulling the heart to the right side. Up to 3 years ago he continually expectorated purulent masses. He also has markedly clubbed fingers. Radiographs show that the clubbing is not due to increase in the bony tissue, but in the surrounding soft tissue. No tubercle bacilli were ever found in his sputum. [M. O.]

4.—Comby and Zielinski report the history of a boy of 8, **with measles, who suddenly developed pneumonia, greatly resembling appendicitis in the sudden appearance of symptoms.** Only 4 days later were pulmonary signs found. Recovery followed. Similar cases are quoted from the literature. [M. O.]

LA RIFORMA MEDICA.

December 4, 5, 6 and 9, 1902.

1. Brinton's Pastic Linitis. A. FOLLI and U. BERNADELLI.

1.—Folli and Bernadelli report 4 cases presenting the macroscopical features of linitis as described by Brinton, in 1864; of which the principal are said to be: Thickening of the stomach wall, together with an almost cartilaginous hardness; reduction in the size of the organ and distinct limitation between its various coats. Histological examination, however, showed that the affection was of a neoplastic nature, and that a diffuse cancerous infiltration existed in each case. The authors do not consider these findings as a confirmation of the opinion held by many observers, that the condition described by Brinton under the name of linitis is invariably of a cancerous nature; but hold that repeated observations are necessary before a decision can be reached as to whether the term linitis may be considered as descriptive always of the same affection of the stomach, or whether the condition which Brinton characterizes by that name may not be the expression of many diseases, all of which present the same macroscopical features. [R. L. F.]

December 10, 11 and 12, 1902.

1. The Condition of the Blood in Poisoning from Phosphorus, with Studies of the Physiopathology of Phosphoric Intoxication. A. CEVIDALLI.

1.—In view of the importance attached to the fluidity and coagulability of the blood at autopsies in general, and those conducted from the medicolegal standpoint in particular, the experimental studies of Cevidalli relating to the **coagulability of the blood, and allied phenomena in phosphorus poisoning,** are of more than usual interest. He found that incoagulability was present in subacute phosphorus poisoning, both in the blood of the cadaver and in that extracted during life. Thus it is proven that fluidity of the blood in the cadaver does not depend essentially upon putrefaction and autodigestion of the coagula. To obtain incoagulability of the dog's blood, it is necessary that the poisoning should be of at least 5 days' duration, or, better still, 10; the poisoning being produced by means of 3 to 4 injections upon alternate days and the specimen of blood being extracted from 2 to 4 days after the last injection. In the author's experience incoagulability was a terminal phenomenon; as but a few hours generally elapsed between the appearance of incoagulability and the death of the animal. That the blood undergoes a gradual change before the appearance of the terminal phenomenon was shown in repeated examinations by the gradual diminution and final disappearance of the coagulating ferment. The absence of the coagulating ferment would seem at once to explain the incoagulability of the blood in phosphorus poisoning, yet experiments in vitro wth fibrinogen and the plasma of animals poisoned with phosphorus seemed to show that a specific fibrinolytic power does not reside in such blood; though, that such power may be present in vivo, the author does not deny. He leans rather to the belief that the incoagulability of the blood in phosphorus poisoning is due to a general exaltation of the autolytic processes normally existing in the organism. [R. L. F.]

December 13, 1902.

1. Contribution to the Study of the Histological Lesions in Ovine Smallpox. M. E. TABUSSO.

1.—Tabusso presents a careful analysis of the findings in a vast amount of pathological material acquired during an epidemic of smallpox among sheep. In addition to the usual skin lesions which are described in the various stages of their evolution, with a wealth of detail not possible of inclusion within the limits of an abstract, he calls attention to the subcutaneous nodules described by Mokel and Valèe; which, under the microscope, are found to be made up of masses of migrated cells, chiefly polymorphonuclear leukocytes, with a few small and large mononuclears. Of the viscera, the lungs were found most frequently affected; the characteristic changes occurring equally in the superficial and deeper parts of the lung; a lobular pneumonia being common. In the numerous examinations made the author found that the period of congestion was followed by the appearance of the smallpox nodules; these were made up mainly of leukocytic infiltration; and, while the small bronchi were almost invariably unaffected, the alveoli showed misshapen and, in great part, degenerated cells; the lumen of the alveoli being filled with detritus and an exudate rich in white cells. Ne special change was seen in the central nervous system; the kidneys, however, showed profound reaction to the infection; the glomeruli participating to a marked degree in the changes seen. Desquamation of Bowman's capsule was present, and the whole glomerulus was infiltrated with leukocytes. Dilatation of the capillaries was frequently found; and the greater part of the nuclei did not take the stains. An amorphous, granular substance occupied the lumen of the tubules; especially the straight tubules. The epithelial cells of these tubules had undergone fatty and granular degeneration in varying degrees. In severe cases hemorrhagic foci were frequently observed, especially in the cortex. In the remainder of the organs nothing beyond an initial inflammation was noticeable, save in cases of hemorrhagic smallpox, when ulceration of the various parts of the gastro-intestinal tract was invariably present. [R. L. F.]

December 15, 16 and 17, 1902.

1. Contribution to the Study of Extensive Intestinal Resections. G. FANTINO.

1.—Fantino discusses the extent of intestinal resection compatible with life and health from the standpoint of his own work and that of other operators. The general trend of evidence seems to point to the possibility, in a certain proportion of cases, of removing with safety from 1/3 to ½ the length of the intestine, though the approach to the latter figure marks the danger line. Fantino details the outcome of the removal of 10 feet of the small intestine in 2 patients, one of which was entirely successful; the second patient dying of marasmus one month after the operation. He believes that the class of cases in which a favorable result is most probable is found among those in which there has been a gradual development of hypertrophy in the healthy part of the intestine so that after the removal of the diseased portion the former is better prepared to carry on the additional work imposed upon it; just as the most successful results follow nephrectomies when there has been a gradual adjustment of the healthy kidney to the extra work required from it by reason of a slowly developing atrophic condition in its fellow. The consensus of opinion seems to indicate that the first or second part of the small intestine is the most favorable site for resections; yet in one patient the author, owing to difficulty of identification from the extensive adhesions present, unintentionally removed the entire colon and with it about 3 feet of the small intestine, and the patient lived in fairly good health for 9 months; death ensuing as a result of prolapse and strangulation of a part of the intestine through a fistulous opening in the abdomen. An incorrect anastomosis of the intestines necessitated a circuitous passage of the alimentary substances through the remaining intestine, and the greater length of time required was, in the author's opinion, favorable to digestion. He believes that this case illustrates the possibility of dispensing with the colon, upon necessity; and the anomalous condition accidentally produced suggests that a perfect technique might provide for a sojourn of the food in the small intestine a sufficient time to ensure its digestion. [R. L. F.]

LA PRESSE MEDICALE.

December 3, 1902. (Volume II, No. 97.)

1. Weak Infants. P. BUDIN.
2. Communication Between the Abscess of Pott's Disease and the Bronchi. BENTZ.
3. The Actual Technique of Rachicocainization. T. TUFFIER.

1.—Budin reports 2 cases of **young infants with congenital weakness,** whose lives were saved by appropriate treatment, heat and nourishment. The great dangers for these infants are subnormal temperature, improper food, inability to take food and infection. Budin uses hot baths of increasing temperature, incubators, hot bottles, etc. The correct food, mother's milk if possible, should be given at regular intervals, in approximately equal amounts, and care should be taken to prevent contagious diseases. He has noted 10% of deaths in 3 years among congenitally weak infants. [M. O.]

2.—Bentz reports 3 cases of young children with **Pott's disease,** in whom **the abscess** due to spinal caries **opened into the bronchi,** the pus being expectorated. Operation upon the site of the abscess permitted evacuation and drainage, and was followed by improvement of the bronchial condition in 2 cases; yet in one case it looks as if infection had resulted, the child now becoming more and more cachectic. [M. O.]

3.—Tuffier reports **the technique of rachiococainization as at present** practised by him. [M. O.]

December 6, 1902. (Volume II, No. 98.)

1. Examination of the Eyes from the Medicolegal Standpoint. F. de LAPERSONNE.
2. Massage in Locomotor Ataxia. G. CONSENSOUX.

1.—De Lapersonne in a technical article reviews the **laws concerning** the occurrence of **injuries to the eyes while at work,** and other diseases of the eye, ophthalmia, sympathetic inflammation, etc., noting most details. [M. O.]

2.—Constensoux advises **special massage for each case of tabes,** since harm will result unless practised exactly as directed. Massage of the skin is of value for quieting sensory disturbances and acts as a tonic; massage of the muscles is valueless, since it causes fatigue. Passive motion is contra-indicated; active motion is ony indicated for reeducation. Massage should always be light and soft, given for a short time only. [M. O.]

Society Reports.

THE PATHOLOGICAL SOCIETY OF PHILADELPHIA.

The annual Symposium, held January 22, 1903.

The meeting was called to order and directed by the president, Dr. C. W. Burr, who made a brief address, calling attention to the fact that the society was honored by the presence of Dr. S. Weir Mitchell, the founder of this field of research in America.

Dr. S. Weir Mitchell presented a paper on **the history of the investigation of snake venom.** He said that but very little work had been done and very little written on this line of research (more than the publication of one or 2 papers in 1843), prior to the reports of his investigations in 1857; at this time he performed some experiments with rattlesnakes, and in 1861 he published his paper on rattlesnake bites. Later he studied the substance from a toxicological aspect, the anatomy, physiology and pathology having been considered in his previous work and contributions. He found that the venom did not influence the organism in which it developed, neither was it deleterious when ingested. At this time he discovered that the venom caused an agglutination of the red bloodcells. The discovery that the poison existed double, one portion in small and the other in large amounts, was also made; besides, he separated these substances, at first by dialysis, later by more simple methods. In 1899 he began the study of the action of snake venom upon the blood, but, unfortunately, his investigations were interrupted.

Dr. Joseph McFarland spoke on **venene and antivenene.** He described the work done by Phisalix, who, he says, discovered antivenene, and of the investigations carried out by Calmette, who demonstrated the fact that cobra venom acts as a paralyzant to the respiratory center. He stated that Martin, of Sidney, found that Calmette's serum could not be used in cases of poisoning from serpents in that country, and that this fact led him to perform experiments with rattlesnakes, moccasins and vipers in order to produce a serum for use in India. Horses were used in his experiments, and in the first one local injections of the pure venom were employed. This he found to cause extensive necrosis at the site of injections, no matter how dilute, and hence had to be discontinued. In the second and third animals the undiluted venom was injected intravenously without any local destruction of tissue. The animals were rendered immune, and the serum was found, on further experimentation, to protect against the nervous symptoms induced by cobra venom. He found, too, that, immediately after the injections, the horses passed into profound collapse, the cause of which he could not determine, and that sooner or later the animals died; this, he said, was caused by the destruction of the normal bactericidal properties of the blood, thus predisposing the animals to various forms of infection.

Dr. Hideyo Noguchi read a paper entitled: **The blood reactions of serpent venom.** He said that through the latest physiological tests he had, under the guidance of Dr. Flexner, made a comparative study on the toxic principles (hematoxins, hemorrhagine, spermatoxin, hepatoxin, nephrotoxin and neurotoxin) of different venoms (cobra, trimeresurus, moccasin and rattlesnake) and different serums (rattlesnake, moccasin and pine snake). He has found that every cytotoxic principle, except the liquefying action upon gelatine, possessed by venoms is to be found in snake venoms, though they differ widely in quantities. He has pointed out that certain complements, either thermobile or thermostabile, of serum are necessary to activate venoms, as was first described by Flexner and himself. He also found that snake serum contained almost exclusively the isocomplementophilic and that snake venom contained both the iso- and heterocomplementophilic amboceptors and in larger amounts. He has also proved conclusively that the cytophilic haptophore groups of venom and serum amboceptors are identical as regards their behavior toward anticrotolus serum and antivenene. Following the work of Preston Kyes' experiments with cobra venom on lecithin, Flexner and Noguchi have found that not only lecithin, but also a group of lecithans, lecithin, kephalin, etc., are able to activate moccasin, trimeresurus, copperhead and cobra venoms. The substance that activates crotolus venom is not like those that activate other venoms. Venom agglutinins, he says, are identical with snake serum agglutinins in quality.

Dr. Simon Flexner spoke **on the effect of serpent venom upon the blood.** He first paid tribute to the kindly aid and co-operation given by Dr. S. Weir Mitchell, and said that the renewal of the work and study would not have been begun but for the interest and help of Dr. Mitchell. Dr. Flexner and his colleague, Dr. Noguchi, began their investigations on the line of immunity, first studying the action of the different venoms upon the blood. The outcome of their efforts was the establishment of the amboceptor or intermediary body, upon which the hemolytic properties of a venom depend. The discovery that a specific constituent of the venom caused the agglutination of the red bloodcells was also made. They then took up the consideration of the general toxicity of venoms, demonstrating that some possessed general action (cobra venom), while others were endowed with local action (rattlesnake and moccasin venoms). Cobra venom they found to possess a decided hemolytic influence, and they also learned that there existed no relation between hemolysis and hemorrhage. This led them to believe that certain constituents of the venoms had a selective affinity for certain tissue cells, consequently their later experiments were carried out on these lines. Cobra venom, they found, contained a specific and destructive agent having a predilection for nerve-cells. This they called neurotoxin. Another was found that exerted its deleterious influence upon the endothelium of the bloodvessels, thus inducing hemorrhage. This they termed endotheliosine or hemorrhagine. Through Dr. Mitchell's suggestion they found that the experiments did not hold good in warm-blooded animals, therefore, their recent investigations have been confined to cold-blooded ones, particularly the clam. The destruction of the bactericidal power of the blood from the introduction of venom they found to be caused by a hemal decomposition, which is due to the presence of the amboceptor or intermediary body. They have also developed a large number of distinct and specific bodies which have a specific affinity for certain tissue cells, as liver-cells, nerve-cells, muscle-cells and so on, to which they have applied special terms as neurotixin, hepotoxin and nephrotoxin. In concluding, Dr. Flexner called attention to the assistance given them by the Carnegie Institute.

NEW YORK OBSTETRICAL SOCIETY.

Meeting held December 9, 1902, the president, Dr. E. H. Grandin, in the chair.

Dr. H. J. Boldt presented 4 specimens of **fibromyoma uteri.** One large tumor was removed from a patient, who had been suffering for several months from atypical hemorrhages, pain and enlargement of the abdomen. No trace of tube or ovary could be found upon the left side. In the second patient abdominal hysterectomy was performed. Pathological examination revealed colloid degeneration, with marked hyperplasia and cystic degeneration of the uterine mucosa. The uterus was an integral part of the tumor. In the third case extensive pelvic peritonitis made the operation very difficult. Abdominal hysterectomy was also done in the last case. Dr. J. R. Goffe said that he did not consider the condition of the endometrium a contra-indication to myomectomy unless a malignant growth exists. He reported a case of myomectomy for a large fibroid, in which the uterine cavity was opened, transperitoneal curettage performed, and dilatation of the cervix, with gauze drainage into the vagina, was followed by perfect recovery.

Dr. Boldt presented 3 cases illustrating **the possibilities and disadvantages of the vaginal route.** The first specimen was a large dermoid removed *per vaginam* from a patient who had complained of abdominal pain and swelling for several years. The tumor bulged so much into the posterior fornix that the vaginal route was chosen for its removal. A pelvic exudate so delayed convalescence that he questioned the advisabilty of this route. The second and third cases were tubo-ovarian abscesses, one removed successfully *per vaginam*, the other through the abdomen, but, because of the difficulty in separating intestinal adhesions, he thought that the operation might be better done through the abdomen. Dr. Boldt aso presented a **possible fibroma of the ovary** for examination. Dr. W. S. Stone recalled a specimen found to be uterine fibromyoma, which had become detached from the uterus and had grown to the ovary. Dr. Boldt related the history of a case of severe acute general peritonitis, in which exploratory laparotomy failed to reveal the cause, which was intestinal obstruction. Dr. Goffe recalled a case of ptomaine poisoning, presenting a similar clinical picture. Dr. J. Brettauer thought that the possibility of infection from the bacillus coli communis could not b excluded. Dr. W. T. Gibb recalled a case of general peritonitis, in which partial obliteration of the lumen of the appendix was found. Dr. R. A. Murray spoke of the frequent occurrence of general peritonitis from an appendix which appeared normal.

Dr. A. F. Currier presented a paper on **the scope of the vaginal incision.** Introductory remarks relating to the inception of this method by Péan were followed by an enumeration of the 4 vaginal incisions; circular, lateral, anterior and posterior. The circular incision is limited to cases in which the uterus is to be removed. The anterior incision, as preferred by Dührssen, is less desirable than the posterior, because of the unyielding pelvic bones, the proximity of the bladder, and the comparative narrowness of the vagina. The posterior incision gives the vaginal method its greatest usefulness. Section of the peritoneum *per vaginam*, although unexplained, gives better opportunity for drainage and irrigation and more positive evidence of secondary hemorrhage, unless the large vessels are involved. The 2 requisites are a sufficiently large incision and a peritoneal opening that is in immediate contact with the uterus. The usefulness of the anterior incision has been demonstrated for the cure of retroflexion by shortening the round ligament, attaching the body to the supravaginal cervix, or anterior vaginal wall; for ligation of the tubes to insure sterility in cases of tuberculosis and serious disease of the heart, liver and kidney; for myomata in the lower segment; for pyosalpinx, hydrosalpinx, ovarian tumors, inflammatory exudates and collections of pus in the anterior pelvis; and, occasionally, as an aid in the diagnosis of disease in the pelvis. The posterior incision may be indicated for diagnosis; for opening and drainage of collections of pus, both apart from, and inclusive of, the appendages; for the removal of tumors of the appendages, provided they are not too adherent to the intestines, without removal of the uterus unless it has been mutilated; for the removal of pedunculated uterine myomata of small size; for the removal of intraligamentous cysts, prolonging the incision laterally according to the method of Stratz; for release of the displaced uterus and appendages, permanent cure requiring either an additional opening in the anterior fornix or laparotomy; for evacuation and permanent drainage of fluid accumulations from tuberculosis, liver and kidney disease; and for some of the exigencies of parturition and the puerperal state, cystic tumors obstructing delivery, rupture of the uterus and puerperal septicemia, but not for ectopic gestation. Dr. W. M. Polk spoke of the difficulties of this method of operating. Dr. H. S. Collyer approved of opening abscesses *per vaginam* and of subsequently removing the sacs from above. Dr. Goffe thinks the consensus of opinion is that, in large pelvic abscesses and acute conditions, the vaginal route is to be chosen, and its use in diagnosis is sufficient evidence that the vaginal incision is safer, if possible. He prefers, however, except for releasing the adherent uterus and appendages, the anterior incision, as the uterus and appendages are more accessible. He thinks the vaginal route the most satisfactory for shortening the round ligaments. Dr. J. E. Janvrin would not use the vaginal route for diagnosis, for ectopic pregnancy, or for the removal of cystic tumors, if there was any reason to suspect adhesions. Dr. G. W. Jarman thought that vaginal work would be generally accepted by younger men. Dr. Stone recalled how recently most men were doing vaginal work extensively. Dr. Brettauer said that, as he became more familiar with vaginal work, he used it less. He would use the anterior incision for cystocele in old women, by fixing the uterus to the anterior vaginal wall just beneath the urethra. Dr. Boldt thought that the question of hemorrhage was the most important point for consideration, as it was very much harder to control from below than from above.

MANHATTAN DERMATOLOGICAL SOCIETY.

Meeting held January 2, 1903, Dr. L. Weiss in the chair.

Dr. W. S. Gottheil showed a woman with red patches on the nates, gluteal regions, legs, breasts and neck, varying from 4 inches square to 15 inches in diameter, with itching, scratch marks, induration and lichenization. This eruption, which had persisted 8 years and had resisted all treatment, was diagnosed **chronic indurated eczema.** Dr. Abrahams thought it a parasitic eczema and suggested a 50% solution of silver nitrate to allay itching. Drs. Bleiman, Oberndorfer and Pisco believed the eruption to be due to gout, which should be treated constitutionally. Dr. Weiss recommended unguentum diachylon; Dr. Pisco advised mild applications locally.

Dr. Geyser showed a child of 5 years with **psoriasis.** Dr. Pisco had seen one at 3 years; Dr. Abrahams one at 6 months. Everyone agreed that the child had psoriasis.

Dr. Oberndorfer presented a man of 30 with a hard, somewhat fluctuating mass 2½ inches square, in the body of the penis, behind the glans. There were fistulæ along the under-surface of the penis, and mucopurulent discharge, both from the fistulæ and from the urethra. This was diagnosed **multiple gummata of the corpora cavernosa.** All members present concurred in the diagnosis. Large doses of antispecific treatment were recommended.

Dr. Abrahams showed a case of **diffuse scleroderma** which he had already presented last October. The patient showed marked improvement upon thyroid gland which, begun with one grain 3 times a day, had been increased to 5 grains 3 times a day, combined with strychnine.

Dr. Sobel presented a case of **tubercular epididymitis and orchitis,** also shown last October. The tumor had increased in size but had then broken down, causing fistulæ. The process was evidently extending, the prostate gland now being involved. The lungs and other organs were apparently normal. The diagnosis made was progressive ascending genital tuberculosis, in spite of the fact that frequent examinations failed to show any tubercle bacilli.

LA SEMAINE MEDICALE.

November 19, 1902.

The Value and Indications for Surgical Intervention in Cholelithiasis. F. LEJARS.

It is now established that 3 elements must be considered in the study of this condition: (1) **The rôle of infection** in the pathogenicity of calculus and the accidents which lead to their original formation. (2) The evolution of lithiasis occurs in several stages. (3) The study of the remote effects of operation and of relapses. Infection is the chief factor at work. The especial danger of the condition lies in the development of a suppurative inflammatory condition. The danger begins with the migration of the stone from its site of formation. While the operations for the removal of the calculi have been by no means entirely satisfactory, yet surgical intervention is demanded in certain conditions; such as suppurative conditions of this duct or viscus or perforation leading to peritonitis. The chief causes of failure have been due to the fact that the patients have not been operated upon in time. This author regards **cholecystectomy** as the operation of choice.

[T. L. C.]

Special Articles.

THE LIBRARY OF THE COLLEGE OF PHYSICIANS OF PHILADELPHIA.

The recent generous offer of $50,000 by Mr. Andrew Carnegie to the Library of the College of Physicians, of Philadelphia, has already been chronicled and commented upon in this Journal. The following brief sketch of this famous medical library will doubtless be of interest to many of our readers:

The College of Physicians of Philadelphia was founded in 1787, and is consequently one of the oldest medical societies in America. It is an institute, not a college for the education of medical students. It has always held a leading place in the medical life of Philadelphia, and it early began the formation of its library, which is now one of the most important collections of medical books in the world.

On July 1, 1788, a plan for forming a library was suggested, and this was formally adopted on March 3, 1789. In December, 1788, John Morgan sent a donation of twenty-four volumes to this library, and in 1789 he added other volumes. In the latter year the college ordered $133.33 to be expended for additions to this collection. From this humble beginning the library of the College has grown to be, in point of numbers, the third or fourth medical library in the world. In the value of its collection the library of the College of Physicians of Philadelphia is second in the United States, being surpassed only by the library of the Surgeon-General's Office at Washington. In January, 1903, it contained, in round numbers, 61,000 bound volumes, 13.000 unbound volumes and 64,000 unbound theses, dissertations, pamphlets, etc. This large collection of valuable medical books has reached a point at which it is necessary to provide for its better housing and for its future growth. For several years those who are active in the management of the College have been concerned for the future of this great storehouse of knowledge, of this important workshop of the physician, whither he goes to supplement the knowledge that he already possesses. It is particularly gratifying to learn that Dr. S. Weir Mitchell has induced Mr. Andrew Carnegie to promise to give $50,000 to the College of Physicians for the improvement of this library, provided the Fellows of the College will raise another $50,000. We understand, and we congratulate the College on the fact, that $21,000 of the required $50,000 are already actually paid or pledged. We have no doubt that the Fellows will succeed in raising the remaining $29,000 necessary for the realization of Mr. Carnegie's offer. Here is a chance for those laymen who have been helped by physicians and who realize the value to a community, to a State and to a nation of a body of intelligent, educated and scientific medical men, to make substantial recognition of that value by adding to the fund already started, in great measure, by laymen. Here also is an opportunity for professional men, recognizing the usefulness of a great free library to their professional brethren, to influence those of their clientele who are able to contribute to this fund and thus to have part in advancing medical science and medical knowledge.

This library is absolutely free; it is consulted not only by physicians, but also by laymen, who frequently make use of it in order to obtain information on hygiene, sanitary science, medical jurisprudence and kindred subjects.

A committee of the College is actively at work considering plans for the extension of the library, two feasible methods having been brought before it. The profession at large should be gratified to know that this valuable collection of books will, in all probability, be satisfactorily housed in the future in quarters that will allow of its growth for many years to come.

It must not be supposed that the College of Physicians is content with managing and maintaining a library; it has regular monthly meetings at which scientific papers are read and discussed, except in July, August and September. There are sections of the College devoted to the study of problems connected with general medicine, ophthalmology, otology and laryngology and gynecology, which meet once a month. There is the Mütter Museum, which contains a valuable collection of specimens illustrating the various branches of medicine and its collateral sciences. There is the Directory for Nurses, from which trained nurses and attendants can be obtained for attendance upon the sick. The College also administers two funds, the income of which is awarded as prizes; first, the Hatfield prize, which is awarded every three years for original research in medicine, and, second, the Alvarenga prize, which is awarded yearly for the best memorial or unpublished work upon any medical subject.

TROPICAL DISEASES.*

TROPICAL DYSENTERY. (Continued.)

Third Lecture in a Course on Tropical Diseases, Etc.

By CAPTAIN CHARLES F. KIEFFER,
Assistant Surgeon, U. S. Army.

Gentlemen: I find in the conclusion of my last lecture, that I rather slighted the subject of the use of opium in acute dysentery. You will find, as a rule, that with heat, either dry or in the form of fomentation, you will be able to relieve the abdominal distress, the tenesmus and griping. Dry heat obtained from the Japanese pocket stove, with which you are all familiar, is probably the preferable form. When these means are insufficient you must not hesitate to use opium in one form or another, remembering that you are giving it for the relief of pain and not for the purpose of checking bowel movements. I think you can safely dismiss the fear that you will be "locking" up, in the bowel, morbid contents that will produce untoward symptoms. You may use opium locally in the rectum, 10-15 minims in an ounce of cold starch solution. If a more decided action is needed, give morphine hypodermically in doses sufficient to produce the effect. In tropical practice you must always be on your guard, in this connection, against the native opium smoker or opium eater. Indeed, you will do well to bear this very prevalent vice in mind in general practice, even in these latitudes. I ask you to remember that diarrhea, often long-continued and severe, is sometimes an expression of chronic opium intoxication. If upon one of these diarrheas you have a dysenteric process superimposed you will readily understand that the estimation of the opium element becomes a very important factor in the casuistics of the case. It will be well to know whether you are not feeding more fuel to the flames instead of extinguishing them. Therefore, gentlemen, before the administration of the drug in these conditions, endeavor to find out whether or not your patient has been addicted to the use of opium or morphine. This you will have little trouble in doing, because in tropical countries these vices are not pursued with the degree of secrecy commonly employed in our own country.

If your treatment of dysenteries has been thorough, particularly if you have had the opportunity of seeing your patients early in the disease process, you will commonly be able to terminate them with the cessation of the acute symptoms. If, on the other hand, treatment has not been successful or only partially so, or if the patients have been neglected and come to treatment late, particularly if they have defied all dietary and medical restrictions, we then see the chronic phases of the disease, to which I now direct your attention.

Chronic Dysentery.

Chronic dysentery is usually a sequel of acute dysentery, although it may be a subacute or chronic process from the beginning in amebic cases. In this connection the statistics compiled by Woodward, in the Medical and Surgical History of the War of the Rebellion, are of interest. He tabulated 259,071 cases of acute dysentery and 28,451 cases of chronic dysentery. Osler very properly calls attention to the 182,586 cases classified as chronic diarrhea and makes a very pertinent conjecture as to what proportion of these cases would properly be classed as chronic dysentery, in the light of our present knowledge of the disease. Nevertheless, these figures will give you a very fair idea of the proportion of chronic dysentery resulting from acute cases. These statistics of the war of the rebellion are medical and surgical treasures and remain as appalling models of encyclopedic labor for the respect of future generations of medical men; and I desire to call the attention of the men of this school to the fact that in this great work of Woodward's on the medical side you find the equally valuable labors of Professor Brinton on the surgical side. Here, then, we have enormous statistics bearing on the incidence of chronic dysentery. The large proportion of these cases came from the seat of war and, as you know, the terrain of the operations of the civil war was, almost entirely, in the southern states, practically in a subtropical climate. With our present knowledge of the probable identity of the etiological factors, these figures, therefore, become valuable in our present study.

The great bulk of chronic tropical dysentery is due to the ameba coli. These are either the forms that after beginning with an acute course run along as slow chronic cases with periodical recrudescences or the forms that were chronic from the time of an insidious beginning. I bring before you now a case of the former description and, the better to fix in your minds the salient features of this type of dysentery, I will develop in your presence a rapid anamnesis.

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*Third lecture delivered at the Jefferson Medical College, Philadelphia.

A. R., male, white, by occupation a soldier, age 24. As you see a man of very good muscular development, well set up, fairly well nourished, with a very slight deposit of subcutaneous fat and a finely textured, freely movable skin. This man is a trifle anemic, a trifle "drawn" looking. If you were looking at him with the eye of an athlete you might say that he was trained down too "fine;" or that he was overtrained or "stale." You would make this deduction, I say, from his color, the slight falling away of his cheeks, the apparent tension of the skin over his malar bones and the almost complete absence of subcutaneous and belly fat, the panniculus adiposus, that makes him look like the "flayed figure" so well known in artistic anatomy. His history is that after two and one-half years' service in Luzon he developed a dysentery. From his description the disease was of rapid onset. He says he had ten or twelve movements the first day and the second day they had become so numerous that he lost count of them. At this time he was in the mountains on detached service, and he was not treated for several days. The disease progressed rapidly and with it rapid and considerable emaciation. We ascertain that his normal weight was 155 pounds. After the acute symptoms abated and he commenced to move about, he weighed 95 pounds. He entered on a slow, tedious convalescence, was sent home, improved greatly while on shipboard and shortly after reaching San Francisco was able to resume his duties. That was one year ago. Now he weighs 135 pounds. You will observe he has nearly regained his loss and if you were to sum up his present condition you would say that the deficit is represented in the loss of the subcutaneous fat. During the last year, and this is the interesting point, he has had nine recurrences of his diarrhea. These recurrences have been mild. The movements consisted of mucus and undigested food, and lasted from three to five days. When we examine him we find nothing but a slight degree of tenderness over the colon and a little enlargement of the liver dulness downward. Microscopical examination of the feces reveals the ameba coli.

Now, gentlemen, this case is so very typical of the common run of these relapsing dysenteries that I am glad to make it the text of what I shall say concerning them. In the first place, bear in mind that this man has present in his colon, and apparently constantly present, the etiological factor. He has quitted the endemic area and has since that time suffered these repeated recrudescences, these lightings up of his old process. Harris, a distinguished alumnus of this school, used to say that he believed amebic dysentery never entirely recovered. I do not know whether I can subscribe to that, because my experience has not been sufficiently long. But I will say that I have not yet seen one entirely recover in an experience of individual cases extending between three and four years. Manifestly the etiological factor is at least expelled very slowly. The mildness of these recurrences in this case is usual. But, on the other hand, this man is entirely liable to a recrudescence of fatal severity. Removal from the tropical to the temperate zone has very much diminished that liability, but has not entirely removed it. In the interval between the attacks, as you see him now, he believes himself to be entirely well, and he practically is well.

In the second class of these amebic cases we find, instead of a gradual and fairly prompt restitution with subsequent relapses, a slow smoldering along of the process. The patient is apparently condemned to years of valetudinarianism if not to complete invalidism from the extensive damage done to the bowel. The symptoms are indefinite. The patient has from four to ten or fifteen bowel movements during the twenty-four hours. These movements are usually attended with little griping or tenesmus, but rather with indeterminate, dull abdominal pain and with considerable flatulence and borborygmus. There is considerable tenderness over the colon and, as in acute dysentery, this tenderness is an excellent guide to the extent and location of the disease process. As a rule, blood and bowel structure are not demonstrable, macroscopically, in the stools. Mucus may be present in varying amounts, usually frothy and intimately mixed with undigested food particles. The diarrhea may alternate with constipation, in which case the bowel movements are apt to be scybalous and each separate fecal mass is covered with tenacious mucus. If with this chronic stage of the disease there be some degree of active process going on, if, while the bulk of the dysenteric lesions are healing, new ulcers are formed and spread, we will have added to these symptoms certain elements of the acute manifestations. Then we find, in addition, blood, pus and bowel structure in varying amount and size. To these symptoms all the phenomena of impaired digestion and assimilation are added. The degree of activity or inhibition of the biliary excretion will, of course, alter the appearance of the stools so that we may have intensely bilious stools or white, frothy, mawkish-smelling stools.

If these symptoms continue, we have great anemia and emaciation, developing sometimes to a startling degree. Nowhere, perhaps, except it be in malignant strictures of the esophagus, will you see such advanced emaciation. So that these patients with their thin, retracted, bloodless lips, the deeply sunken eyes and the skin hanging in dry, scurfy folds, like an ill-fitting garment on the bony skeleton, present a pitiful appearance. The last scene that closes the distressing picture is death from asthenia or perhaps a terminal pneumonia or other infection, or, if the symptoms abate somewhat, the patient lives a life condemned to chronic invalidism. The third common termination of these tropical cases is in sprue or psilosis, of which interesting condition I shall have more to say to you further on.

When bacillary dysentery becomes chronic, the clinical type is simply one of amelioration of all the symptoms of the intense acute stage. When these cases are not rapidly fatal we see a gradual decrease in the symptoms and the development of a condition that may be called chronic in comparison to the acute stages, but which is much more severe and progresses much more rapidly than a parallel case of chronic amebic dysentery. The bowel movements number from five to fifteen daily. There is a moderate amount of griping and considerable tenderness over the course of the colon. Dyspeptic symptoms are quite pronounced, and flatulence is usually present. With all these symptoms we may have a dry, glazed, eroded, beefy-looking tongue that is constantly smarting and that makes the ingestion of food very painful. Sapid foods indeed cause intolerant, stinging and burning of the tongue and buccal mucous membrane. In this form of dysentery the process may rest at any one of the stages detailed to you in the study of the acute cases. As a result we see chronic follicular and chronic diphtheritic forms and even the intensification of the latter that ends in sphacelation of the bowel structures. The bowel movements contain mucus, blood, pus and, depending on the degree of the process, varying amounts of exfoliated tissue. In appearance they vary from a small, slimy mucus evacuation to a thin, watery or syrupy flesh-colored to brown fluid with a horribly offensive odor. The terminal asthenia of these cases is, if possible, more pronounced than in the fatal amebic cases, and it represents the common ending, although many terminal infections may develop. The development of sprue as a terminal state is not common in these cases.

The *pathological conditions* are similar in their nature to those in acute dysentery. The process will be found in every degree, from the beginning follicular ulcer to the extensive ulceration, the covering of this ulcerative process with a dense diphtheritic deposit and the necrosis of the underlying tissues. You will have added, of course, in chronic dysenteries, very great thickening. This thickening involves the mucosa, the submucosa and the muscularis. It makes of the colon a thick, rigid tube, the deposit being concentric and, therefore, encroaching on the caliber of the bowel, although large pouch-like dilatations may be found. This thickening of the colon is so pronounced that, in some cases, the course of the colon can be readily palpated through the attenuated abdominal wall. In the ulcerative cases you find all stages of lesions. Most of them old, with thickened edges and pigmented borders and floors, sometimes giving you the "shaven beard appearance." Some of the ulcers will be more recent, some of them still active. The processes of repair will be represented in all stages; there will be induration and cicatrization. In addition to the findings in acute dysenteries we find in long-standing cases very marked changes in the small bowel; indeed, in the whole gastro-intestinal tract from the stomach down. These are low-grade catarrhal inflammations and extensive areas of atrophy. The small intestine may be so thin as to resemble parchment and be almost diaphanous, with most extensive atrophy of the mucous membrane. The stomach shows large areas of chronic inflammatory changes and areas of atrophy, but not so extensive as in the small intestine.

In bacillary dysentery we observe the same grades of changes, only here the diphtheritic forms distinctly prevail. The lesions are more apt to be of the same age, because this form is a continuous and progressive disease and quite distinct, therefore, from the ulcerative amebic types in which the recurrences account for the different stages of ulceration. The chronic ulcerative forms of amebic and bacillary dysentery show quite constant differences. The ulcerations in chronic bacillary dysentery begin in the follicles and extend regularly into the mucosa and deeper. In the amebic form the ulcers are much more irregular; not only in point of age, but they present more tendencies to undermine and for different ulcers to unite, creating serpiginous lesions.

The ameba coli is constantly present in the amebic form, but, in the bacillary form, the Shiga bacillus disappears as the disease becomes chronic, particularly when there is marked ulceration. With this disappearance the agglutination reaction becomes very much fainter and is finally lost in long-continued cases.

Treatment of chronic dysentery is divided, first of all, into the treatment of the subacute recurrences and, secondly, into the treatment of the essentially chronic stages. The remedies are general and local. The general remedies are what might be classed as intestinal antiseptics. They include the various preparations of bismuth. Bismuth is a much more valuable remedy in chronic dysentery than in acute dysentery. Yet, even here, it must be classed as distinctly secondary in our plans of treatment, properly speaking an adjuvant. To be of service, the preparations of bismuth must be given in very much more decided doses than are commonly employed. The patient should take from 10 to 15 drams of the drug daily, distributed throughout the twenty-four hours at intervals of two or three hours. Thus you would give your patient one dram every two hours. Monneret insists on these large doses, giving as high as 18 drams a day. You may use either the subnitrate, the subcarbonate, the salicylate or the preparation I recommended to you in the treatment of acute dysentery, beta-naphthol bismuth.

Salol alone or in combination with bismuth is of great value. Sulphur has been used by Stengel in the treatment of chronic amebic dysentery with such prompt and striking success that his observations demand very careful consideration and the remedy extended trial. The administration is quite simple. Ten grains of sulphur, in capsule, are administered three or four times daily, with sufficient opium to overcome the laxative effect. In one old case he has seen the amebæ disappear from the stools, "and the movements, which had been liquid for 6 months, become solid within 24 hours." I have had no experience with this remedy, but this remarkable observation, which I regard as very authoritative, will lead me to use it in suitable instances, and I give it to you for your notation and observation.

The local treatment of chronic dysentery is our mainstay and, all things considered, is the most rational plan. Before detailing the various remedies employed, I must call your attention to certain very essential general points for you to bear in mind in the local treatment of the colon. First of all, you will not use local remedies in acute or subacute recurrences or recrudescences, in chronic dysentery. You must combat these active conditions in the manner I have described to you in the treatment of acute dysentery. These cases should be put through a several days' treatment with ipecac or the saline sulphates, until the acute symptoms have subsided. Then you may begin with topical treatment.

In the next place, the manner of making the application is of considerable importance. The greatest difficulty you will encounter is the irritability of the colon itself, its intolerance of the injection. You will remember that this was the chief objection to the use of local remedies in acute cases, and you will find, even in chronic cases, sufficient difficulty in overcoming it. You may find it necessary, at first, to anesthetize the rectum with a 4% solution of cocaine or with a suppository containing cocaine or iodoform. You will very commonly discover that the full amount of the irrigation cannot be used at first, and that the ability to admit a large quantity of fluid will be attained gradually, beginning with a small quantity and increasing daily. These injections should never be given hurriedly and should be either under the supervision of the physician, or in the hands of very competent attendants. The intention is to bring the medication in direct contact with the diseased surface; to do that the quantity of the fluid must be such that the irrigation will fill the colon and will reach quite up to the ileocecal valve. The pressure must be such that the bowel will be moderately distended, so that the remedy may reach every part of the sacculations and flow between the folds of tumefied mucosa. To attain these ends the clyster must be from 3 to 6 pints. The fluid must run with very little pressure and very slowly. For all practical purposes, 3 feet should represent the extreme head of your hydrostatic column, and it should be as much less as is possible, in each individual case, to fill the colon. It has been shown that a fall of 6 to 8 inches suffices in many cases. The injection must be stopped when there is pain. I do not mean by this discomfort, since the filling of even a normal colon is attended with some degree of discomfort. When you begin topical treatment you will find that the irrigation may be rejected at once, and particularly is this the case if the introduction be made rudely or hurriedly. Hare advises that 10 to 15 minutes be allowed for the injection to flow in and speaks of "sneaking" the solution into the bowel, as it were, and so prevent "angering" the colon. A very graphic description, gentlemen, that should be of the greatest instructive value to you. Further to facilitate the flow into the bowel, I have adopted the following routine: The patient is placed on his left side, buttocks elevated, and the rectal tube, well lubricated, is carefully introduced. Just here you can, by supervising your attendants and insisting on gentleness, save your patients much pain. The lower rectum is sometimes exquisitely tender and the harsh introduction of the rectal tube or syringe point may rouse the colon to the point of rejecting the fluid. I hope you will not think this a trivial point. It may, indeed, mean the success or failure of your whole plan of treatment. The solution is allowed to flow in very slowly, the left position being maintained for 5 minutes. The patient then slowly turns on his back for another period of 5 minutes and finally on his right side for a further five minutes. The tube is then gently withdrawn, the buttocks are lowered and the patient lies quietly in bed making an effort to retain the injection as long as possible. When it is finally voided, it should be done in the recumbent position. The reason of this is that in the erect or sitting posture the colon acts somewhat as a siphon, a particularly efficient one when the walls are rigid, and empties itself not only more quickly but with a degree of violence, not always consistent with the diseased conditions. Never permit abdominal massage during the injection, with the idea of diffusion of the liquid, make 3 feet your extreme pressure limit and either stop the injection or diminish your pressure when there is pain.

The temperature of the fluid has also some importance. You will be very commonly advised to use the enema at or about 100° F. or the body heat. This temperature is supposed to be less likely to cause irritability of the bowel. In the earlier stages of local treatment this is probably true. I feel quite convinced, however, when you have once established a degree of tolerance that you will obtain better results, other things being equal, from either decidedly hot or very cold injections. You wake up a reaction that is quite valuable. I knew in the Orient an irregular practitioner who had considerable local reputation as a "dysentery doctor." His routine treatment consisted in large enemata of iced water with opium and some vegetable astringent, and I am convinced that in this mixture the cold was the efficient agent.

The remedy of greatest value is *silver nitrate*. It is administered in a strength of from 20 to 30 grains to the pint. Of this solution 3 to 4 pints are carefully injected; using all the precautions already detailed. Osler advises larger injections, up to 6 pints. These injections are sometimes very painful and may be promptly rejected. With cocaine as a preliminary and gradual increase, a tolerance is soon established. Manson advises the preliminary administration of a "minute dose" of castor oil. After the oil has acted, the bowel is washed out with a large enema of a weak solution of sodium carbonate. When this has been completely voided, the silver solution is introduced. Commonly you would repeat this injection at intervals of three or four days. As a rule, improvement is pronounced. In certain cases, however, the silver salt causes marked irritation and must then be abandoned for some other remedy. These injections are usually well borne, even for considerable periods, and, contrary to what you might be led to suppose, there is no tendency to the production of argyria. The study of the value of the newer salts of silver in this connection should be of great interest and may prove a valuable field.

Creolin has been used in the same manner in ½% to 1% mixtures and is a very valuable remedy, ranking next, perhaps, to the silver salt. It has several advantages. One is its self-lubricating quality; another is its deodorant property, a consideration of some importance when you may be treating many dysenterics with fetid stools in a ward; creolin should be given twice a day, morning and evening.

Copper sulphate, zinc sulphate, alum have all been used in appropriate solution, but are not as valuable as the preceding.

Iodine in a strength of 20 to 30 minims to the ounce of water is of some value.

Carbolic acid, 1% solution, has been successfully used, but cannot be used in massive injections on account of the danger of absorption and poisoning.

Chlorine water, carbon bisulphide, creosote in emulsion and *mercuric chloride,* 1-5000, have all been used with success.

When the process is due to the amebæ we have several special remedies. *Quinine* first suggested itself as being a typical protoplasmic poison, its action probably being identical in this respect with its action on the malarial parasite. Indeed, the laboratory experiments of Losch in this connection enabled him to suggest this remedy in amebic dysentery. The quinine solution is given in a strength of 1-5,000 to 1-1000 in exactly the same manner as the silver injection. This remedy is of particular value in the comparatively early cases. It is not so valuable in the later stages because of the element of bacterial infection of the amebic lesions, against which quinine is inactive.

Benzoyl-acetyl peroxide has been advocated lately in Manila in the treatment of amebic dysentery. It is used in solution of 1-1000. Strong considers it valuable, because it has just as decided an effect in killing the amebæ as quinine, but, in addition, it has a very marked bactericidal effect and, therefore, also gives us a very desirable additional benefit in the diminution of the intestinal bacteria. This is the newest remedy and merits careful investigation.

Hydrogen peroxide has been recommended.

Methyl blue, one-tenth per cent., for the same reasons as quinine or the benzoyl preparation.

Dietary Treatment. Exclusive milk diet has been advocated as a cure for chronic dysentery and, when conscientiously carried out, is of very great value. It is our mainstay in the treatment of sprue, which must be considered very closely allied to chronic dysentery. The treatment is very burdensome, however, and patients will not submit to its rigors unless the necessity seems to them very urgent. The dietary of chronic dysentery is the same as already given you in acute dysentery. Remember that the effort is always to use nourishment that will, as far as possible, be taken up in the small bowel. There must be no bulky masses carried into the colon to furnish material for putrid changes. For this reason milk must usually be diluted with Vichy or lime-water and even meat broths be given diluted.

Changes of climate will sometimes work wonders with your cases, sea voyages being particularly valuable. The patient should quit the tropical zone and remain away if possible. The return of these patients, particularly those afflicted with amebic dysenteries, to the tropics must always be understood to increase the liability to, and the virulence of, recurrences. Sometimes residence in a moderately high mountain resort is advantageous, particularly if it be cool, dry and bracing. The elevation should not exceed 5,000 feet, because it seems possible that higher altitudes have something to do with the occurrence of hill diarrhea or sprue in these cases.

There are two complicating conditions that must always be borne in mind, *scorbutus* and *malaria.* I might add to these chronic disease of the kidney and cirrhotic changes in the liver. These must be sought for in all old, sluggish cases and removed as far as possible. You must also bear in mind the intestinal parasites described in acute dysentery. When these or their ova are found in the dejecta, proper eliminative measures must be instituted.

The *operative treatment* of chronic dysentery has been advised in old, chronic and apparently hopeless cases. I have seen it produce a cure when every hope seemed futile. The rationale is to put the colon completely at rest and also facilitate through-and-through irrigation. The cecum is brought up into a right abdominal incision and anchored in the same way as in doing a Maydl operation on the left side. The colon is irrigated directly through the opening. This procedure must always be a last resort, but in some of the cases it has justified itself.

Postdysenteric constipation or balling of the stools you will combat by careful regulation of the diet, by careful attention to intestinal digestion and by the daily administration of large enemata of normal salt solution or cotton-seed oil enemata every fourth or fifth day. Remember that many of these patients will be condemned to a life of valetudinarianism on account of the damage done to the secreting structures of the bowel. These must guard against dietary indiscretions and protect themselves against local temperature changes.

Some few remarks on the prophylaxis will close this lecture. The dysenteric stools should be destroyed by fire if possible. If not, they should be buried after treatment with milk of lime or mercury bichloride. They should never be emptied into water courses. With regard to personal prophylaxis, the maintenance of a water-supply that shall be above suspicion is essential. Great care should be exercised in the preparation of vegetables, particularly such as are usually consumed raw. Indeed, these had better be avoided in the endemic areas. The condition of the bowels should receive careful attention. Constipation should receive as thorough care as a mild bilious diarrhea or morning looseness of the bowels. The flannel abdominal band or "cholera belt" is of established value and should be worn, particularly at night; lastly, always advise your patients to establish the habit of thoroughly washing their hands before each meal.

A Case of Pseudo-Hermaphroditism.—André Léri reports an exceptional case of a male having lived 75 years as a female and having menstruated regularly for 37 years. "She" said that "she" first menstruated at 18, and continued regularly until 55 years of age. "She" had married, but had never had children or abortion. Examination showed a penis 4 cm. wide, 8 cm. long, with a corona and prepuce, a pseudovaginal opening, and testicles to either side of the penis. No uterus could be felt, nor any urinary meatus, though she said she had urinated through the "vagina." "Her" breasts were those of a man; "her" voice was that of a eunuch. The autopsy confirmed the diagnosis that "she" was more male than female. But there was no trace either of a uterus or prostate gland. The regular monthly bleeding remains unexplained in this case. Photographs illustrate all details. (*La Médecine Moderne,* December 17, 1902.) [M. O.]

Original Articles.

THE ELEVATION OF THE STOMACH IN GASTROPTOSIS BY THE SURGICAL PLICATION OF THE GASTROHEPATIC AND GASTROPHRENIC LIGAMENTS; AN ORIGINAL OPERATION.

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The purpose of this paper is to direct attention to the surgical treatment of gastroptosis, to present a study of the operative procedures practised up to the present time, their influence in the cure of this condition and, particularly, to detail the technique of an original operation. Before entering upon the consideration of the surgical aspect of the question it would seem wise to familiarize the reader briefly and in a general way with the frequency, etiology, symptomatology and the customary medical and mechanical treatments.

Gastroptosis, the falling or descent of the stomach to a more or less vertical position, existing alone or in association with a similar descent of one or more of the other abdominal organs (Glenard's Disease), has been known to the medical profession since 1885. Only during the last eight or ten years, however, have any accurate studies of its frequency and causative influence in the production of pronounced symptoms been made. Taking the aspect of our present knowledge, gastroptosis may be said to be a very frequent cause of chronic invalidism, particularly in women, and a subject of almost daily interest to the specialist in the diseases of the stomach and the practitioner of internal medicine.

The frequency may be estimated from the recent publications of Steele and Francine, that 65 cases of gastroptosis were observed and treated during two years in one of the medical dispensaries of the University Hospital. Glenard observed the disease 400 times in 1300 patients.

The etiology of gastroptosis, like that of floating kidney and retrodisplacement of the uterus, is not definitely known. However, two sets of causes are generally believed to exist, predisposing and exciting. The former are congenital weakness and hereditary predisposition, the patient with gastroptosis representing an almost characteristic type of individual. The exciting causes are thought to be tight lacing, rapid emaciation and changes in the intra-abdominal pressure, as due to constricting bands or relaxation of the abdominal walls and diastasis of the recti muscles.

The upper curvature of the stomach, through inflation by means of the stomach tube and auscultatory percussion, is outlined, in the more pronounced cases, midway between the xiphoid cartilage and the umbilicus, at the umbilicus or one or two inches below the umbilicus.

The supporting ligaments of the stomach, the gastrohepatic and gastrophrenic ligaments, are lengthened or stretched out proportionate to the degree of displacement. As a result of the ptosis there is frequently a secondary dilatation of the stomach, mostly of the pyloric end. In some instances, also, it is believed a primary dilatation of the stomach occurs with secondary gastroptosis.

The symptoms are those of gastric motor insufficiency, brought on by gastric and intestinal atony, by the mechanical disturbances caused by the descent of the organ and neurasthenia.

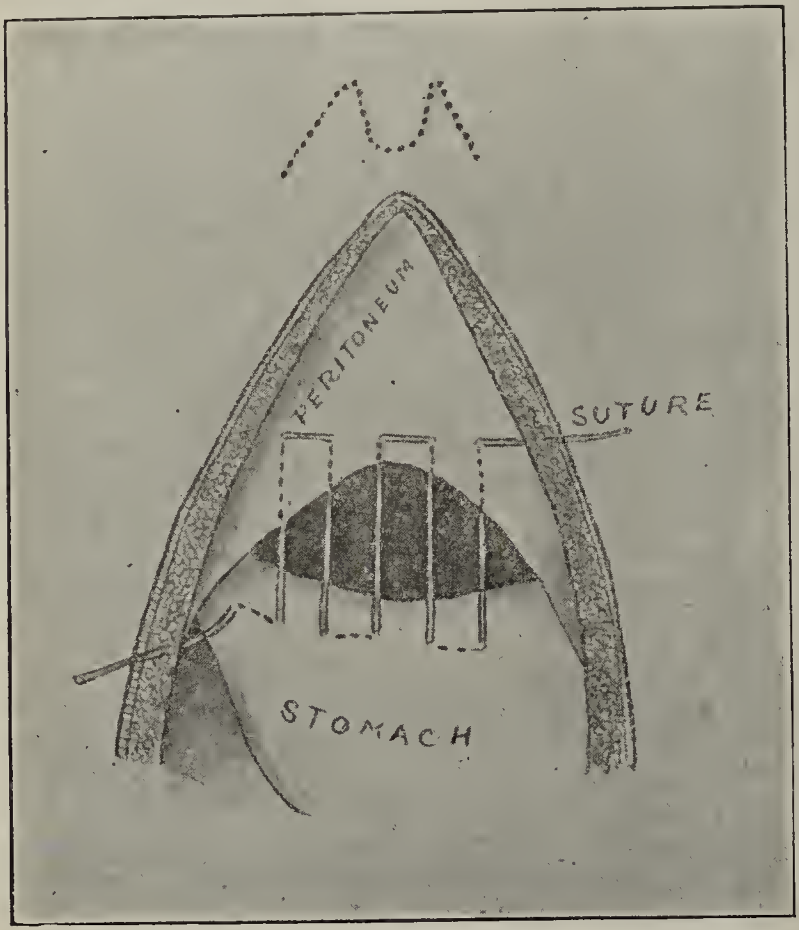
The patient comes to the physician complaining of pressure and fulness in the epigastric region, abdominal distension, flatulence and pain (gastralgia), coming on at irregular intervals and independent of the digestive act or the quantity or quality of food. Eructations are usually, nausea and vomiting frequently, complained of. There are numerous pains during bodily exertion. Intense lumbago is a frequent symptom. The patient is usually, often profoundly, neurasthenic. Nausea and vomiting in the most severe cases occur several times each day, little food is retained, the patient becomes more and more emaciated, neurasthenic, feeble, anemic, even bedridden and a confirmed invalid. The picture, in a few words, is that of chronic, severe atonic dyspepsia with neurasthenia and increasing emaciation.

The medical treatment consists in the administration of strychnine and other tonics, regulation of the bowels, lavage, the selection of a suitable, nourishing diet, massage, electricity, cold water applications and abdominal gymnastic exercises to strengthen the abdominal muscles and increase the intra-abdominal pressure, the avoidance of tight lacing or wearing of any garment which restricts the waist.

The mechanical treatment consists in applying a properly selected, adapted and accurately fitting abdominal bandage to increase the intra-abdominal pressure and relieve the splanchnic congestion and symptoms of weight. When there is great weakness the rest-cure is a most efficient means of treatment. Alternating cold and hot douches are often efficient in restoring partial tonicity to the muscular walls.

The medical and mechanical treatment, when skilfully and persistently applied, in a large proportion of the cases gives much symptomatic relief, and the patient is able to live on in more or less comfort. The application of an abdominal binder, according to some authorities, may succeed in elevating the stomach one or two inches with more marked relief. However, the patient remains constantly under observation and is never restored to good health.

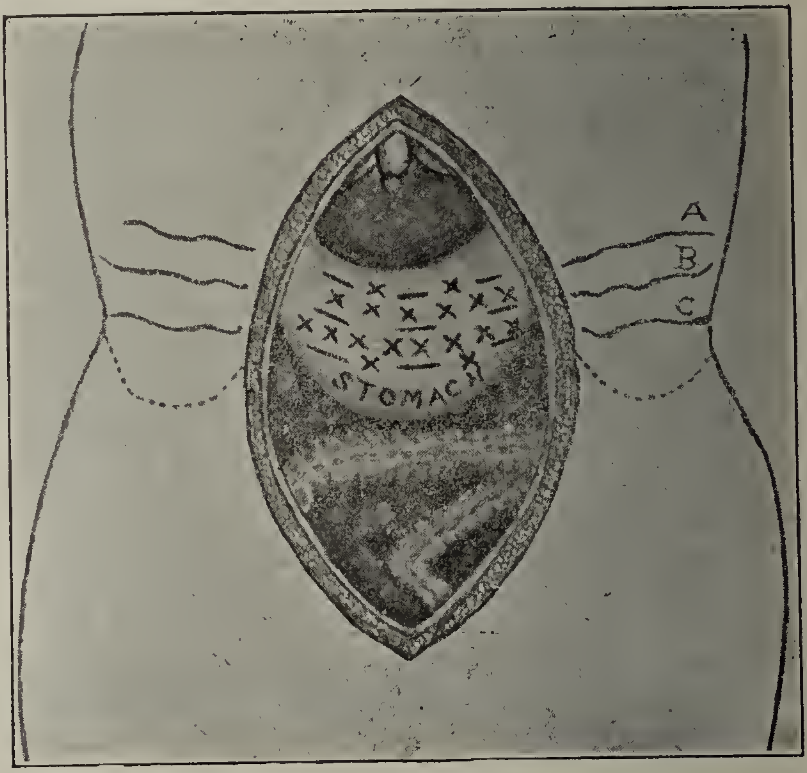
These treatments are those popularly and extensively employed throughout the world today and are believed to be satisfactory, or the best that can be obtained. There is a considerable percentage of cases associated with severe symptoms in which this medical and mechanical treatment gives little or no relief, the dyspeptic symptoms continue to be severe, vomiting persists, the neurasthenia is profound, the emaciation and chronic illness continue. The patient seems destined to chronic invalidism, and the physician is at his wit's end to discover a remedy which can promise any relief. It was under these conditions, in such a case, that the surgical elevation of the stomach was suggested to the mind of Duret, of Lille, in 1894 (*Revue de Chirurgie*, 1896, p. 430). The patient, a married woman, 31 years of age, had suffered from the severe symptoms of gastroptosis for three years, was emaciated and weighed only 70 pounds. The greater curvature of the stomach was outlined four fingerbreadths above the symphysis. The operation which Duret devised and practised on this patient, in March, 1894, consisted in the passing of a continuous fine silk suture from right to left through, first, the fascia, muscle and peritoneum of the abdominal wall and the serosa and muscularis of the stomach, near the lesser curvature, then twice, at short intervals, through the parietal peritoneum (left intact in the incision) and the serosa and muscularis of the stomach, following the line of the lesser curvature, and finally thorough the peritoneum, muscle and fascia of the abdominal wall of the opposite side. This suture was placed in the wound just below the xiphoid cartilage. When the suture was knotted, the stomach was elevated and the lesser curvature firmly fixed to the abdominal wall. Two years later the patient's health was greatly improved and she had gained 25 pounds in weight.



Operation of Duret.

Davis (*Western Medical Review*, Oct., 1897, p. 291) next operated upon two patients, attaching the lesser omentum, near the lesser curvature of the stomach, to the parietal peritoneum in the same position by means of fine interrupted silk sutures. There were numerous adhesions in one, enteroptosis in both cases, and, hence, the operation was supplemented by shortening the mesentery of the small intestine and the gastrocolic omentum in one, and gastrorrhaphy was performed in the other. There was apparent improvement.

Rovsing (*Archiv für Chirurgie*, Bd. LX, 1899, p. 812) reported having operated upon three greatly emaciated women, who had suffered severely because of descent of the stomach for from 8 to 25 years. The operation was performed as follows: The parietal peritoneum was left intact in the upper 4 cm. of the incision. Three rows of interrupted silk sutures were passed through the serosa and muscularis of the anterior wall of the stomach, the parietal peritoneum and abdominal wall from right to left and one above the other. The first row was placed just below the lesser curvature, the second row 2 cm. below this and the third 3 cm. above the greater curvature. The stomach wall and parietal peritoneum were scarified. When the sutures were secured, a broad surface (6 cm.) of the anterior wall of the stomach was thus firmly fixed to the abdominal wall near the xiphoid cartilage. The sutures were removed at the end of three weeks. Nephropexy was also performed on each patient. The first patient, after an interval of seven months, was enjoying excellent health and had gained 30 pounds in weight, the second, after a period of three months, was well, and the third complained of pain for a short time, but was later much improved.



Operation of Rovsing. A, B, C, the three silk sutures. X, scarifications.

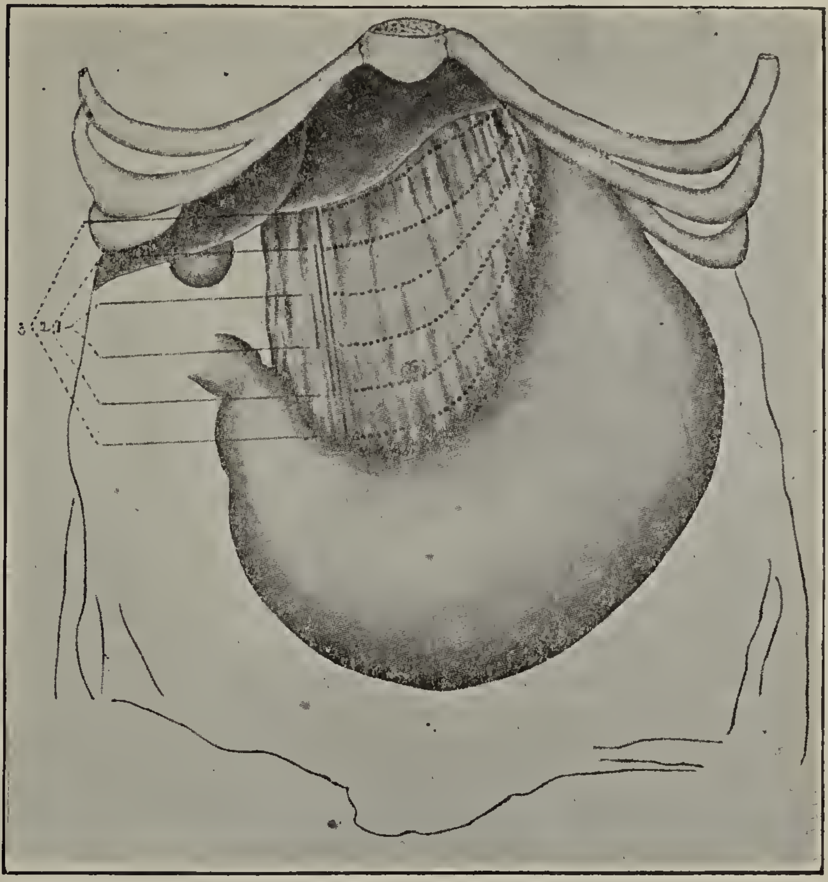
Hartmann (*Société de Chirurgie*, April 19, 1899), in a case of dilatation and vertical dislocation of the stomach, after plicating the pyloric end with fine silk sutures, fixed this end of the stomach to the parietal peritoneum of the diaphragm beneath the left ribs with the plication sutures. The patient was relieved and after four months had gained 29 pounds in weight.

Coffey (**Philadelphia Medical Journal**, Oct. 11, 1902), in two cases of gastroptosis, each associated with adhesions, appendicitis, disease of an ovary and displacement of the uterus, separated the adhesions and elevated the stomach by suturing the greater omentum at a point one inch below the attachment to the transverse colon to the anterior abdominal wall about one inch above the umbilicus. He reports both patients as being much improved in health.

Webster, of Chicago, in 1901, advised and practised the resection and suture of the fascia of the recti muscles in those cases of enteroptosis and gastroptosis associated with diastasis of the *recti abdominales*. The writer is unable to find any statistics relative to this operation.

During the years of 1897 and 1898 the late Dr. William Pepper and Dr. Alfred Stengel had under their care a patient suffering from severe symptoms of gastroptosis and to whom every medical and mechanical treatment, including a prolonged rest-cure, had been faithfully applied without distinct benefit. The patient was a chronic invalid. At this time (March, 1898) Dr. Pepper suggested to me that some operative procedure might be undertaken to restore the stomach to its normal position in this patient. We were not aware that the surgery performed by Duret and Davis had been applied in this condition. After a careful study of the anatomical relations and the ligamentary supports of the stomach on the cadaver, and considering the importance of the preservation of the physiological mobility of a hollow viscus, particularly the stomach, I devised and practised for the first time, on April 19, 1898, the following operation:

Operation.—The patient, after having been prepared for the operation of celiotomy and anesthetized, was placed upon the Bolt operating table in a position opposite to that employed for operations through the lower portion of the abdomen. The object of this position was to permit the elevation of the chest and upper portion of the abdomen, which would allow gravitation of the intestines and stomach out of the field of operation and give the greatest operative space, in order to gain every advantage of the Trendelenburg position. The skin of the abdomen was then scrubbed with ether, alcohol and a mercuric chloride solution, and the field of operation was surrounded with sterilized towels. An incision, about three inches in length, was made through the linea alba, midway between the xiphoid cartilage and umbilicus. The tissues were separated in the usual manner and the peritoneal cavity opened, exposing a small portion of the lesser curvature and cardiac end of the stomach, the gastrohepatic ligament or omentum, gastrophrenic ligament and the lower portion of the left lobe of the liver. The table was then elevated to the Trendelenburg position and the stomach displaced still further downward and out of the wound by means of gauze sponges. This procedure caused the gastrohepatic and gastrophrenic ligaments to be slightly stretched and separated from the underlying structures, which permitted an accurate determination of the length of these ligaments and very much facilitated operative manipulations. The gastrophrenic ligament was seen well developed and evidently formed a strong support to the cardiac end of the stomach. The joining portion of the gastrohepatic ligament was composed of thin, delicate peritoneum, increasing in thickness and strength toward the right or pyloric end of the stomach. Retractors were introduced and the liver held aside by placing a gauze sponge beneath a retractor. Three rows of interrupted silk sutures were then introduced so as to plicate and thus shorten the gastrohepatic and gastrophrenic ligaments in the following manner: The first row, beginning in the gastrophrenic ligament and extending across the gastrohepatic ligament to almost opposite the pyloric orifice and hepaticoduodenal ligament, was introduced so as to form a plication in the center of these ligaments, and included from above downward or vertically about four cm. of tissue (row No. 1). They were practically mattress sutures including sufficient of the delicate tissue (1 cm.) to insure against their tearing out. Five sutures, about one inch apart, were introduced from right to left and caught in hemostatic forceps. The next row (row No. 2) of sutures was introduced in the same manner, but 2.5 cm. above and below the first row. Then a third row (row No. 3) was introduced just above the gastric vessels and a short distance below the diaphragm and liver. The suturing was strictly confined to the normal ligamentary supports, and the distance between the rows from left to right was increased with the length of the ligaments, being greater toward the right. The gauze sponges were then removed, and the first, the second and, finally, the third row of sutures were secured, the stomach, particularly the pyloric end, being elevated to a little above the normal position.



1. Position of one suture of first row, (2) one of the second row, (3) one of the third row. Other sutres forming each row introduced at intervals along dotted lines.

The abdominal wound was closed by suturing the peritoneum with catgut, fascia with catgut, the skin by an intracutaneous silk suture, and three reinforcing silkwormgut sutures were passed through the skin and fascia. The wound was dressed with two layers of sterile gauze, held in position by anteseptic collodion and covered with several more layers of sterile gauze. In order to assist in giving support to the stomach and aid in preventing traction upon the sutures during the early part of the convalescence, a large compress of gauze and cotton was placed over the lower two thirds of the abdomen and the dressing and compress held in place by a many-tailed flannel binder. Fine silk (No. 3.) was employed for suturing the gastrohepatic and gastrophrenic ligaments. The needles were small, curved and round-pointed. This particular needle was selected to prevent tearing of the tissue in the introduction of the sutures. In introducing the sutures care was taken to place them evenly and accurately without causing tension. Each suture also caught the greatest possible amount of tissue practicable, in order to give the greatest strength, form a wide adhesion.

After the operation, which lasted forty minutes, the patient's convalescence was normal. After the first five hours the pulse was never more frequent than 78, and the temperature but once reached 100° F. She was given nothing by the mouth for twenty-four hours, except small quantities of hot water. The usual postoperative treatment was followed, except that the lower end of the bed was elevated. The bowels were open at the end of 48 hours. The patient was kept on small amounts of liquid food, frequently administered, for a week, and in bed in the recumbent position for four weeks.

The principle of this operation is that, by placing three rows of interrupted silk sutures from above downward and from right to left through the gastrophrenic and gastrohepatic ligaments, a broad transverse fold or plication is formed in shortening these ligamentary supports and elevating the stomach to normal position. The normal ligaments are shortened and the stomach elevated to position without disturbing the physiological mobility or functions of the organ.

A report of this first operation, with a description of the patient's illness and physical condition, was made before the Fellows of the College of Physicians, of Philadelphia, by Dr. Stengel and myself on April 19, 1899. Since then we have operated upon three additional cases; one in October, 1901, one in May, 1902, and the other on January 4 of this year.

A brief history of these cases is as follows:

CASE 1.—M. A., 25 years of age, single, white, no occupation, home in New Jersey, was admitted to the University Hospital April 2, 1897. She had enjoyed good health until April, 1893. Complained of eructations of wind after eating, pain and fulness over the epigastrium, attacks of nausea and vomiting, was much emaciated, very nervous and an invalid. Physical examination determined a floating right kidney. On inflation and auscultatory percussion, the stomach outlines reached from one-half inch above the umbilicus (lesser curvature) to a point two-thirds the distance from the umbilicus to the pubes (greater curvature). The operation of nephropexy was performed by Dr. J. William White, on April 21, 1897, and, after the convalescence, the patient left the hospital. She was admitted for the second time on October 9, 1897, complaining of the same symptoms, and had apparently received no benefit from the nephropexy. The position of the stomach was unchanged. During the several weeks following, every medical and mechanical treatment and a prolonged rest cure was faithfully applied by Dr. Pepper, without benefit. She returned to her home. She was admitted for the third time on April 11, 1898, complaining as before. At this time operation was suggested and performed, as described on April 19, 1898—November 10, 1898. The patient stated she had gained 10 pounds in weight and was considerably improved in health. The lower curvature of the stomach was found one-half inch below the umbilicus. March 14, 1899. Patient stated that she was very much better and had gained 19 pounds in weight. Position of the stomach unchanged. June 23, 1902. Patient's physician wrote that she was enjoying excellent health, took any character of food and had gained 40 pounds in weight since operation. He believed the stomach to be in good position.

CASE 2.—K. V. S., 36 years of age, married, unipara, miscarriages 2, housewife, home in Philadelphia, was admitted to the Gynecean Hospital on October 12, 1901, and had been in good health until two years ago. She complained of loss of appetite, eructations, pain over epigastrium, only relieved by vomiting. The symptoms had become worse each year, she was vomiting several times each week, had had fainting attacks for six months and for three months had lived on nothing but ice cream. Weight 102 pounds. Lesser curvature of the stomach was at the umbilicus. No diastasis of recti muscles. Medical and mechanical treatments applied by Steele, Artelt and others for year and a half. Operation, October 17, 1901. Convalescence normal. July 7, 1901, reported enjoying excellent health, free from all previous symptoms, taking any character of food, was attending to her duties as a housewife, and had gained 23 pounds in weight. January 25, 1902, same report and had gained 30 pounds in weight.

CASE 3.—Mrs. M. D., 54 years of age, white, no occupation, quadripara, home at Bridgeton, N. J., admitted to Bridgeton Hospital, May 1, 1902. She had suffered from indigestion for years, complaining of gaseous eructations, was able to take but small quantities of food; often she had no food for several days, vomiting two or three times each week. The patient was very nervous, greatly emaciated and weighed 78 pounds. Medical and mechanical treatment was applied by Dr. E. S. Fogg, of Bridgeton, for a year and five months. Lesser curvature outlined one inch below umbilicus. Operation May 8, 1902. Convalescence normal. June 8, 1902. Patient said she felt well and food caused no distress. November 15, 1902. Took any sort of food, had gained 10 pounds in weight and was completely relieved of all previous symptoms.

CASE 4.—Miss D. K., 23 years of age, no occupation, home in New Jersey, admitted to the Gynecean Hospital January 2, 1903. Had suffered for nine years. Medical and mechanical treatments, and six weeks' rest cure applied by Dr. John H. Rhein, without benefit. Operation January 4, 1903. Still in hospital.

Since the description of our first case Bier, of Greifswald, Germany (1900), (*Deutsche Zeitschrift für Chirurgie*, Bd. LVI, 1900, p. 374) has reported four patients operated upon in a somewhat similar manner. Three or four sutures were placed through the gastrohepatic ligament from above downward and from right to left so as to form two plications, one above the other, in the ligament. The first suture attached the serosa and muscularis of the pyloric end of the stomach, at the lesser curvature, to the capsule of the liver, the others including only the ligament. Also in two cases the shortening of the gastrohepatic ligament was supplemented by passing two sutures through the serosa of the lesser curvature of the stomach and then through the capsule of the left lobe of the liver.

These cases were as follows:

CASE 1.—Frau, 36 years of age, suffered from pain in stomach, loss of appetite and more or less vomiting for four years. Worse for two years, vomiting increasing, emaciation, weight 84 pounds, cachexia. Medical and mechanical treatments applied without relief. Lesser curvature at umbilicus. Two years and four months after operation she had gained 26 pounds in weight (110) and was relieved of all symptoms. Greater curvature a fingerbreadth above the umbilicus.

CASE 2.—Frau, 43 years of age. Para 12, previously operated upon for gall-stones and floating kidney. Complained of pain on eating, pain in epigastrium; little food was taken, emaciation and general weakness were present. Weight 100 pounds. Lesser curvature midway between umbilicus and symphysis. Operation. One year later pain was relieved, felt well and had gained 12 pounds. Greater curvature 3 fingerbreaths below the umbilicus.

CASE 3.—Man, 50 years of age. Suffered for 8 years from dyspepsia, nausea, vomiting and pain in epigastrium. Emaciated, weight 123 pounds. Greater curvature 2 fingerbreaths below the umbilicus. Operation. Five months after operation symptoms were relieved and he had gained 14 pounds in weight.

CASE 4.—Frau, 28 years of age. Para 3. Complained of pain after eating and fulness in epigastrium; nausea and vomiting; emaciation; weight 115 pounds. Lesser curvature midway between xiphoid and umbilicus. No diastasis of recti muscles or abdominal relaxation. Operation. Two months later, she was relieved of pressure symptoms and has gained 11 pounds in weight.

In the operations of Duret and Rovsing, particularly in the latter, the stomach was firmly fixed to the abdominal wall by passing the sutures through the serosa and muscularis of the stomach and the various layers of the abdominal wall. In that of Hartmann the anterior wall over a considerable portion of the pyloric end of the stomach was firmly fixed to the diaphragm. Carrying the pyloric end to the diaphragm beneath the left ribs of necessity caused great distortion of the stomach. In the operation of Duret, introducing the suture as a puckering string along the lesser curvature of the stomach and securing it in the median line, very much increased this curve and also distorted the stomach. The operation of Davis, attaching the lesser omentum at the lesser curvature of the stomach to the anterior abdominal wall, would seem a better procedure, yet the principle of securing a strong abnormal attachment was the object. The same, with some improvement, may be said of Coffey's operation, the stomach being swung as in a hammock.

The operation performed by Bier shortened the normal ligaments, but in addition the first suture secured the serosa and muscularis of the pyloric end of the stomach to the capsule of the liver, and in two cases, further to the left, the serosa of the stomach wall at the lesser curvature was attached to the left lobe of the liver. Here, too, a fixation of the stomach was thus practised.

The operations practised by the first five operators, the securing of the stomach to the abdominal wall by adhesion, must quite completely destroy the physiological mobility of the organ and would be very apt to result in the production of the severe painful affections we frequently see associated with adhesions of this organ.[*] I am informed by a colleague that he has for several months had under his care a patient on whom an operation of this character was performed in a neighboring city, and, as a result, the patient has suffered from nausea and vomiting and severe pain in the epigastrium. She is many times worse than before the operation. Also, in one of the cases reported by Rovsing, severe pain followed operation for a short time. These operations, or any operation which is in close contact with the stomach, that attaches it to the abdominal wall, would be subject to the same danger, at least in a considerable percentage of the cases, and because they elevate the organ by abnormal adhesions, must be considered to be conducive to harm and not surgically ideal. It is to be noted, however, that even in the reported cases thus operated upon, every patient is described as being improved in health and many gained a number of pounds in weight.

The procedure performed by Bier attempted to carry out the ideal principle, but, probably with the feeling that the natural ligaments were not sufficiently strong, the supplementary sutures were introduced to attach the lesser curvature to the capsule of the liver.

The operation we have devised simply shortens the natural ligamentary supports, and the normal mobility and function of the stomach are completely preserved. The principle of the operation must be considered physiologically and surgically ideal. With the formation of a broad surface of peritoneal adhesion between the surfaces plicated, secured by the introduction of three rows of sutures, sufficient strength is gained in the shortened ligaments permanently to maintain the stomach in a normal position. That this is true is determined by the physical examination of one patient after three and a half years and of one one year after operation. Further, the investigations of Scarpa and Hutsche (cited by Landau, Hängebauch und Wanderleber, S. 42) have determined that a single layer of peritoneum will maintain 7.5 to 22 kg. of weight.

Including Bier's four cases, for the purpose of study and because the principle was similar, eight patients have been operated upon by this method. All had suffered for from five to fifteen years from the severe symptoms of gastroptosis. In two a right kidney had been operated upon without relief of symptoms. All were emaciated, weighing between 78 and 120 pounds. In every instance the form of gastroptosis was the subvertical and pronounced. In three patients the upper curvature of the stomach was at or below the umbilicus; in one, two inches below the umbilicus; in another, two inches above the umbilicus and in three others, midway between the umbilicus and the xiphoid cartilage. In three an associated dilatation of the stomach was diagnosed, but was not demonstrable at operation. In none was there a diastasis of the recti muscles or relaxation of the abdominal walls, although four had born children. Certainly in every case the severe symptoms of gastroptosis rendered the patients chronic invalids and incapacitated them for any occupation or social duty. All had been treated faithfully for a great length of time with medicine, hygiene, diet, bandages and the rest-cure, and in our four cases the physicians insisted that they were unable to relieve their patients, and the patients themselves were at once willing, because of their suffering, to risk the danger of operation for the sake of a possible cure. The convalescence in each case following operation was normal and easy. Our patients were kept in bed in the recumbent position for four weeks after operation and on a special diet.

Seven of these patients have now been observed from seven months to three and a half years after operation. In every patient the improvement in health has been most remarkable and the relief of symptoms complete. The dyspeptic and neurasthenic symptoms are entirely relieved; they take, without restriction, any character of food. All have gained markedly in weight, and this gain has been lasting and gradually increased with time, one after three and a half years having gained 40 pounds and one, after fourteen months, 30 pounds. Further, the gain in weight began immediately after the patients left the hospital, the least gain in two months being ten pounds and the greatest 19½ pounds. In no instance, regardless of the time that has elapsed since operation, has the stomach changed in position. In three the line of greater curvature is from one to two inches above the umbilicus and in the other four one to one and a half inches below the umbilicus.

The immediate and lasting complete relief of symptoms, improvement in nutrition and gain in weight, in the case of every patient thus far operated upon by the shortening of the gastrohepatic and gastrophrenic ligaments, would seem to prove that the dyspeptic symptoms were induced by the abnormal position and secondary changes in the stomach in gastroptosis, and that the neurasthenia is not an essential but an induced neurasthenia. Also the remarkable lasting effect of the simple shortening of the ligaments gives rise to the conclusion that the anatomical cause of gastroptosis is a lengthening of these ligaments. *The completeness of the relief and, to my mind, the extraordinary restoration to excellent health of these seven patients who had suffered for years, the simplicity of the operation (which restores the stomach to normal position by shortening of its natural ligaments without removal of tissue or the formation of abnormal adhesions) and the fact that it is practically free from danger (we would estimate the danger as being no greater than one-fourth of one per cent.) must strongly recommend this operation at least in every case of gastroptosis in which the suffering is great.* The medical and mechanical treatments at best secure only partial relief of symptoms, do not restore the position of the stomach (the cause of the illness) and entail constant treatment, diet and the wearing of a cumbersome bandage, while the operation promises at once to completely and permanently restore the patient's health.

It is true that the patients thus far operated upon represent but one class, those with gastroptosis and without relaxation of the abdominal walls or diastasis of the recti muscles. Experience alone can teach what influence the operation will have when the relaxation of the abdominal walls is active in the production of the displacement of the stomach. Reasoning from the influence of ventrosuspension or Alexander's operation in retrodisplacement of the uterus, under the same conditions the plication of the ligamentary supports of the stomach would ever and alone be efficient. If, however, the contrary were determined to be true, the operation might easily be supplemented by the resection of the recti muscles, as recommended by Webster. A necessary adjunct to the operation, if a floating kidney is present, is the operation of nephropexy. Though our experience with this operation is, as yet, limited, we feel justified in prophesying that the medical and mechanical treatments of gastroptosis, like the bandage and pad in floating kidney and the pessary in retrodisplacements of the uterus, will, in the not far distant future, be greatly replaced by such a surgical procedure as we have devised and here described.

A STUDY OF FIFTY-FIVE FATAL CASES OF PERTUSSIS.

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Whooping cough was epidemic at an orphanage with which the writer is professionally connected, during the months of May and June of last year. There were five fatal cases, all presenting some interesting features. Pertussis being considered by laity and the profession as such an innocent infection, occasion was taken to examine the records of the Board of Health with a view to ascertaining its fatality here. During the period from January, 1900, to July, 1902, there were 55 fatal cases reported. Just what relation this bears to the number of cases occurring during this period we are unable to say, since the disease is not reported to the Board. A report of some of the cases first referred to, with a study of the whole number, will form the basis of this paper.

Case 1, W., a male infant, 4½ months old, was admitted to the institution when 11 days old. He had been born at the end of the eighth month of pregnancy, the cause of the premature labor being unknown. Nothing relative to his family history could be ascertained. He was put on a percentage modification of cows' milk and grew rapidly. He contracted pertussis among the first ones affected; the disease ran a normal course for three weeks, the "whoop" developing at the end of the first week. His appetite was good, his bowels normal, he had no rise of temperature and slept well between the attacks of cough. There was no inflammation in the thorax. At the end of the third week he suddenly became very much prostrated, death seeming imminent. Under stimulation he revived, the temperature rising rapidly to 104° F. From this time to his death, which occurred a week later, his cough ceased entirely, his temperature continuing above 102° F., his pulse above 140, his strength gradually failing. Convulsions occurred shortly before death.

Case 2, H., a female infant, aged 3 months, was admitted to the institution when 6 weeks old, the epidemic being in progress at the time. Her parents were both healthy. She was a well-developed infant, had been weaned and was being fed on condensed milk. On account of the prevailing epidemic, it was thought best not to change her food at the time. She was bright and healthy for 2 weeks, then she became apathetic, lost her appetite, seemed to be sick, but presented no definite evidences of illness. She had no fever, no nausea, no diarrhea, no pain, no cough. She grew gradually weaker, became emaciated, went into a stupor, which deepened until death occurred 2 weeks later. A few days before death the bowels became loose, frequent and contained some mucus. She had no fever at any time, no cough, nor any signs of disease in the chest.

Case 3, a female infant, 5 months old, who had been admitted when 6 weeks old, had thrived on a percentage modification of cows' milk, and who had had no illness until the present. Nothing was known of her family history. She contracted the disease at about the same time as Patient 1. Her bowels became affected immediately, and her diet was changed from milk to barley water and peptonoids, with some meat-broths. Her case ran a normal course, her cough was hard, paroxysmal and frequent, but she never whooped. There were a few moist rales in the bronchial tubes, and the breathing was rapid and shallow. The temperature continued above 100°, never going above 103° F. She was ill for two weeks and a half, the last week of which she was in a stuporous condition, which gradually increased until death.

Case 4, a female infant, five months and a half old, had been admitted at the age of four weeks. Her case ran a course exactly similar to that just reported, except that she had from time to time spells of great prostration, which always yielded to stimulation. The stupor came on at the same time and lasted until her death, one week later.

Case 5 was exceedingly interesting from many standpoints. It was that of a male infant, a year and a half old, who had been admitted to the institution when six weeks old, a little waif. Marasmus was responsible for the extreme emaciation which existed until he was nine months old. Upon a percentage modification of cows' milk he began to improve and grew fat and strong. He was exceedingly bright. He contracted the disease at the first, and it ran a normal course for three weeks. The disease was quite severe with him; the paroxysms were hard, frequent and lasted for ten minutes at a time. After two weeks, enteritis developed and continued until his death, the bowels being partially controlled at times, but never entirely. A week later he developed a case of purpura hemorrhagica, the eruption beginning on the feet and ankles and gradually extending up over the entire body. This lasted one week, then faded during the following week. Two days before his death it re-appeared on the wrists, although it had never entirely disappeared. During the existence of this eruption he had a thick whitish fur covering the whole of the mucous membrane of the mouth. This was very dry. There was anorexia at this time, but this improved very materially after a few days. His temperature had been very variable, most of the time, however, being normal, but just before the development of the eruption rising to 105½° and continuing above 104° for 2 days. The chest was clear with the exception of a few rales in the bronchial tubes during the time when the cough was most severe. His cough had grown better, the paroxysms being less severe and less frequent, and he gave every hope of recovery. After a very bright day he was lying on his bed ready for sleep, and without any effort or sign of distress passed away.

It will be noted that in these cases the complications were not the primary causes of death; existing in some, but not in others. In all of them, but particularly in those of the very young infants, the danger-signal was either a developing stupor or an attack of prostration, from which the patients recovered only temporarily, to go into a state of increasing stupor and exhaustion until death. They seem to have resisted the toxemia until their vital forces could resist no longer, when they yielded all at once. These considerations led me to ask the following questions, the answer to which I sought in the study of the 55 cases reported by various observers during the period above specified. Just here I wish to express my appreciation of the courtesy of these gentlemen in placing at my disposal the information desired. I questioned to what extent complications were to be feared, and which to be most feared; whether age, sex, or color had any influence on the mortality; what was the duration of fatal cases, what time of the year is it most liable to be fatal, and to what extent the toxemia affects the impressionable nervous system of childhood unfavorably.

I found that 25% of the cases were complicated with some affection of the respiratory tract, either as bronchitis, pneumonia, edema of the lungs or phthisis. Another 25% were complicated with some affection of the digestive tract, being either gastroenteritis or enterocolitis. Measles complicated 3 of the cases; typhomalarial fever one, and septic peritonitis one. Another patient died of a hemorrhage. In general, it may be said that a catarrhal affection of the mucous membranes is the most probable complication, and liable to prove the most fatal by lowering the resistance of the body to the toxic effects of the infection. Most of these complications developed in the last two weeks of the disease.

Thirty-one males, as opposed to 24 females, would seem to indicate that boys were more liable to be overcome than girls, but in a series of cases so small as this it would be hardly fair to make any such deductions. Black and white were about equally affected in this number. As to age, the larger number of fatal cases, by far, occurs under one year. Of these 55 there were 11 deaths under six months, 11 between six months and one year, 11 between one and two years, 10 between two and three years, 4 between three and four years, 3 between four and five years and 5 between five and sixteen years. Practically, after two or three years the complication was the cause of death, pertussis only contributing to that most undesirable end.

The average duration of these fatal cases was a trifle over three weeks. It would seem that, if the patient could resist the toxicity of the infection that long, the system would overcome the inroads made by the specific germ, whatever that is.

Strange to note, the largest number of deaths occurred in the warm months, from April to September, the death-rate reaching its height in June and gradually declining until October. Thirty-eight of these deaths occurred between the months of April and September, 10 of these being in June. One would think that the severe weather of the winter months would render affections of the respiratory tract more frequent and thus raise the death-rate at that season; but it is probable that less care is taken to prevent exposure in the warm weather, and hence the mortality is increased. As diarrheal affections are more frequent in the warm weather, this may be accountable in some measure for the greater mortality at that time.

The question to what extent the toxemia affects the impressionable nervous system of childhood seems to us to be of vital importance in this case and brings up the question as to the real cause of the disease and the seat of it. Is pertussis an infection? Is the disease a nervous condition, or does the specific germ choose the nervous system as its particular point of attack? Or is it a general infection with local manifestations? The answers to these questions would largely determine the treatment of the disease.

All observers agree now that the disease is produced by a micro-organism, though there is some difference of opinion as to what that organism is. Koplik, in a series of cases, found as a constant factor in the disease a facultative anærobic bacillus, resembling that of influenza. Vincinzi found a coccus-like bacillus as a constant factor. Behla, on the contrary, found a micro-organism, not bacterial in character, which was not found in the blood or the epithelium, but which had all of the characteristics of an ameba. Whether either of these is the true specific germ, or which one is the true one, is impossible to say. All are agreed, however, that there is such a cause. Observers differ as to the point of attack. Some think it is the mucous membrane of the nasal cavity, others that of the larynx and still others that of the trachea in its upper portion. We can get no information on this subject from post mortem examinations, for the only lesions shown are congestions of the various organs, more especially of the meninges. But the whole picture is one of general infection with a local manifestation. This is especially marked in the cases reported, particularly those of the youngest ones. In these the toxins produced by the micro-organisms, being absorbed into the system, so overpowered the nervous system that the patients succumbed without manifesting in a very marked degree any of the usual symptoms. The writer's observations have led him to the opinion that the characteristic lesion of the disease is a bronchial catarrh, caused by the specific micro-organism, the toxin of which acts principally on the nerve centers, lowering their resistance to afferent impulses of all kinds; those centers controlling the respiratory tract, and especially that of the superior laryngeal nerve, being more affected than the others.

While this paper does not contemplate the consideration of the treatment of the disease at all, still, in the light of the above, a word in general may not be out of place. If the writer is correct in his view of the pathology of this condition, the indications are plainly (a) to support the patient, (b) to establish an equilibrium in the nerve centers and (c) to prevent the further absorption of toxins by destroying the micro-organism producing them. The first indication is best met by plenty of fresh air and digestible, nourishing food; by stimulants carefully used; by iron in a form that will not derange the digestion, and by quinine, given with the same precaution. No drug should be used that interferes with the processes of digestion and assimilation in a disease that calls for so much of the patient's vital force. The second indication is best met by the measures just mentioned and by nerve sedatives. The third indication is best met by antiseptic sprays, difficult as they are to use with the class of sufferers under consideration.

The commonly accepted opinion as to the fatality of whooping cough is erroneous. Murray classes it in its fatal affects with acute bronchitis and the diarrheas. In England and Wales, during the years from 1881 to 1890, the mean annual death-rate for children under five years of age was 12.97 for respiratory diseases, 4.35 for diarrheal diseases, 3.37 for whooping cough, 3.13 for measles, 1.67 for scarlet fever and less than 1.0 for diphtheria and smallpox. We dread these diseases for our little patients and our children, but we care little whether they contract whooping cough or not. Let us take greater care to prevent and eradicate this very dangerous disease, and give our little patients better attention when they have been so unfortunate as to contract it.

WHAT IS IRRITABLE BLADDER, AND WHAT IS THE BEST METHOD OF TREATING IT?

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of New York.

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Most text-books teach us that irritable bladder is a nervous disorder characterized by a constant desire to urinate. According to F. Winckel, of Munich, irritable bladder should be diagnosed only by a process of exclusion. In the eyes of very few authors the condition is pathological only when present in an exaggerated form. To my mind, the pathology of this condition has been somewhat, if not entirely, overlooked. A careful examination of the bladder would convince the writer that in every case of irritable bladder there is something more than a mere nervous condition. The frequent urination so often seen in pregnant women is not due to any neurotic condition, but solely to mechanical pressure upon the viscus by the anteflexed, gravid uterus.

I am sorry to state that most of our medical men look upon medicine as a perfect science; consequently, they do not like to describe a diseased condition when they fail to find a cause for it. This leads them to attribute everything and anything they do not know to a nervous or reflex condition. If medical writers would make a more careful study of the pathology of the organ in question, the terms nervous or reflex would be used less frequently. My experience has taught me that in every case there is necessarily some pathological lesion on the inner surface of the wall of the bladder, situated usually at or near the neck. This was proved in every case in which a cystoscopical examination was made. The lesion results very frequently from any pressure upon the bladder, as from a displaced abdominal organ or tumor. The constant pressure upon the bladder tends toward the neck. Among other causes may be enumerated bacteria, staphylococci, streptococci, bacterium coli, tubercle bacilli, gonococci and proteus. Traumatism, such as a blow, fall or kick in the hypogastrium, plays a great part in this affection. The introduction of catheters or other surgical instruments is also an etiological factor. Adjacent diseases and gonorrhea of the urethra are also factors in producing the lesion. The pathology of irritable bladder very much resembles that of ordinary cystitis. The mucous membrane of the diseased area exhibits redness, swelling and an increased secretion of mucus. The diseased area is usually from $\frac{1}{4}$ to $\frac{1}{2}$ inch in circumference, round or oval in shape, and is situated at or near the neck of the organ. There may be a single lesion, or several, situated closely together. In subacute or chronic cases the region is brownish or grayish-red. The urine shows mucus and a sedimentary deposit; frequently the urine is turbid and at times bloody. Occasionally the urine has an offensive odor from alkaline decomposition.

The first symptom experienced by the patient is a desire for frequent urination. As soon as the least amount of urine accumulates the patient has a desire to urinate. The act is usually attended with pain of a varying degree. Only a few cc. are voided each time, and very often only a few drops. The patients also complain of heaviness and painful feeling in the hypogastrium. Microscopical examination of the urinary sediment shows a few round cells and desquamated epithelium from the diseased mucous membrane. From my description of the etiology and pathology it will be seen that I look upon irritable bladder as a mild form of localized cystitis.

When we speak of cystitis we understand an inflammation of the mucous membrane of the bladder, whereas in iritable bladder we have an inflammatory condition of a *localized area* of the mucous membrane.

In the treatment of this condition prophylactic measures are worth considering. Instruments are to be introduced into the bladder with great care, and only after thorough sterilization. Every case of urethritis should be thoroughly treated. Great care should be exercised in the administration of toxic drugs, such as cantharides, balsamics and other agents capable of causing bladder irritation. All irritating foods, such as alcohol, beer, acids, spices, etc., should be avoided.

A mild diet, such as soups, milk, etc., should be used. Local treatment is of the utmost importance. The results obtained from the treatment which I am about to describe have been most satisfactory. At the Good Samaritan Dispensary we followed this method in every case with brilliant results. The usual procedure is as follows: Place the patient on a table in the dorsal position and wash the urethra and adjacent structures with a 1% solution of lysol.

Introduce a sterilized glass catheter into the urethra and into the bladder; be careful not to carry any mucus or dirt, which is usually found around the urethra. After you have introduced the catheter into the bladder, draw off the accumulated urine. Now wash out the bladder two, three or four times with a warm saturated solution of boric acid and then introduce one ounce of a 1% solution of silver nitrate, allowing this to remain in the bladder for three or four minutes; draw off the silver nitrate solution and introduce about three ounces of a 2% to 10% solution of ichthyol in water, and allow this to remain in the bladder for at least half an hour.

Very often it will be found that the patients experience severe pains while introducing the silver; this may be remedied by anesthetizing the bladder previously with a 1% solution of cocaine. An excellent cystic sedative and anesthetic consists of a 4% solution of antipyrine.

This treatment should be repeated every other day for about three or four weeks, when a permanent cure will usually result.

In conjunction with this treatment a simple alkali should be administered daily, such as sodium bicarbonate, liquor ammonii acetatis or potassium citrate. I am convinced that any physician who will try this method of treatment will obtain most satisfactory results.

THE SIGNIFICANCE OF THE TEMPERATURE IN THE DIAGNOSIS OF EXTRA-UTERINE PREGNANCY DURING THE PERIOD OF COLLAPSE FROM HEMORRHAGE.*

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The following case was of special interest to me because of a doubtful diagnosis, and hence it is reported to elicit discussion upon the point as to the value to be attached to a rise of temperature in a patient in collapse in deciding for or against a diagnosis of extra-uterine pregnancy with rupture.

After reaction from collapse or faintness due to hemorrhage from ectopic pregnancy a rise of temperature is quite common and is due to plastic peritonitis, which is a part of the process of walling off the bloodclots from the general peritoneal cavity. With a history suggestive of ectopic pregnancy and a mass in Douglas's pouch, the presence or absence of a rise in temperature would not at all throw doubt upon a diagnosis of ectopic pregnancy with rupture. On the other hand, in a case coming under my observation, in which the patient was seen during primary collapse from hemorrhage, there was a febrile temperature. This fact caused a question as to the diagnosis of the following case:

Mrs. R., aged 34, has had two children and one miscarriage. She menstruated regularly and normally March 21, 1902. She missed the April period. A pelvic examination, made about the middle of May by Dr. Wm. E. Parke, led him to think that uterine pregnancy existed. At that time there were no lateral masses felt. May 25, about noon, after active exertion, the patient was seized with severe epigastric pain, faintness and vomiting. The pain and faintness continued throughout the day. A neighboring physician was called in and made a diagnosis of acute indigestion and prescribed an anodyne. Dr. Parke saw her at 11.30 P. M. She was then pale, with a pulse of 120, the skin cool, the mind clear, the abdomen distended and the abdominal walls tense. The vaginal examination was unsatisfactory, but no lateral masses were made out. I saw the patient in consultation about 1 A. M., when the condition was as described. The pelvic examination disclosed nothing abnormal but was unsatisfactory, because the patient was stout and the abdomen so distended that bimanual palpation was impracticable. The absence of menstruation, the appearance of the patient, the condition of the pulse and the persistence of faintness were suggestive of hemorrhage from extra-uterine pregnancy. On the other hand, no clots or fulness could be felt in Douglas's pouch, the pain had been epigastric in location, and the vaginal temperature was 100°.

Hypodermic stimulation and hypodermoclysis were advised to promote reaction, and it was felt, if reaction was not prompt, a diagnosis of hemorrhage would be rendered more certain. The patient was left with the understanding that if reaction was not prompt and satisfactory she was to be transferred to the Kensington Hospital for Women for operation. This was done the following morning, when the abdomen was promptly opened and found full of fluid and clotted blood, due to ectopic pregnancy. The patient was so prostrated for some days that the outcome was in doubt, but she made a good recovery.

The case is reported as showing that a rise of temperature a few hours after the onset of symptoms of hemorrhage from ectopic pregnancy does not exclude a diagnosis of collapse from hemorrhage.

AN IMPROVED SYRINGE FOR INTRATRACHEAL MEDICATION.*

By P. S. DONNELLAN, M. D.,

of Philadelphia.

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The subject of intratracheal medication has interested the writer for some time and, in a paper presented to this section one year ago, he ventured to record his results in a series of cases of acute and chronic pulmonary affections. In his earlier cases he used the Muir intratracheal syringe, but he found that the wide barrel of this instrument obscured the line of vision and the entrance of the canula into the trachea was often attended with great discomfort to the patient. An antitoxin syringe to which a laryngeal canula was attached gave better results, but was objectionable because it could not be sterilized.

For the past two months the writer has been using with perfect satisfaction the syringe which he has

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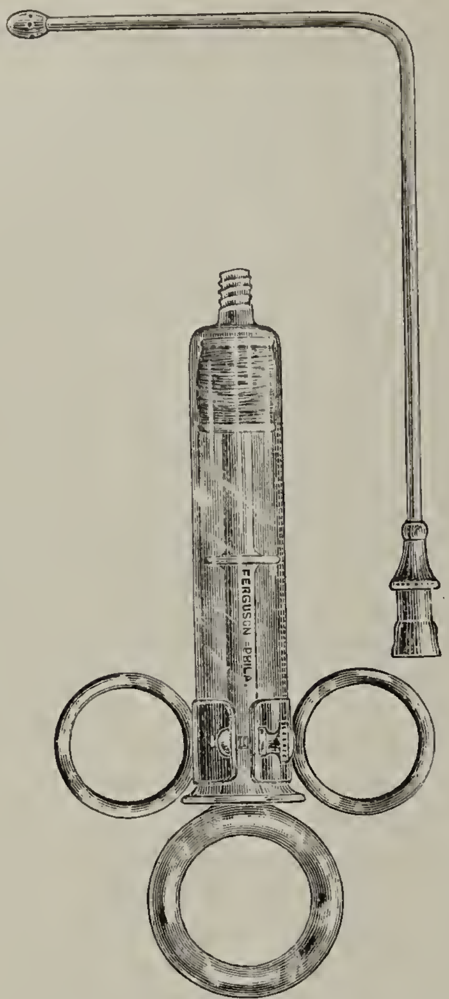
*Read before the Philadelphia Obstetrical Society, Oct. 2 1902.

*Presented to the Section of Otology and Laryngology, the College of Physicians of Philadelphia, December 17, 1902.



the pleasure of presenting to the section this evening. As will be observed, it consists of an annealed glass barrel graduated to two drams' capacity. In the barrel is inserted a glass piston, at one end of which is an asbestos plunger, at the other end a thumb ring. Fitted to the barrel is a detachable metal collar with rings for the insertion of the index and middle fingers of the right hand and, hence, is a device of much value in steadying the instrument during its use. To the syringe is attached a metal canula, bent at a right angle and having an olive-shaped closed tip with four fine lateral openings—an advantage over the open tip, which discharged the injection too freely and produced paroxysmal coughing.

The entire instrument can be readily sterilized by boiling, by immersion in alcohol or bichloride solution.

With ordinary care the barrel and glass piston are quite durable, but, should they get broken, they can be easily replaced by the instrument dealers, who will supply any part of the syringe as requested.

The writer desires to express his obligations to Mr. Joseph Ferguson, Jr., of Philadelphia, who has carried out his ideas in the making of this syringe.

Fatal Hemorrhage from Tubercular Ulceration of the Duodenum.—Comte and Hoche report the case-history of a soldier who fainted suddenly during exercises. On regaining consciousness he vomited, then began to bleed profusely through the anus. He had been passing blood with defecation for several days. In spite of gelatine injections, death followed in 6 hours. The autopsy showed miliary tubercles in the intestines, peritoneum, pleuræ, diaphragm, spleen and liver, tubercular ulcers of the duodenum and tubercular lesions in the left lung. The ulcers had caused fatal hemorrhage, the intestines being filled with blood. The case was remarkable in that such widespread tuberculosis had not caused more severe symptoms earlier. (*Revue Médicale de l'Est*, December 1, 1902.) [M. O.]

Health Reports.

Health Reports: The following cases of smallpox, yellow fever, cholera and plague, have been reported to the Surgeon-General, U. S. Public Health and Marine-Hospital Service, during the week ending January 31, 1903:

SMALLPOX—United States.

CALIFORNIA:	Los Angeles	Jan. 4-17	6	
	San Francisco	Jan. 11-18	8	
COLORADO:	Denver	Jan. 10-17	9	
ILLINOIS:	Chicago	Jan. 17-24	11	1
	Galesburg	Jan. 17-24	1	
INDIANA:	Evansville	Jan. 18-24	1	1
	Indianapolis	Jan. 10-17	37	6
	South Bend	Jan. 17-24	5	
KENTUCKY:	Lexington	Jan. 17-24	4	
LOUISIANA:	New Orleans	Jan. 17-24	2	
MAINE:	Aroostook Co. Presque Isle included	Jan. 20	150 to 400	
	Biddeford	Jan. 17-24	10	
MASSACHUSETTS:	Boston	Jan. 17-24	5	3
	Cambridge	Jan. 17-24	1	
	Chelsea	Jan. 17-24	1	
MICHIGAN:	Grand Rapids	Jan. 17-24	21	
MISSOURI:	St. Louis	Jan. 18-25	17	
NEBRASKA:	Omaha	Jan. 17-24	6	
NEW HAMPSHIRE	Manchester	Jan. 10-24	7	
	Nashua	Jan. 17-24	1	
NEW JERSEY:	Camden	Jan. 17-24	1	
	Newark	Jan. 17-24	8	
NEW YORK:	New York	Jan. 17-24	1	
OHIO:	Chillicothe	Jan. 17-24	1	
	Cincinnati	Jan. 16-23	8	
	Cleveland	Jan. 17-24	14	3
	Dayton	Jan. 17-24	5	
	Hamilton	Jan. 17-24	2	
PENNSYLVANIA:	Erie	Jan. 17-24	9	
	Johnstown	Jan. 18-25	2	
	McKeesport	Jan. 17-24	5	
	Philadelphia	Jan. 17-24	13	2
	Pittsburg	Jan. 17-24	23	4
	Reading	Jan. 19-26	1	
SOUTH CAROLINA	Charleston	Jan. 17-24	3	
TENNESSEE:	Memphis	Jan. 17-24	8	
WISCONSIN:	Milwaukee	Jan. 17-24	3	

SMALLPOX—Foreign.

AUSTRIA:	Prague	Dec. 27-Jan. 3	9	
BELGIUM:	Antwerp	Dec. 27-Jan. 3	6	3
	Ghent	Dec. 21-Jan. 3		3
CANADA:	Amherstburg	Jan. 17-24	2	
GREAT BRITAIN:	Birmingham	Jan. 3-10	1	
	Dublin	Jan. 3-10	1	
	Glasgow	Jan. 9-16	1	
	Leeds	Jan. 3-10	3	
	Liverpool	Jan. 3-10	59	6
	London	Dec. 27-Jan. 10	5	
	Manchester	Jan. 3-10	6	
	Sheffield	Dec. 27-Jan. 10	4	
RUSSIA:	Odessa	Dec. 27-Jan. 3	4	
	St. Petersburg	Dec. 27-Jan. 3	18	5
STRAITS SETTLEMENTS:	Singapore	Dec. 6-13		2

YELLOW FEVER.

COLOMBIA:	Panama	Jan. 12-19	6	2
MEXICO:	Tampico	Jan. 10-17		2

CHOLERA—Foreign.

EGYPT:	Alexandria	Dec. 28-Jan. 4	9	6
JAVA:	Batavia	Dec. 6-13	1	1

PLAGUE—Foreign.

INDIA:	Karachi	Dec. 13-20	25	13

Diphtheria at the Bretonneau Hospital.—Josias and Tollemer have reviewed the number, origin, bacteriology, mortality, complications and treatment of the 709 children who entered the Bretonneau Hospital, Paris, in 1901, suffering from diphtheria. Klebs-Löffler bacilli were found in 580 cases. Of these 178 were clinically and bacteriologically typical. Streptococci were also present in 131 cases. The disease was exceptionally severe in 46 children. Seventy-six out of the 580 children died, a mortality of 13%. Omitting those who entered moribund, there was a death-rate of 10%. The main cause of death was bronchopneumonia. Among the complications noted were albuminuria, heart accidents, paralysis, convulsions and otitis media. Intubation was performed on 172 patients; tracheotomy on 11. They insist upon the real efficacy of antitoxin in the prevention of diphtheria, and the absolute innocuousness of antitoxin injections. (*La Médecine Moderne*, October 8, 1902.) [M. O.]

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See Advertising Page 8

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Needed Amendments to the Pennsylvania Laws Governing Medical Education.—American medical education has frequently been ridiculed by foreigners, and perhaps, when the circumstances of our country's extent and advancing development were not taken sufficiently into account, such criticisms may have seemed deserved. If, however, the vastness of this continent is taken into consideration, and the unparalleled rapidity of development is remembered, captious critics will be silenced by observing that such conditions did not allow of the same careful cultivation of the final adornments of education that were possible in older and settled countries. Conditions have, however, now changed, and we may say with reasonable pride that the larger part of this great country has reached as high a state of civilization as has been attained in any part of the world, and we cannot now shield ourselves from just criticism on the ground that the more important problem of conquering a new and boundless estate is paramount. Speaking from the point of view of finance and practical affairs, it must be apparent to any one that no man could afford to expend upon a finished scientific education such a sum in ready money and the time of a long course of study as are required at the present day, with no better prospect of return on his investment than the meager earnings of a practitioner in a frontier country.

Surely, America was not slow in adopting higher standards in educational methods and strict requirements for the license to practise. Various States have established Boards of Examiners whose regulations, while varying in detail more or less widely, are, upon the whole, satisfactory. Complaints have, however, been heard, especially from the examiners themselves, that candidates who present themselves are often lacking in an important particular in which, however, the existing laws give the examiner no option of censorship—namely, in preliminary education, as evidenced by illiteracy. An extension of the powers of the examiners, the establishment of auxiliary boards, medical councils, or the like, with powers to enforce a sufficient preliminary education, is the crying need at the present time. The medical profession has always occupied an enviable position in the community as a body of educated and scientific men. However much or little the profession may have deserved this reputation, it seems at the present time in danger of falling from its high position. The great increase in complexity of medical study, and the necessary increase in the length of time devoted to that study, have made it difficult for young men to finish both a college course and the full medical study. The consequence has been that a somewhat larger proportion of the educated community outside of the professions (for Law to a certain extent is in the same predicament) is college-bred, and the tendency of the time is toward a still greater falling off in the proportion of professional men among the college-bred citizens. Some literary colleges are beginning to hint at the necessity of diminishing their curriculum by permitting a completion of the last year or years in connection with the first year of medical study, but it is not probable that any very radical plan of this kind would meet the approval of the best educators. Professional study must under no circumstances be neglected, and the full four years should be exacted with rigid adherence to the spirit as well as the letter of the law. No subterfuge, such as that of pretended preliminary study in a preceptor's office or any other pretence, should be allowed to cut down the full four years of study in an approved medical school.

At the same time it is of vital interest to the profession that the reputation for culture always heretofore enjoyed by medical men shall be undiminished. To insure this, as well as to insure the highest character among the practitioners hereafter graduated and licensed, some standard of preliminary education must be insisted upon. The old plan of permitting any one to study medicine and to practise that profession provided he were able to obtain a degree, and the more recent method of merely a professional examination by a State Board, are insufficient unless the State Board be given the right to refuse the license to any who cannot show evidence of sufficient preliminary education. In this particular, the great State of Pennsylvania has been less alive to the needs of the times than some of her neighbors, notably Ohio and New York; and we are unfortunately in the humiliating position of having our licensed practitioners refused by the authorities of these States. The wise and progressive character of the Ohio regulations will be shown by the following quotation which gives the requirements for admission to medical colleges:

"A diploma from a reputable college granting the degree of A. B., B. S., or equivalent degree; a diploma from normal school, high school or seminary, legally constituted, issued after four years of study; a teacher's permanent or life certificate; a medical student's certificate issued upon examination by any State Board; a student's certificate of examination for admission to the Freshman class of a reputable literary or scientific college; or a certificate of his having passed an examination conducted under the direction of the State Board of Medical Registration and Examination of Ohio by certified examiners; none of whom shall be either directly or indirectly connected with a medical college."

In exacting a preliminary education equal to that of a High School, surely the States of New York and Ohio have not gone too far. We do not insist upon a full college course in every case, much as we believe in the value of this for those who have the time and means to complete this longer term of study; but we are just as certain that every physician hereafter licensed should be required to show an education equal to that obtained upon the completion of study in a reputable High School or Academy.

The Legislature of Pennsylvania will shortly consider an Act to modify the regulations of the Board of Medical Examiners. One feature of importance in this amending Act is the unequivocal requirement of a full four years' course of study in a medical college, and another is the establishment of a penalty for the practising of medicine in any way or kind without a license. In their amended form, the regulations of the Board become more adequate to the needs of the time, and the amendments should be strongly endorsed by physicians who have the welfare and advancement of the profession at heart. We trust, however, in the very near future that a further amendment will be offered to establish a requirement for entrance to a medical school. The time has come when the more settled States of this country should demand *a certain preliminary education before allowing the students to begin the study of medicine*. It is unjust to the student to require him to submit to the ordeal of a separate examination in fundamentals at the end of his medical course with the possibility of his failing in this. The plan adopted in Ohio and New York is an excellent one, and the sooner it is incorporated in the laws of the State of Pennsylvania, the more creditable it will be to this commonwealth.

The Formalin Treatment of Septicemia.—The avidity with which the lay press seizes upon the reports of new or supposedly new methods of treatment, surgical operations and the like, frequently leads to a general discussion and a notoriety unpleasant to medical men, and in many instances quite disproportionate to the importance of the subject. It thus frequently becomes necessary for the medical press to take up the matters so exploited. In the present instance we refer to the intravenous use of formalin in acute septicemia. Dr. C. C. Barrows, of New York, in the *New York Medical Journal* of January 31, 1903, reported a severe case of puerperal septicemia which recovered after two intravenous injections of 1 to 5,000 formalin solution, the first injection being 500 cc. and the second 750 cc. Bacteremia had been demonstrated, but cultures made subsequent to the first formalin injection were all free from streptococci. The injections were made in aqueous solution, but Barrows believes that normal saline solution would be a preferable medium. Unfortunately, accounts of this case have found their way into the newspapers, and a number of physicians are reported to have made use of this method with indifferent results.

We believe that it is necessary to sound a distinct note of warning against the employment of this method of treatment at the present time. It is always unwise to build too much upon the results of a single case. Laboratory investigations have shown conclusively that injections of solutions of formalin and other germicidal agents distinctly lower, rather than increase, the power of the organism to resist infection. The difficulties of securing favorable results from the use of any antiseptic introduced into the circulation, have frequently been pointed out. When destructive to bacteria, such solutions are also destructive to cell life. The toxemia which results from bacterial infection should logically be met by the use of some substance which would possess antitoxic power for the particular toxin. Evidence is quite lacking that formalin in any way fills this requirement. A point that must not be overlooked is the fact that even desperate cases of septicemia may recover spontaneously and quite independent of any but supportive treatment. The temporary improvement which follows the injection of normal saline solution is recognized and utilized. To our mind it is doubtful in the highest degree whether the addition of formalin in potent amount to such a solution could accomplish anything but harm. The experimental evidence which stands against the formalin treatment can scarcely be said to be assailed by the single case which Dr. Barrows reports.

The Cure of Tuberculosis.—The statement (made by J. H. Lowman, in his article read before the Academy of Medicine in Cleveland, September 19, 1902) that *it is not at all unlikely that tuberculosis is a universal disease*, and that all mankind are more or less susceptible to it, as they are to measles, will be a surprise to many. If this is true, then the whole race must be taught how to live and where to live, how to rest and when to stop, as well as how to avoid contagion. At the present time more attention is given to the actual invalid, and this is done by a system of air, food and rest, medicine being very little given. The care of these patients in hospitals and sanatoria has been universally adopted, especially in Germany, where there are 57 folks sanatoria and 26 in process of building. Those patients in the incipient stage are most favorable for sanatorium treatment, and it has been stated that in 15 sanatoria 60% of the patients left the institutions as cured. The great defect in this country is the want of some suitable place to send such persons after their discharge from sanatoria, as is done abroad where they are sent to convalescent homes in which they are allowed to stay two or three months, thus securing a more permanent cure.

In this country they generally return to the strain and fatigue of the factory, to the shop and to the conditions in which the germ of the disease developed. A sanatorium patient should be one in the first stage with a temperature a little above 99°. He should be put to bed, and if the fever is due to the fatigue of the journey it will disappear in three or four days. If due to the extension of the disease, it will continue. The patient should remain in bed, and, if it be convenient, he should be rolled to a balcony or porch. Meals should be served in his room, and he should be as quiet as possible. If the fever continues, antipyrine may be given and sponging practised. Diet is restricted to liquids and easily digested solids. In two weeks the temperature usually falls to normal. If by three weeks the temperature has not fallen to normal, the case may be considered unfavorable, and the patient should not be kept in the sanatorium. Opinions differ as to what constitutes a recovery, but we think there can be no question when we say it is one in which no pathological changes can be detected, after repeated examinations, in the lungs, and in which there are no cough, no expectoration and no bacilli. A markedly improved case is one in which there is no evidence of disease. It is exceedingly important that the various sanatoria should adopt a common standard, so that comparison may be made by observers.

The Razlag Treatment of Leprosy.—A few weeks ago we commented in these columns on the report of the excellent results which had followed the treatment of four severe cases of leprosy under the care of Dr. Adolph Razlag, an American citizen, in South China. We based our first comment upon an account which appeared from the pen of Dr. J. M. Swan in the *China Missionary Journal*. The *Public Health Reports* of January 30, 1903, contain Dr. Razlag's own account of his treatment submitted to the Treasury Department as an enclosure of the report of Robert M. McWade, U. S. Consul at Canton. Mr. McWade states that the results in the first four patients have been most satisfactory. Although they had been but four months under treatment, three have returned to their ordinary work practically cured, while the fourth, who was in most desperate condition, is still under treatment. It is not feasible within a scope of this comment more than to outline Dr. Razlag's treatment. He places great dependence upon open-air life and cleanliness. Baths are of the greatest importance. He uses cold or warm baths with fresh water, salt water and baths medicated with such drugs as iodine, tannic acid and potassium permanganate, as the condition of the patient may require. Wounds are treated with zinc chloride or zinc sulphate, hydrogen peroxide, ichthyol, chrysarobin, arsenic, iodine, creosote, croton oil and salicylic acid. He never uses iodoform. For the massage and friction of anesthetic skin, croton or chaulmoogra oil, in combination with olive oil, is employed. He reduces the edema by the judicious application of leeches. Internally he employs jaborondi or simply strong coffee or tea as a sudorific. Arsenic is used routinely in combination with strychnine and ichthyol. Soda salicylate and creosote have also a place in the treatment. Great care must be taken that the wounds heal slowly, as the quick closing of ulcers will generally lead to the reappearance of nodules. Our first duty after isolation is to endeavor to heal the skin lesions, relieve the patient of all pain, and then begin our routine internal treatment. The average time of successful treatment, according to Dr. Razlag, is at least one year under favorable conditions. He believes that the perpetual isolation of lepers is demanded, and that the utmost care should be taken in placing such leper colonies in the best hygienic conditions. Dr. Razlag's success seems to have been due to his thorough acquaintance with leprosy in all its stages. There is nothing specific in the treatment he advocates and, indeed, it appears to have succeeded largely on account of the intelligent and persistent manner in which it has been conducted.

Defects of Plague Sanitation.—Dr. Richard Freer contributes an interesting article in the London *Lancet* of January 24, 1903, on the Prevention of Sea-Borne Plague. His observations were made during twelve months recently spent as surgeon on steamers trading mainly with Bombay and the Far East. The measures adopted by the sanitary officers in ports infected with plague conform to the regulations recommended by the Venice Convention. The following methods are employed at Bombay: At an early hour on the morning of leaving the port the native crew are assembled with their belongings in a large building about a quarter of a mile from the docks. There they strip, and the clothes they were wearing, together with their bedding, etc., are sterilized by steam. Their shoes are sprayed with a solution of mercury perchloride, and the boxes in which they keep their belongings are scrubbed by themselves at water-taps provided for the purpose. They then take their boxes to a native who sprays the interior with a very small quantity of disinfecting solution. The men in the meanwhile have arrayed themselves in clean clothes which are not disinfected.

He points out many deficiencies of the system as employed, and severely criticises the methods of disinfection. The soft leather shoe or slipper of the native, a dirty object, is subjected to a mere spray of the disinfecting agent which cannot possibly sterilize it, while the scrubbing of boxes is a mere farcical proceeding. Measures in use for the prevention of rats boarding a ship in an infected port are very ineffective. He states that frequently rats come up the gangway ladder, and nothing is done to prevent them, and the means devised to stop them from climbing the ship's cables by the use of funnels attached to the cables are also most unsatisfactory as they are carried out at the present time. The extermination of rats on shipboard is fraught with such difficulties that we believe nothing short of sinking the ship will kill all the animals aboard. Valuable suggestions are offered for reducing the number of these pests to a minimum. He holds the opinion that no native sailor should be allowed to bring any clothing or effects from his home on shipboard, and the port authorities should establish a depot where the sailor could deposit his effects and be provided with suitable clothing for the voyage. From his remarks we gather that lack of attention to details by sanitary authorities to a large extent explains the failure to check the spread of sea-borne plague.

The Army Canteen.—Major Seaman's article, in the *North American Review* for January, strikes a timely note of warning to Congress. It deals with the army canteen, a subject which has received much attention from many sources, from the General of the Army, who wrote first against and then for it, down to the overzealous members of the W. C. T. U. In this connection it is interesting to note that one of the women, who finally succeeded in persuading Congress to abolish it, described the canteen as "that little thing which the Government fills with whiskey and hangs at the belts of the soldiers." This opinion of the canteen we believe to be much more prevalent than many army officers would imagine.

Major Seaman's article is strongly in favor of the canteen and is based on his personal experience as an army surgeon. His statement that the liquor sellers and the members of the W. C. T. U. are the strongest advocates of the law as it now stands, although indicating a strange coincidence, is nevertheless true and needs no further comment.

The reports of court-martial cases in the Judge-Advocate-General's office can testify to the moral benefit derived from the canteen, for it is stated that "in the year 1889, before the establishment of the canteen, the number of trials and convictions for drunkenness and conditions arising therefrom was 423. In the year 1897 the total number reached only 143." Army officers are almost unanimously in favor of the canteen system. It would seem but rational to respect the opinion of these gentlemen, and particularly the medical officers in this matter, since certainly none of them desires anything but temperance and good behavior on the part of the troops, and since they are anxious to do anything which contributes to these qualities. Besides the moral and physical advantages of the canteen, it benefits the soldier in many ways—it affords a place for innocent social enjoyment, and the small profits from it are devoted to the soldiers' mess table, to buying music for the band, for which little other provision is made, and adds much to the soldier's material comfort.

It would be easier to clean the Augean stables than to make teetotalers of 50,000 men, and it would be better for the present to encourage temperance, leaving total abstinence for the millenium.

Paul Pry Legislation.—The *Medical Record* has delivered a Philippic against a bill that is now before the New York Legislature intended to protect (?) the modesty of women patients in the hospitals. To read this monstrous bill one would suppose that all physicians and surgeons that have to do with female patients in our hospitals were a band of vulgarians and rakes. The inference is irresistible that the most wanton exposure and insult are such common occurrences in our hospitals that decency and female modesty can only be preserved by the good offices of State legislators. Heaven save the mark!

We should like to ask the legislative Peeping Tom who is responsible for this prudish bill, how he is going to enforce it? We suppose he would have a police officer, or the township constable, present at every gynecological examination and at every obstetrical case in order to see that the medical attendant behaved himself with due decorum. In New York City especially the police force, with its present savory reputation, could with propriety stand guard over female modesty against the abandoned medical profession.

We sympathize with the *Medical Record* in its trenchant criticism of this ridiculous bill. New York is sufficiently saddled already with all sorts of sumptuary and blue laws, but none of them can quite equal the fatuity of this proposed legislation. The only good thing about it is that it makes itself and its author ridiculous and thus supplies its own remedy.

Current Comment.

HIS OPINION OF AMERICAN NURSES.

Dr. Lorenz was asked if a woman could learn to do his operations.

The Herr Professor shook his head without a suspicion of regret in his expression.

"She could not," he said positively and decidedly. "The first requisite to perform what is called these bloodless operations is strength—a man's strength. One does not want to see that in a woman."

"A woman may be a diagnostician, a general practitioner, but never could she be a surgeon. To be a surgeon requires all the qualities she should not have."

"What should she be?" I asked.

"A nurse!" cried the doctor.

"Let me right here congratulate the American nation. Never till I came to this country have I known what a woman could be in the way of a nurse.

"In Austria they are women of any class, of any sort. They are women of little education. Here in America they are ladies—ladies! Never have I been so amazed. They are in aprons and caps, but they are educated, they are refined, they are charming. Never have I seen such a thing—never!

"You are so far ahead of us in this that I am lost in wonderment. You see how I appreciate what women may do, but say to them not to attempt to compete with my profession."

—*The American Journal of Nursing.*

Reviews.

International Clinics. A Quarterly of Illustrated Clinical Lectures and especially prepared Articles on Medicine, Neurology, Surgery, Therapeutics, Obstetrics, Pediatrics, Pathology, Dermatology, Diseases of the Eye, Ear, Nose and Throat, and other Topics of Interest to Students and Practitioners by leading Members of the Medical Profession throughout the World. Edited by Henry W. Cattell, A. M., M. D., Philadelphia, U. S. A., with the Collaboration of John B. Murphy, M. D., Chicago; Alexander D. Blackader, M. D., Montreal; H. C. Wood, M. D., Philadelphia; T. M. Rotch, M. D., Boston; E. Landolt, M. D., Paris; Thomas G. Morton, M. D., Philadelphia; James J. Walsh, M. D., New York; J. W. Ballantyne, M. D., Edinburgh, and John Harold, M. D., London, with Regular Correspondents in Montreal, London, Paris, Leipsic and Vienna. J. B. Lippincott Company, Philadelphia and London. Cloth, $2.00. Volume 3. Series 12.

This volume of International Clinics maintains the general excellence of the series. The field of medicine is well covered. Especially timely are the articles upon treatment of typhoid fever by Dr. O. T. Osborne and the treatment of intestinal perforation in this condition by Dr. Noel Mauger, of Versailles. This last paper is an eloquent plea for surgical intervention in this complication, and the subject is tersely and clearly set forth. Professor H. Hallopeau discusses the urticarias, their causes, varieties and treatment, and this paper may be read with profit. Dr. David Nabarro reports an interesting case of splenomyelogenic leukocythemia subsequent to an attack of malarial fever. The well-executed colored plates showing stained specimens of the blood of this patient, accompany the article. Professor G. Dieulafoy describes the means of telling whether an attack of serofibrinous pleurisy is tuberculous or not. Dr. T. D. Crothers presents his well-known views on the treatment of morphinism. The papers of surgical bearing include the treatment of club-foot by Dr. De Forest Willard and the treatment of fractures and dislocation in relation to suits for malpractice by Dr. John A. Lewis. Dr. John H. Brinton has studied the effects of firearms at short range. His paper is embellished with a colored plate, showing the comparative effects of black and smokeless powder cartridges at short range. Space forbids us to dilate upon the general excellence of these contributions, as well as that of many others contained in the volume. Two special articles will be read with interest; one of these describes the researches of the eminent Russian Professor, I. P. Pavlof, on the function of the digestive glands. This is from the pen of Dr. Peter Borrissof. The number is concluded with a critical study of the theory of inflammation by Dr. Hans Schmaus.

International Clinics is by no means an epitome of current literature, but consists of especially prepared articles, and the attractive and permanent form of this series has made for the work an established place. [T. L. C.]

Book on the Physician Himself and Things That Concern His Reputation and Success. By D. W. Cathell, M. D. The Twentieth Century Edition, being the eleventh edition revised and enlarged by the author and his son, W. T. Cathell, A. M., M. D. The F. A. Davis Company, Philadelphia. 1902.

This well-known book, which has now reached its eleventh edition, contains over 400 pages. Every subject, which at any time could cause a physician to seek advice, is discussed fully, some apt quotation being appended in most cases. As would naturally be the case in a book so large and comprehensive, some of the suggestions offered by the authors seem hardly to be in good taste. Yet, on the whole, the book can be commended, since it contains many facts of value to the young and old physician, concerning both his reputation and his success, at the present and in the future. [M. O.]

American News and Notes.

PHILADELPHIA AND PENNSYLVANIA.

Dr. Beyea's Article.—The valuable paper on "The Elevation of the Stomach in Gastroptosis by the Surgical Plication of the Gastrohepatic and Gastrophrenic Ligaments; an Original Operation," by Dr. Henry D. Beyea, published in our last issue, was published by courtesy of the editor of the *University of Pennsylvania Medical Bulletin* and published synchronously with its appearance in that journal.

The Health of Philadelphia.—During the week ending February 7, 329 cases of typhoid fever were reported, with 23 deaths, as compared with 325 cases, with 30 deaths, during the previous week. The epidemic of typhoid fever covers almost the entire city, the only wards from which no cases have been reported being the Ninth, Eleventh, Thirty-fifth and Forty-first wards. Smallpox still exists in the city, there being 33 cases, with 2 deaths, as compared with 29 cases, with 4 deaths, during the week preceding. There were also a few more cases of diphtheria and scarlet fever reported this week than were reported last week. There are, too, a great number of cases of pneumonia at present in the hospitals of Philadelphia, a number of them being influenzal in character.

Bucks County Medical Society.—At the winter meeting, held at Newtown, February 4, addresses were made by Dr. Wilmer Krusen, Philadelphia; Dr. E. C. Hancock, Yardley; Dr. W. Erdman, Buckingham, and Dr. H. L. Bassett, Langhorne. A memorial of the late Dr. W. H. Doughty, of Hartville, was adopted.

State Hospital for the Insane, Norristown.—There is at present an epidemic of influenza among the insane patients at the Pennsylvania State Hospital, where there are 1102 female and 1014 male patients. The hospital is so crowded that several hundred inmates are compelled to sleep in the corridors, so that the epidemic is easily spread.

Jefferson Medical College.—This institution has offered a free course in medical training to the employés of the railroads entering Philadelphia, so that all trainmen employed may be able to render assistance to those wounded in wrecks. Railroad officials are pleased with the suggestion, and the medical director of Jefferson Medical College Hospital is making arrangements for a course of illustrated lectures upon this subject. The men to be instructed will be employés of the Pennyslvania and Philadelphia and Reading Railroads.

Lancaster Pathological Society.—At the recent meeting Dr. Frank Alleman was elected president of the Lancaster Pathological Society.

Rigid Quarantine Against Smallpox.—The authorities of Dunmore, near Scranton, agitated over the appearance of smallpox in the town, have quarantined the whole square where one case exists, put officers on guard, ordered all cats and dogs killed, prohibited children from going to school, ordered dance halls and amusement places to shut down, and will erect an emergency hospital. The officers on guard are mounted, armed with shotguns, and ordered to run down or shoot any person who attempts to get outside quarantine bounds.

Society Meetings Next Week.—The following Sections of the College of Physicians meet next week at the College of Physicians, Philadelphia, at 8.15 P. M.: Tuesday evening, February 17, Section on Ophthalmology; Wednesday evening, February 18, Section on Otology, and Thursday evening, February 19, Section on Gynecology.

Death of Dr. Hornor.—Dr. Caleb W. Hornor, of Philadelphia, died at his country home near Bryn Mawr, February 8, aged 74 years. Born in Burlington county, N. J., March 26, 1828, he was graduated from Jefferson Medical College in 1849. During the next 2 years he assisted Drs. Meigs, Dunglison and J. K. Mitchell. In 1862 he took charge of the Wood Street General Hospital, Philadelphia, and in 1863, as assistant surgeon, U. S. V., he was placed in charge of the Summit Home General Hospital. Later he became surgeon and was transferred to the Army of the Cumberland, in charge of Shelby Medical College Hospital. The next year he was appointed medical director of the Third Division, Fourth Army Corps, and later became a member of the examining board. After a year in Washington, he was transferred to Philadelphia as post surgeon at Camp Cadwalader, and became chief medical officer in 1865. Since his retirement, in 1866, with the rank of lieutenant-colonel, he has practised medicine in Philadelphia.

NEW YORK AND NEW JERSEY.

A New Laboratory for Medical Research.—Formal announcement will soon be made of plans for the erection, in the city of New York, of what is expected to be one of the greatest laboratories for medical research in the world. This will be a gift from Mr. J. D. Rockefeller, for the Rockefeller Institute for Medical Research, and is to be erected on the East side of the city. Announcement was made, February 9, that the location of the site for the new laboratory would occupy 3 blocks of land, extending from Sixty-fourth to Sixty-seventh streets, and from Avenue A to the East River. The new laboratory will, it is said, be the finest and also the most costly institution of its kind in the world. It will probably be modeled upon the Pasteur Institute, Paris, yet is expected to surpass all present scientific laboratories. The ground purchased is a portion of the old Schermerhorn farm and cannot be transferred to Mr. Rockefeller until the will of the late Mr. Schermerhorn is probated, next week. The property contains 110 city lots and is the only unimproved plot of its size south of Harlem. The numbered streets have never been opened across this land. The price paid for the land approximates $700,000. The property is admirably adapted for a laboratory, rising high above the water, opposite Blackwell's Island, commanding a fine outlook up and down the river. It is said that work upon the new laboratory building will be begun about May 1. The laboratory will be under the direction of the Rockefeller Institute, founded several years ago by Mr. John D. Rockefeller. The president of this institute is Dr. W. H. Welch, of Johns Hopkins University Medical School.

Columbia University.—For the first time in the history of this institution, summer courses will be given in the medical department, in the summer of 1903, each course to continue from 3 to 5 weeks. While the work will be adapted to the needs of the undergraduates of the third and fourth years especially, there will also be courses for graduate students.

Bellevue Hospital Improvements.—At the dinner of the Bellevue Hospital Alumni Society, held February 4, Dr. J. W. Brannan announced a number of changes at that institution, some of which have been completed, others to be carried out in the future. Among these, the announcement was made that a new building will be erected, to cost $3,000,000.

Typhoid Fever in Ithaca, N. Y.—The water-supply of Ithaca, which has a population of a little over 13,000, comes from a near-by creek. February 5, the total number of cases of typhoid fever was reported to be 340, and the epidemic shows no signs of abatement since. Water for drinking purposes is now being brought into Ithaca from wells in the surrounding towns. Many of the patients are students at Cornell University, one of whom died, February 7. Dr. F. C. Curtis, of the New York State Health Department, found that Six Mile Creek, the principal stream supplying the city water, is in no way protected from contamination. It runs through 2 villages and receives their waste water and sewage. The City Hospital and the Cornell Infirmary are both filled with patients with typhoid fever.

Bronx Eye and Ear Infirmary.—This new hospital, at 660 East 142d. street, was opened to the public February 7. It has been established and will be supported entirely by voluntary contributions. Free treatment will be given to the poor. Drs. C. H. McIlwaine and E. M. Raynor are on the board of directors.

Malaria Contagious in New York.—Early this spring the New York Board of Health will add malaria to the list of contagious diseases, which must be reported by physicians in this city. It is intended that every patient with the disease shall be surrounded by screens during the duration of the illness, so that mosquitoes will not be able to spread the disease. The new regulations will probably go into effect early in March.

Scarlet Fever at Wenonah, N. J.—On account of the outbreak of scarlet fever, the schools of Wenonah have been closed temporarily.

New York Academy of Medicine.—At the meeting held February 5, tuberculosis and its treatment were the subjects of discussion. Resolutions were proposed urging that the construction of State sanatoria be hastened. Dr. C. B. Fitzpatrick described means of detecting the tubercle bacilli. Dr. S. A. Knopf contradicted the statements made by Dr. Robin, of Paris, and insisted that, with the aid of philanthropists, the disease was curable. A resolution was also proposed condemning the attempt to diminish the requirements of the tenement house law. Dr. E. J. Lederle said that New York City needed a sanatorium for consumptive patients. In New York City alone there are as many as 30,000 persons afflicted with tuberculosis, two-thirds of whom are too poor to pay for medical treatment. The section of the city most infected with consumption is Chinatown. Next to the Chinese, the Syrian population of New York suffers most from phthisis.

Rochester Smallpox Hospital.—The new smallpox hospital in Rochester was opened February 7, for the reception of patients. At one time more than 200 patients with smallpox were reported in Rochester; now there are but 33 cases. The new hospital cost $40,000.

Death of Dr. Mynter.—Dr. Herman Mynter, professor of clinical surgery in the University of Buffalo, died in his home in Buffalo, February 9, aged 55 years. A native of Denmark, he finished his medical course at the university of Copenhagen in 1871, coming to America a few years later. On his arrival in this country, he settled in Buffalo, where he soon become well known as an abdominal surgeon. The author of a few monographs on surgical subjects, he has also written a book upon appendicitis embodying his lectures delivered at Buffalo, the second edition of which appeared in 1897. This book earned for him his M. D. from the university of Copenhagen in 1897, 26 years after the termination of his studies, because, in order to be graduated from the medical school of the university of Copenhagen, a treatise showing research work of value must be presented. Several years ago Dr. Mynter became surgeon to the German Hospital, Buffalo, becoming later professor of clinical surgery in the medical school of the university of Buffalo. His lectures on appendicitis he also delivered at the university of Copenhagen a few years ago. His name was brought prominently before the public when the late President McKinley was shot, as he was one of the surgeons attending the President at that time

NEW ENGLAND.

The Health of Lowell, Mass.—The recent report of the Lowell Board of Health shows the great value of antitoxin in the treatment of diphtheria, and a pure water-supply in the prevention of typhoid fever. Among 654 cases of diphtheria, reported during the past year, antitoxin was used in 535 patients, only 38 of whom died, the percentage of mortality being 7.1. Of the cases in which antitoxin was not used, 89 recovered and 29 died, the proportion of mortality being 24.5%. Since 1894, when antitoxin was first used in Lowell, the mortality from diphtheria has fallen from 44% to 9.5%. In typhoid fever the record of Lowell is almost as good. In 1890 the drinking water was obtained from the Merrimac River, the report for that year showing 454 cases with 123 deaths. The river was then discarded, drinking water being supplied by wells. Since that time the number of cases of typhoid fever has constantly decreased, there having been but 83 cases with 16 deaths in 1902. The death-rate from typhoid fever has decreased from 1.58 per 1000 to 0.11 per 1000.

Death of Dr. Homans.—Dr. John Homans, the eminent Boston surgeon, died at his home in Boston, February 7, aged 66 years. Not only was his father a prominent surgeon, but his grandfather was also well known as a surgeon, performing service at the battle of Bunker Hill. Dr. Homans was born in Boston, November 26, 1836, and was graduated from Harvard College in 1858, taking his medical degree at the Harvard Medical School in 1862. In 1862 he became assistant surgeon in the U. S. Navy, resigning from the Navy to enter the U. S. Army as an assistant surgeon the next year. He was on the staff of General Banks at New Orleans, having been surgeon-in-chief at the St. James Hospital in that city. He was in the famous Red River expedition and in the battles of Sabine Crossroads and Pleasant Hill. Temporarily he acted as medical director on this expedition. He was then ordered to the Army of the Shenandoah as surgeon-in-chief of the First Division, Nineteenth Army Corps. Later he was made medical inspector on the staff of General Sheridan, resigning, finally, in 1865. He then spent 2 years in Europe and started to practise surgery upon his return. He was surgeon to the Boston Dispensary, Children's Hospital, Carney Hospital, and Massachusetts General Hospital, where he was both visiting surgeon and lecturer on surgery in the Harvard Medical School. He was an authority upon abdominal surgery, as his numerous writings show. He was a member of a great number of societies and clubs, medical, historical and social. He had a charming personality, and was never forgotten by anyone who came in contact with him.

WESTERN STATES.

No More Plague in San Francisco.—Under date of February 9, Dr. Vincent P. Buckley, of the San Francisco Board of Health, announces that no traces of the plague any longer exist in San Francisco, and that vessels now leaving the port are given clean bills of health. The last reported case of bubonic plague occurred December 11.

Health Day in Utah.—Health Day is a new legal holiday created by a bill recently introduced into the Legislature. This bill sets apart the first Monday in October as a legal holiday in the State of Utah, upon which day it is compulsory for every person to clean and disinfect thoroughly dwelling houses, stores, theaters and buildings of every kind used by the people. There is a penalty of $50 for failure on the part of any person to clean up and disinfect as provided.

Hospital For Consumptive Naval Men.—It is proposed to enlarge the army hospital at Fort Bayard, N. M., so as to accommodate tuberculous patients from the Navy also. An enlargement to provide for 100 patients will cost $100,000. If this change is made, it is proposed to call the hospital the Army and Navy General Hospital, and the patients will be admitted under the same rules as are in force at the Army and Navy Hospital at Hot Springs, Ark. It is to be hoped this change may be accomplished, as, heretofore, consumptives in the Navy were kept without proper climatic conditions, at some Naval hospital.

Northwest Medicine.—A new journal under this title has just appeared, published by the Washington Medical Association, of Seattle. The editor-in-chief of the new publication is Dr. Clarence A. Smith.

SOUTHERN STATES.

The President's Illness.—President Roosevelt has recently had a slight attack of influenza which, while not at all serious, kept him indoors several days last week. He had tonsillitis, with slight fever, followed by bronchitis. He remained in the White House February 6, 7 and 8, by order of Surgeon-General Rixey.

Mrs. Reed Pensioned.—The Senate, February 4, passed a bill granting a pension of $125 a month to the widow of Dr. Walter Reed, Surgeon, U. S. A., in recognition of his eminent services in connection with the yellow fever investigations in Cuba.

Washington Hospitals Benefited.—By the will of the late Frederick Pilling, $1000 each were left to the Children's Hospital, Garfield Hospital, Emergency Hospital and Orphan Asylum, Washington, and $500 to the Huddlefield Infirmary, England, contingent upon the death of his widow.

To Fight Bubonic Plague.—A bill was introduced into the House of Representatives, February 3, by J. L. Slayden, of Texas, providing that, to prevent the spread of the bubonic plague now prevailing on the Pacific Coast of Mexico, the President is authorized and directed to send a commission of 3 medical officers of the army or navy, to investigate and report the conditions as to the disease there prevalent. The bill carries an appropriation of $50,000 to aid the Mexican authorities in their efforts to stamp out the plague and to prevent its spread to the United States.

MISCELLANY.

Bubonic Plague in Mazatlan.—Under date of February 7, the total number of cases of bubonic plague reported up to February 1 was 260, with 200 deaths. Four patients are reported as being gravely ill. February 6, one death occurred; February 8, 2 deaths. The results of the use of the antiplague serum are very satisfactory, improvement following immediately after injection.

Manila Free From Cholera.—Under date of February 4, the U. S. Quarantine officials at Manila have declared Manila free from cholera, thus ending the quarantine which lasted almost one year. The disease is still epidemic in the provinces. There have been 130,363 cases, with 828,955 deaths, reported, the actual number being probably fully 20% more.

Brazilian Medical Schools.—Dr. Ignacio Monteiro de Almeida Gouvêa has been appointed professor of clinical surgery in the Bahia Medical School. Dr. Ernesto de Nascimento Silva has been appointed professor of medical jurisprudence and toxicology, replacing Dr. Agostino José de Souza Lima, who recently resigned.

The First Medical College for Women in China.—The Medical College for Women, in Canton, was formally opened, December 17, by the U. S. Consul. Addresses were made by a number of missionaries, who paid high tribute to Dr. Fulton, who has done so much for the Chinese. Thirteen young women are studying medicine in this institution, while the applicants for admission next year number 60. Next to Dr. Kerr, Dr. Mary Fulton, the head of the new college, has afforded Chinese women great relief from suffering.

No More Bubonic Plague in Africa.—Latest reports from Lorenzo Marquez, November 30, 1902, state that the district of Magude is entirely free from plague.

Obituary.—Dr. Charles Mahnke, at Appleton, Wis., January 28.—Dr. Archibald E. Covert, at New York City, February 2, aged 32 years.—Dr. Herman T. Richardt, at East Orange, N. J., January 31, aged 69 years.—Dr. John P. Agnew, at Philadelphia, Pa., February 3.—Dr. Charles Wetherill Gumbes, at Norristown, Pa., January 31, aged 62 years.—Dr. B. T. Shimwell, at Philadelphia, Pa., February 4, aged 51 years.—Dr. Henry Koch, at Egg Harbor, N. J., February 5, aged 62 years.—Dr. Earle Eugene Woolworth, at Brooklyn, N. Y., February 5, aged 30 years.—Dr. J. Frank Valentine, at Richmond Hill, L. I., February 5, aged 45 years.—Dr. James R. MacGregor, at New York City, February 5, aged 70 years.—Dr. John Homans, at Boston, Mass., February 7, aged 66 years.—Dr. Edward Vandernauf, at New York City, February 7.—Dr. Caleb W. Hornor, at Bryn Mawr, Pa., February 8, aged 74 years.

GREAT BRITAIN, ETC.

London Neurological Society.—Sir William Broadbent will give the third Hughlings Jackson Lecture, during the present year, before the Neurological Society of London.

Queen's College, Galway.—For the first time on record a young lady has won the literary medical scholarship at Queen's College, Galway.

Victoria Memorial Midwifery Fund.—Mr. Henry Phipps, of New York, who is at present traveling in India, has given the wife of the Viceroy the sum of $10,000, in support of her Victoria Memorial Midwifery Fund.

London Hospital Statistics.—The secretary of the London Hospital announces that last year 2,500,000 pills and 3 tons of cough lozenges were taken by people who came to the hospital for treatment. In dressing injuries 92 miles of lint, 476 miles of bandages, 6 tons of cotton wool and 9 miles of plaster were used. Every day they consumed half a ton of ice and 400 syphons of soda water. The eggs consumed, if placed end to end, would form a chain 6½ miles long.

St. Bartholomew's Hospital, London.—Mr. W. McAdam Eccles, M. S. Lond., F. R. C. S., Hunterian Professor at the Royal College of Surgeons of England, the author of a recent successful book entitled "Hernia, Its Etiology and Treatment," has been appointed assistant surgeon on the staff of St. Bartholomew's Hospital. His essay on the Pathology and Treatment of Diseases Caused by or Connected with Imperfect Descent of the Testicle won the Jacksonian Prize in 1900.

CONTINENTAL EUROPE.

A Scientist's Brain.—Dr. Retzius, of Stockholm, recently described the brain of the eminent physician and pedagogue, Adam Siljeström, who died in 1892, aged 76 years. The brain weighed 1422 grams, which is about an ounce above the average normal brain weight, and was exceptionally well developed, showing extremely rich convolutions in the frontal and parietal association areas. A small abscess was found, which involved the right subfrontal gyrus.

A Gift to Italian Hospitals.—At a recent meeting of the directors of the Savings Bank of Milan it was decided to donate the sum of $1,000,000 to the hospitals of Lombardy. The money is to be used for the introduction of recent scientific discoveries and in providing for the comfort and well-being of the patients.

Berlin Medical Society.—At the meeting held February 7 the question was again discussed as to whether bovine tuberculosis could be transferred to human beings. Professor von Hansemann showed the strength of Professor Koch's theory, from prolonged observations, and declared that tuberculosis certainly could be transferred through food, which caused tuberculous tumor of the intestines. This frequently heals itself, but sometimes spreads to other parts of the body. He added: "In no case, however, does the infection cause ordinary tuberculosis of the lungs, which results in phthisis, and since the fact that this bovine tuberculosis of the human intestines is never, by itself, fatal, Professor Koch's assertion, to all practical intents and purposes, has turned out quite right. It would, therefore, be harmless to feed children with uncooked milk, but the milk which is commonly sold contains a number of other dangerous ingredients, which frequently lead to catarrh of the intestines."

Influenza in Italy.—A serious epidemic of influenza was reported last month throughout Italy. It is said that there have been 15,000 cases. In Padua it is rumored that as many as 20 persons have died in one day from this disease.

University Notes.—**Basle**: Dr. A. Jacquet has been appointed professor of materia medica, replacing the late Dr. Massini.—**Berlin**: Dr. M. Laehr has been appointed professor of psychiatry.—**Bonn**: Dr. Ernst Schultze has been awarded the title of professor.—**Breslau**: Dr. L. Hirt, professor of hygiene and neurology, recently celebrated his twenty-fifth anniversary as prosector in the University.—**Dijon**: Dr. Bataclan has been appointed professor of biology. **Erlangen**: Dr. Arnold Spuler has been appointed professor. —**Graz**: Dr. Victor Ritter von Hacker, of Innsbruck, has been appointed professor of surgery in the place of the late Dr. Karl Nicoladoni.—**Greifswald**: Dr. von Grützner, of Tübingen, has been offered the post of the late Dr. Landois, professor of physiology.—**Halle**: Dr. Hitzig, director of the psychiatrical clinic, has announced his intention of retiring soon.—**Heidelberg**: Dr. Friedrich Arnold, formerly director of the Anatomo-Physiological Institute, whose lectures in anatomy and embryology were at one time greatly admired, celebrated his 100th. birthday, January 8, 1903. A tablet in his honor was unveiled in the Anatomical Institute.—**Jena**: Dr. B. S. Schultze, who celebrated his 75th. birthday, December 29 last, will retire from the position of professor of gynecology and director of the gynecological clinic, April 1.—**Leipsic**: Dr. Hantzsch, of Würzburg, has been appointed successor to Dr. Wislicenus.—**Marburg**: Dr. Ludwig Aschoff, of Göttingen, has been appointed professor of pathological anatomy, succeeding Dr. Ribbert.—**Moscow**: Dr. K. A. Tinirjasew, professor of physiology, has been made emeritus professor of physiology.—**Munich**: Dr. George Dittmann has been appointed professor of internal medicine, as has also Dr. Otto Frank.—**Padua**: Dr. D. Bertelli has been appointed professor of anatomy.—**Paris**: Dr. Henri Huchard has been made an officer of the French Legion of Honor, of which order Dr. Jules Comby has been made chevalier.—The Monbinne Prize, consisting of $300, has been awarded to Dr. Cahnheim, of Dresden, and Dr. Ehlers, of Copenhagen, for their joint work upon leprosy in Crete.—**Prague**: Dr. E. Steinach, professor of physiology in the German university, has been appointed director of the new physiological department.—**Salamanca**: Dr. H. R. Pinilla has been appointed professor of pediatrics.—**Seville**: Dr. Enrique Suner y Ordonez has been appointed professor of pathology, and Dr. C. J. Munoz professor of obstetrics and gynecology.—**St. Petersburg**: The Medical Institute for Women has just granted its first diplomas. The graduating class consisted of 111 women. There are at present, not including these recent graduates, 1314 students, many more than are found in several Russian medical schools for men.—**Würzburg**: Dr. C. Schleich, professor of surgery, has received the Rinecker Prize for his services in having discovered the methods of local anesthesia bearing his name.—Dr. Karl Marbe has been appointed professor of psychology.

Obituary.—Dr. G. Colasanti, professor of materia medica and pharmacology in the Medical School of Rome, died recently.—The death is also announced of Dr. M. Lawdowski, professor of histology and embryology in the Military Medical School at St. Petersburg.

The Latest Literature.

BRITISH MEDICAL JOURNAL.

January 24, 1902.

1. An Address on the Modifications and Improvements in Operations on the Biliary Passages. A. W. MAYO ROBSON.
2. The Operation of Cholecystectomy With a Record of Cases. B. G. A. MOYNIHAN.
3. Gall-Stone in the Common Bile Duct. S. J. ROSS.
4. Two Operations Performed Upon the Liver Through the Chest Wall. C. P. NEWBOLT.
5. Case of Liver Abscess in a Child Aged Two and a Half Years. W. J. J. ARNOTT.
6. Note on a New Method of Producing Hemolysins. M. ARMAND RUFFER and MILTON CRENDIROPOULO.
7. Bottle-Finishers' Cataract. WILLIAM ROBINSON.
8. Perforation of the Esophagus by Tuberculous Glands. CLIVE RIVIERE.
9. An Improved Hypobromite Process for the Estimation of Urea. H. J. PECHELL.

1.—Robson says that, as soon as **gall-stones** give serious trouble, operation is indicated, for it is only from the complications which in many cases arise sooner or later that any danger after operation need be apprehended. Medical treatment may do much to relieve the catarrh associated with cholelithiasis, but no medicine can dissolve gall-stones or produce permanent relief. It is impossible to say what operation will have to be done until the abdomen is opened and the exact state of affairs made out. No surgeon should attempt the removal of gall-stones unless he is prepared to perform any of the various operations on the biliary passages, and no operation should be concluded until it is determined that the ducts, including the hepatic and common, are free from concretions, otherwise dissatisfaction is certain to follow. A gall-stone scoop is the only special appliance that need be employed. Rubber gloves impair the sense of touch and cause delay. In jaundiced patients calcium chloride is given in 30-gr. doses by mouth before operation and afterward in 60-gr. doses by rectum, thrice daily for 2 or 3 days or longer if necessary. A sandbag, placed under the patient at the level of the liver, will push the spine forward and with it the liver and bile-ducts, so that the common and hepatic ducts are brought several inches nearer the surface. Robson always makes his incisions over the middle of the right rectus and in a line parallel with its fibers, which are separated by the finger. If more room is required, the incision is carried upward in the interval between the ensiform cartilage and the right costal margin as high as possible. By lifting the lower border of the liver, first drawing the organ downward from under the cover of the ribs, the whole of the gall-bladder and the cystic and common ducts are brought to the surface. An assistant gently draws the gall-bladder upward with one hand and retracts the left side of the wound and the viscera with the other. The gall-bladder, cystic and common ducts now form a straight passage from the fundus of the gall-bladder to the duodenum, and the whole length of the ducts with the duodenum and head of the pancreas are in view. Stones in the ducts are detected by palpation and removed by incision into the ducts. If the common duct has been incised, a probe may be passed into the hepatic duct and down the common duct into the duodenum. The incision into a bile-duct is closed by a curved needle held in the fingers without a needle holder, a continuous catgut suture being used for the margin of the duct proper, and a continuous catgut or celluloid thread being employed to close the peritoneal edges of the duct. When the gall-bladder is contracted and a swollen pancreas presses on the common duct, a drainage tube is inserted into the hepatic duct, passing upward through the common duct, and here held by a catgut stitch. Prolonged manipulations are never made on a stone deeply impacted even in the cystic duct, but the duct is at once incised and the concretion removed. Drainage is effected by gauze surrounded with a split drainage tube, which is brought out by the side of the gall-bladder drain. All bleeding points and all firm adhesions are ligated. Ideal cholecystotomy (cholecystotomy in 2 stages) and partial cholecystectomy (Mayo) are not regarded with favor. A contracted gall-bladder which cannot be brought to the surface may be drained by fixing a tube into it with a purse-string suture, the general peritoneal cavity being protected by gauze packing. In many of these cases it is better to remove the gall-bladder. If a stone is impacted in the duodenal ends, a duodenocholedochotomy is sometimes the easiest operation. A cholecystenterostomy is rarely used because the trouble is not removed; when it is necessary it will be found easier to anastomose the gall-bladder with the colon. In detaching adhesions a careful search must always be made for an opening into the hollow viscera. [F. T. S.]

2.—Moynihan reports 6 cases of **cholecystectomy.** The indications for the operation are: Injuries of the gall-bladder; gangrenous and membranous cholecystitis; chronic cholecystitis with dense thickening of the walls of the gall-bladder and cystic duct with or without stenosis of the cystic duct, and in chronic cholecystitis, when the gall-bladder is shriveled and puckered and universally adherent so that the gall-bladder is no longer a receptacle for bile; distension of the gall-bladder, hydrops or empyema, due to blocking of the cystic duct by calculi, stricture, growth or external deposits or in cases of mucous fistula following these conditions; fistula between the gall-bladder or cystic duct, on the one hand, and the stomach, duodenum or colon, on the other; multiple ulcerations of the gall-bladder or cystic duct, when gall-stones have eroded their way through the walls into the liver, the duodenum or other protective adherent masses; and in primary carcinoma of the gall-bladder. The gall-bladder should never be removed unless the surgeon is convinced that the common duct is patent. [F. T. S.]

3.—Ross reports a case of **gall-stone in the common duct.** The performance of cholecystotomy was followed by recovery. The patient was 67 years of age, and the symptoms had existed 27 years. The stone was pushed into the gall-bladder and removed. [F. T. S.]

4.—Newbolt reports a case of **hydatid cyst of the liver** and a case of **abscess of the liver,** both of which were treated by transpleural drainage, a portion of the ninth rib having been removed. In order to shut off the pleural cavity the cyst in the first patient was sutured to the tissues of the chest wall, and in the second patient the same result was achieved by the suturing of the visceræ to the parietal layer of the pleura. Both patients recovered. [F. T. S.]

5.—Arnott reports a case of **hepatic abscess** in a child, aged 2½ years. There was a history of a neglected attack of dysentery. The abscess was drained by inserting a tube between the tenth and eleventh ribs in the anterior axillary line. Six days later the child died with symptoms of tuberculous meningitis. [F. T. S.]

6.—Ruffer and Crendiropoulo have found that if urine of a healthy man be injected 2 or 3 times subcutaneously into a rabbit, the **serum of this rabbit acquires a marked hemolytic action on human red•bloodcorpuscles.** If the serum is heated to 56° C. for 5½ hours, this hemolytic property is completely destroyed. After the hemolytic power of the serum has disappeared, some serum from a normal animal will restore it in a measure. The specificity of such a serum is not absolute. [J. M. S.]

7.—Robinson calls attention to the frequency of **hard cataract in bottle finishers** who are exposed to the brilliant light and intense heat of a furnace during their working hours. Both eyes are practically always affected. The disease begins early in life and progresses slowly. It usually starts as a posterior polar cortical cataract. The disease can be prevented by wearing dark blue spectacles. Six cases are reported. [F. T. S.]

8.—Riviere reports 3 cases of **perforation of the esophagus from the ulceration of tuberculous glands** occurring in children. Each patient died and was subjected to necropsy. In the 3 patients the glands situated just below the bifurcation of the trachea had softened and discharged their contents into the esophagus. Beyond the causation of an abdominal tuberculosis, perforation of the esophagus by a caseous gland seems to give rise to no symptoms, and its presence cannot be diagnosticated during life. [F. T. S.]

9.—Pechell has found that, by adding 2 cc. of a 25% solution of glucose to 5 cc. of urine and employing Dupré's method, 9% more N gas is evolved from the urine than when the hypobromite process is used with normal urine. This indicates more nearly the normal **urea** content than when the hypobromite process is employed with untreated urine. The method is applicable to any hypobromite process. [J. M. S.]

LANCET.

January 24, 1903.

1. A Clinical Lecture on Tumors of the Bladder. P. J. FREYER.
2. On Reflex Convulsions in Growing Boys and Girls. EUSTACE SMITH.
3. The Prevention of Sea-Borne Plague. RICHARD FREER.
4. Fatalities to Workmen Caused by Breathing Sulphuretted Hydrogen. THOMAS OLIVER.
5. Surgical Treatment of Rheumatic Fever. JOHN O'CONOR.
6. The Early Diagnosis of Pulmonary Tuberculosis. H. HYSLOP THOMSON.
7. Directions for Photomicroscopy. FRANK CROSBIE.
8. A Case of Hernia into the Fossa Duodenojejunalis. CHARLES T. ANDREW.

1.—Freyer, in discussing **tumors of the bladder**, first considers epithelial tumors. Of these the most common and most amenable to treatment are the papillomata. They are analogous to cutaneous warts. The type most frequently seen is the pedunculated villous papilloma, varying in size from that of a cherry to that of a walnut. After removal these are seen to best advantage when placed in water. Freyer has removed a papilloma as large as an orange, attached to the bladder wall by a pedicle an inch long and as thick as a goose quill. The growth of a papilloma may be extremely slow, but those of small size may give rise to very grave symptoms. In the vast majority of cases papillomatous tumors occur singly. Instances are on record of spontaneous detachment of a pedunculated papilloma due probably to the spasmodic contraction of the bladder on the tumor. These tumors are most frequently found between the ages of 25 and 50 years. When a growth is seen through the cystoscope to be covered with villi, it is not proper at once to conclude that it is of a benign type, for malignant tumors are sometimes clothed with villi and may even be more or less pedunculated. Benign growths may be recognized by the absence of any hardness about their pedicles or bases and by the fact that the mucous membrane in the vicinity is soft and devoid of infiltration. Adenomata rarely or never occur in the bladder, and Freyer expresses the belief that many such cases reported have been adenomata of the prostate gland. Epithelioma ranks next in frequency to papilloma. It is extremely rare before the age of 40. In the later stage it may ulcerate into the bowel, may extend to the groin, giving rise to pain and edema in the corresponding lower extremity, or it may make its way through the sacrosciatic foramen. Tumors of the connective tissue type occur but rarely in the bladder, though fibroma, myxoma and myoma are sometimes encountered. Sarcoma is the most common tumor of this type found in the bladder, but is much rarer than the epithelial growths. Sarcoma occurs as a smooth, dense, rapidly-growing tumor involving the entire thickness of the bladder wall. In referring to the symptoms and diagnosis of bladder tumors, hematuria is first described. It is the most important and usually the earliest symptom in all forms of bladder tumor. The urine is not uniformly mixed with blood as in hemorrhage from the kidneys. The attacks of hematuria are intermittent, lasting from one to several days, and completely ceasing in the intervals. Finally, the urine may never be quite free from blood, though at times the bleeding will be more severe than at others. The earlier portions of the urine may be clear and free from blood, the stream gradually growing deeper in color until eventually pure, bright blood is passed. Clots are frequently present, are dark and irregular and unlike the worm-like clots occurring in renal hemorrhage. The bleeding is usually independent of position and motion, in these respects differing from hemorrhage due to stone. Profuse bleeding is rare in connection with stone and is the rule with tumor. The extent and frequency of the bleeding do not bear any proportion to the size of the tumor. Increased frequency of micturition occurs sooner or later with all vesical growths and never disappears until the tumor is removed. It is most marked when the tumor is situated near the neck of the bladder. Occasionally it is the initial symptom, preceding hematuria. Pain is nearly always present in the latter stages of all tumors. Retention of urine may occur from various causes. Occasionally shreds of tumor tissue may be found in the urine. Pus appears in the urine if a cystitis exists; this is rare in benign growths, particularly in the early stages, unless the bladder has been infected by instruments. The ureter may become blocked by the tumor, and a hydronephrosis result. Rectal or vaginal examinations will aid in forming a diagnosis. Freyer describes minutely the Leiter cystoscope and refers to its great value in diagnosing bladder tumors. In washing out a bladder preparatory to the use of the cystoscope, care should be taken to irrigate the bladder slowly and gently so as not to excite fresh bleeding. The bladder sould be examined methodically. In the vast majority of instances tumors will be found in the vicinity of the ureteral openings. Before withdrawing the cystoscope care should be taken that the light is turned off for at least half a minute in order to avoid burning the urethra. That no mishap take place, Freyer always detaches the connecting cords from the instrument before its withdrawal. The only treatment of bladder tumors which offers the prospect of permanent relief consists in the removal of the growth, and this can best be done by means of a suprapubic cystotomy. The Trendelenburg position is considered quite unnecessary in the performance of this operation. Freyer has also given up the use of the Petersen bag, which he believes does more harm than good. Having located the tumor with the finger, its pedicle is grasped with a pair of forceps and the tumor removed by torsion. If the growth is sessile, it will be necessary to use forceps with broad serrated jaws. If the sessile growth be a large one, it is to be removed piecemeal, and this can be best accomplished by keeping the bladder well distended with fluid, otherwise there will be danger of healthy portions of the bladder wall becoming nipped. The seat of the tumor can best be examined through an ordinary Ferguson's vaginal speculum; light can be thrown through the speculum by means of an ordinary electric forehead lamp. Through this speculum any remaining portions of the growth may be removed and the base treated as seems necessary. If the growth is malignant, it should be grasped by the forceps and brought well into the wound; this will be facilitated by an assistant's finger in the rectum. The mucous membrane should be incised all around the base of the growth and a free removal accomplished by broad serrated forceps. It is unnecessary and inadvisable to attempt to suture the edges of the mucous membrane over the former site of tumor. Catgut sutures are absorbed too rapidly to be of any use, and silk sutures might form the nuclei of calculi. Suprapubic drainage is always employed after these operations. [J. H. G.]

2.—Smith discusses **reflex convulsion in growing boys and girls**. He mentions that convulsive attacks so often seen in rickety and highly neurotic infants are not uncommon, but that similar nervous seizures are sometimes present in children beyond the period of infancy and even present in the eleventh or twelfth years. He points out that occasional convulsive attacks in a child who is passed the period of infancy are often classed at once as epileptic and treated accordingly. On inquiry we can often detect premonitory symptoms common to these attacks and find that, on each occasion, the patient for some days before the seizures has shown signs of ill health, and that the seat of the trouble is usually the alimentary tract. Such patients almost invariably suffer from languid circulation and cold feet. They show poor resisting powers and are liable to contract more or less gastric or gastro-intestinal catarrh. He points out that the convulsive attacks are separated by long intervals during which the health of the patient is quite satisfactory. Usually a single convulsive seizure occurs in a day; in some instances 2 or 3 occur in 24 hours for several consecutive days, or in some may be repeated frequently over a period of weeks. Gastro-intestinal derangement usually preceeds or accompanies the seizures. He reports a number of cases illustrating these reflex convulsions. Finally he calls attention to the importance of not being too hasty to assume that periodical fits occurring in neurotic children are epileptic. The treatment should be directed to remove the local irritation or passive derangement of organs, instead of flying at once to bromides or other nervine sedatives. Children subject to such seizures to a period as late as 12 years may grow up into perfectly healthy adults without showing any sign of having suffered in mind or body. [F. J. K.]

3.—See editorial.

4.—Oliver contributes an article **on fatalities to workmen caused by breathing sulphuretted hydrogen.** He reports 4 instances in which workmen were killed by inhaling sulphuretted hydrogen while working in caissons. He gives an account of the symptoms and points out that the necropsies on the bodies of two men showed nothing which indicated that death was caused by the inhalation of sulphuretted hydrogen, and that diagnosis rests largely upon the character of the surroundings and the mode in which death was induced. He is of the opinion that sulphuretted hydrogen is an extremely poisonous gas. Excavations made close to slag heaps or waste refuse of chemical works should be conducted with the greatest caution, and the odor of sulphuretted hydrogen should be considered a signal of danger. He suggests that, before allowing men to work in confined places where there is a suspicion of this gas, the plan might be adopted of exposing a piece of filter paper soaked in lead or silver solution which would become blackened by the sulphuretted hydrogen. [F. J. K.]

5.—O'Conor urges strongly **incision and drainage of joints in acute rheumatic fever** and reports 20 cases in which he has opened and drained the joints in this condition with excellent results. In all of these cases medicinal treatment both local and general had proved ineffectual. This surgical treatment not only causes immediate disappearance of the arthritis and early cessation of the general toxemia, but also effectually protects the heart against involvement. The author takes occasion strongly to state that no operation should be undertaken unless the operator is able to carry out a perfectly aseptic operation. The joint should be freely opened, thoroughly drained and frequently irrigated. [J. H. G.]

6.—Thomson writes that upon the early diagnosis of pulmonary tuberculosis rests the success in the sanatorium treatment. He contends that the diagnosis of pulmonary tuberculosis in its earliest stage is by no means an easy matter in all cases, and that it cannot always be confirmed by the detection of tubercle bacilli in the sputum. He then discusses the physical signs of the early stage of phthisis and gives brief histories of 5 cases. He thinks that in doubtful cases Koch's tuberculin should be employed, and that a rise in the temperature of not less than 1° F. should be obtained before the diagnosis is made. [F. J. K.]

7.—Crosbie gives directions for photomicrography based upon personal experience. Drawings and photographs illustrating the various methods are appended. [F. J. K.]

8.—Andrews reports a case of **hernia into the fossa duodenojejunalis** discovered on the dissecting table. The whole of the small intestine, with the exception of the lower six inches of the ileum, was found in the sac. The subject was an old male. [J. H. G.]

MEDICAL RECORD.

Febuary 7, 1903.

1. Theory and Practice of Spinal Cocainization. G. K. DICKINSON.
2. Essential and Paroxysmal Tachycardia. J. J. MORRISSEY.
3. Hemorrhagic Appendicitis as the First Manifestation of Purpura Hemorrhagica. NATHAN JACOBSON.
4. Subcutaneous Abscesses Due to the Gonococcus, in a Child Two Years of Age. MILTON A. GERSHEL.
5. Imbalance and Insufficiency of the Eye Muscles. R. C. MATHENY.
6. The Maternal Impression Superstition. EDWIN TAYLOR SHELLY.
7. Paraffin Injection in a Case of So-called Saddle-nose. FRANCIS ALTER.
8. The Army Cartridge-belt. LOUIS L. SEAMAN.

2.—Morrissey discusses **essential and paroxysmal tachycardia.** He describes attacks occurring in 2 patients which he regards as representing 2 distinct types of the condition. The first was produced possibly by myocardial degeneration and the second by profound shock to the nervous system. The treatment of tachycardia should be based upon the condition from which it arises, or with which it is associated. [T. L. C.]

3.—Jacobson reports a case of **appendicitis** upon which he operated, in which that organ appeared acutely inflamed. Upon section it was found to present numerous areas of hemorrhage into its substance. Two days after operation the patient, a woman of 37 years, was seized with intense pain in the left side of the chest, and the temperature, which had fallen to nearly normal after the operation, rose to 102° F. Four days after operation she developed a hacking cough and during that evening raised a large quantity of bright red blood, during the same night she had profuse nasal hemorrhage. On the following day a number of **petechiæ** appeared on the left leg in the region of the head of the fibula, while on the calves of both legs numerous ecchymoses were found; on the abdomen there were also petechial points. A detailed history of the case is given. Jacobson regards it as one of **purpura hemorrhagica** in which the first evidence was hemorrhage of the appendix; in consequence of this bleeding the symptoms so closely resembled those of ordinary appendicitis that it was impossible to make a differential diagnosis. [T. L. C.]

4.—Gershel reports a case of **subcutaneous abscesses due to the gonococcus** in a child, 2 years of age. The little patient suffered from typhoid fever and a few days after admission to the hospital developed an **acute anterior urethritis** which was proven to be gonorrheal in nature. The source of infection could not be established. Seven and 10 days later, respectively, areas of induration appeared to the left and right of the anus. Both were found to contain pus in which **gonococci** were present. [T. L. C.]

8.—Seaman protests against the method of carrying the **army cartridge-belt** as is practised to-day in our service in the tropics. He believes that supporting this weight of 10 or 12 pounds practically causes massage of the intestines which creates peristalsis and is one of the most efficient methods of exciting intestinal action. Seaman holds that this unnecessary burden does much to aggravate the prevalant **intestinal catarrh** among the troops. [T. L. C.]

MEDICAL NEWS.

February 7, 1903. (Vol. 82, No. 6.)

1. Report of the Committee on Conference of the Medical Society of the State of New York.
2. What Advice Should be Given to a Woman Suffering from Fibroid Tumor of the Uterus? J. RIDDLE GOFFE.
3. Eye-Strain. A. C. BARDES.
4. A Fatal Case of Polyarthritis Complicated by Choreiform Symptoms and Vegetative Endocarditis. AUGUSTUS A. ESHNER.
5. Prostatic Calculi; with Report of a Case. JOHN F. ERDMANN.

6. The Facts of a Case of Hematuria.
CHARLES H. CHETWOOD.
7. Trap-Drummer's Neurosis; a Hitherto Undescribed Occupation Disease. CHARLES J. ALDRICH.
8. Experiments with a New Quinine Derivative.
F. PIRKNER.

2.—Goffe states that the proper treatment for **fibroid tumor** is operation, whether the tumor be small or large, whether it be in a married woman or a single one, except in a woman of advanced years or one in whom the tumor is complicated by pregnancy. He believes that the majority of cases of fibroid tumor of the uterus complicated by pregnancy will go to full term and be delivered normally. In the hands of an expert, Cesarean section at full term is safer for the mother and child than myomectomy during gestation in the rare instances in which such an extremity is required. [T. M. T.]

3.—Bardes in his paper on **eye-strain** states that glasses for elderly people should be selected with reference to the use for which they are intended. If for reading or sewing, they should have strength whereby a book can be read at a distance of 15 inches from the eye. A musician or an artist requires a pair that will give distinct vision at a distance of from two to three feet. As far-sightedness of age increases with advanced years, the glasses ought to be changed every few years and stronger given. If it should become necessary to change them too often, we should suspect the presence either of cataract or of glaucoma. [T. M. T.]

4.—Eshner reports a case of this condition which is interesting on account of the association of polyarthritis, choreiform symptoms and endocarditis. He prefers to speak of "polyarthritis" rather than "rheumatism" and of "choreiform symptoms" rather than of "chorea." He thinks it is all but certain that rheumatism is an infectious disease, and it seems probable that it is dependent upon one of the several cocci that have been isolated from an infected joint and endocardium. Chorea likewise is looked upon as an infectious disease, but nothing is known definitely of the exciting cause. [T. M. T.]

5.—Erdmann says that the treatment is distinctly operative and consists in making any of the accepted incisions for attacking the prostate. Before the patient comes out of the anesthetic state a careful search or washing of the bladder should be made, so that none of these calculi may be left in the bladder to form a nucleus for a vesical stone. [T. M. T.]

6.—In Chetwood's case of **hematuria** the special features are: (1) The hematuria lasted for 4 years with a relatively small amount of deterioration in general health; (2) the negative results of the laboratory urine analysis; (3) the satisfactory cystoscopical picture; (4) the absence of morbid appearance presented in the gross showing of the kidney at operation; (5) the microscopical evidence of the kidney lesion; (6) the prompt cessation of hematuria following operation. [T. M. T.]

7.—Aldrich reports a case of **trap-drummer's neurosis** and says that in all these exhaustion or occupation neuroses we recognize the liability of any set of muscles to become affected by paralysis, cramp or abnormal sensory sensations while engaged in continuously performing a set of movements that are the result of cerebral volition and attention and which from their nature cannot be cared for by the automatic centers of the cord. A motor and sensory type is discernible. The motor type embraces paralysis or cramp-like seizures of the affected muscles whenever the indicated act is attempted. The sensory varieties usually appear as a paresthesia or a neuralgiform pain. These varieties are rarely pure. [T. M. T.]

8.—Perkner believes that **saloquinine** is much better than quinine in cases of malarial fever in which it is to be avoided on account of certain concomitant conditions, as in patients suffering from acute and subacute middle ear disease, or from gastro-intestinal irritation which quinine may easily increase, or with persons in whom small doses of quinine produce severe symptoms of cinchonism. [T. M. T.]

NEW YORK MEDICAL JOURNAL.

February 7, 1903.

1. An Astigmatism Cured by Operation.
GEORGE J. BULL.
2. Immigration a Factor in the Spread of Tuberculosis in New York City. HENRY L. SHIVELY.
3. Tuberculous Laryngitis. J. CLARENCE SHARP.
4. The Modern Aspect of Common "Colds."
JOHN ZAHORSKY.
5. Some Unusual Cases of Appendicitis from Private Practice. HOWARD LILIENTHAL.

1.—Bull contributes a special article on an **astigmatism cured by operation**. He says that he would rather have withheld this report until after he had completed further investigations. The operation consists in making a complete tenotomy of the external rectus, being careful not to cut the capsule much beyond the upper and lower borders of the tendon. The patient operated upon was a young woman, 27 years of age, and the result was perfectly satisfactory. However, the author thinks the operation should be employed in very exceptional cases. [P. B. B.]

2.—Shively writes on the relation of **immigration** to the **spread of tuberculosis in New York City.** He states that the immigration law of 1891 excludes persons suffering from a loathsome or contagious disease, further, it seems inconsistent that diseases, such as trachoma and favus, should be deemed sufficient ground for exclusion, while the more dangerous consumptive should be admitted through sentiment in his favor. He believes that laws should be established to exclude the dangerously diseased, the pauper, the criminal and illiterate, without singling out individuals from a certain nation. The Canadian route of entrance taken by many of the above class should be strongly condemned and methods to overcome the vice and filth of the congested districts should be adopted. He says that the recent hygienic reforms have done much to decrease the prevalence and mortality of tuberculosis, but still more can be done by careful inspection and the rigid exclusion of the thousands of tuberculous immigrants who enter this country each year. [P. B. B.]

3.—In considering the subject of **tuberculous laryngitis**, Sharp confines his remarks largely to the treatment. He favors the step taken during the last decade of leaving the larynx alone, and he hopes this will continue. Patients with this condition have done well when treated with creosote, good food and attention to hygiene. However, some subjects will do well if the climate is changed. Cauterization, curettement or partial laryngectomy he does not favor. Several case-histories are given, describing his treatment and the results obtained. [P. B. B.]

4.—Zahorsky, in speaking of the subject of colds, endeavors to set forth their true etiology, which he believes to be certain specific micro-organisms. To prove this hypothesis he sets forth many convincing reasons. As regards treatment, if we accept this etiological conception in regard to cold, our prophylaxis will have to be changed. Furthermore, he says, until we make a specific diagnosis of the organisms present, and possess a specific treatment for each infection, our therapeutic efforts will remain, as they are at present, very unsatisfactory. [P. B. B.]

5.—Lilienthal presents this paper in order to impress the fact that we always learn something from every case, and that no 2 cases of like disease present the same symptoms. He reviews several case-histories of **appendicitis** occurring in private practice, and points out the unique features exhibited by each patient and the practical deduction to be drawn from each. [P. B. B.]

BOSTON MEDICAL AND SURGICAL JOURNAL.

February 5, 1903. (Vol. CXLVIII, No. 6.)

1. On Paratyphoid Fever and its Complications. JOSEPH H. PRATT.
2. Typhoid Fever at Boston City Hospital in 1902. GEORGE G. SEARS.
3. Typhoid Fever at Massachusetts General Hospital. HERMAN F. VICKERY.
4. The Clinical Diagnosis of Typhoid Perforation. JOHN C. MUNRO.
5. Diet in Typhoid Fever. FREDERICK SHATTUCK.
6. Typhoid Fever in Private Practice. J. T. G. NICHOLS.
7. Upon Presence of Typhoid Bacillus in Urine and Sputum. MARK W. RICHARDSON.

1.—Pratt says in his article on **paratyphoid** that the paratyphoid bacilli are members of a much larger group, which includes the meat-poisoning bacilli, bacillus psittacosis and the hog cholera bacillus. During the past year 84 cases have been reported. The disease has a wide geographical distribution. It is a general infection in which localized lesions may be absent, presenting all the clinical aspects of typhoid fever. Although the fever may be severe and fatal cases may occur, it is usually mild. Diarrhea and a termination of the fever by crisis are apparently more frequent than in typhoid fever. The duration is from 12 to 24 days. There has been chill at onset. An initial bronchitis has not been uncommon. Epistaxis has been noted. First and second relapses have occurred. Rose spots and a palpable spleen have been present in about half the cases. The pulse is usually slow and regular. In uncomplicated cases the blood showed no leukocytosis. The urine frequently contains albumin. The number and frequency of complications is a striking feature. The death-rate is low. [T. M. T.]

2.—Sears observed in a large number of cases of **typhoid fever** that the **complications** covered a wide range: Otitis media, 11 cases; phlebitis, 12; inflammation of the pharynx, including the tonsils and larynx, 5; pneumonia, 12, pleurisy, 6; furunculosis, 6; periostitis, 1; perichondritis, 1; parotiditis, 1; adenitis, 3; meningitis, 1; neuritis of the legs, 1; perirectal abscess, 1; inflammation of the cornea with loss of the eye, 1. The following infectious diseases were coincident: Pulmonary consumption, 4; syphlis, 2; tertian malaria, 2; erysipelas, 1. [T. M. T.]

5.—Shattuck, believes in more dietary freedom, states that an analysis of his cases by Dr. Fitz shows that the mortality among them was less than that among those of his colleagues who used a more purely liquid diet, and that relapse was 2.9% less frequent in the liberally than in the rigidly fed. He feels that the evidence presented is sufficient to warrant further trial of a liberal dietary, inasmuch that his evidence strongly indicates that under such dietary mortality and relapses are less rather than greater, while hemorrhage and perforation are no more frequent. [T. M. T.]

6.—Richardson sums up our present knowledge on this subject as follows: (1) Typhoid bacilli are present in the urines of about 21% of individuals afflicted with typhoid fever; (2) the bacilli, when present, are generally in pure culture, and their number is frequently enormous; (3) the invasion of the urine by the bacilli takes place in the later stages of the disease; (4) the necessity for the rigid disinfection and supervision of typhoid urines is apparent; (5) in urotropin we have a drug which will, in the vast majority of cases, remove the typhoid organisms from the urine, not only in the cases of simple bacilluria, but also in those in which a cystitis has resulted; (6) this subject in its relation to the public health is of the utmost importance. [T. M. T.]

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

Febuary 7, 1903.

1. How Not to Be Nervous. HUGH T. PATRICK.
2. The Scientific Exhibit and Its Future. FRANK B. WYNN.
3. The Year's Progress in Therapy. GEORGE F. BUTLER.
4. Cardiac Stimulants. JOSEPH M. PATTON.
5. Adenoids. W. FREUDENTHAL.
6. Chlorosis. C. F. WAHRER.
7. Is the Adenoid Operation a Justifiable Surgical Procedure: And, if so, shall it be Done in Accordance with the Rules of General Surgery? GEORGE L. RICHARDS.
8. The Diagnosis of Carcinoma of the Larynx. OTTO T. FREER.
9. Uniformity in Medical Practice Acts. N. R. COLEMAN.
10. A Note on Malarial Vertigo. THOMAS J. MAYS.
11. Vacation Notes. G. FRANK LYDSTON.

1.—Patrick contributes an article entitled **how not to be nervous.** He discusses the various etiological factors which occur in the nervous state and in a brief summary he writes: If you wish never to be nervous, live with reason, have a purpose in life and work for it, play joyously, strive not for the unattainable, never regret the unalterable, be not annoyed by trifles, aim to obtain neither great knowledge nor great riches, but unlimited common sense, be not self-centered, but love the good and thy neighbor as thyself. [F. J. K.]

2.—Wynn describes the **scientific exhibit and its future.** He suggests that secretaries of the various sections of the American Medical Association should constitute an advisory committee to the director of the Scientific Exhibit; it would then be possible in the preparation of the annual meeting to develop a co-relation between the work of the sections and that of the exhibit. He further suggests that in the future the exhibit should be condensed and specialized according to the tendencies in the medical world. [F. J. K.]

3.—See **Philadelphia Medical Journal,** June 21, 1902, page 1103.

4.—See **Philadelphia Medical Journal,** June 21, 1902, page 1105.

5.—See **Philadelphia Medical Journal,** June 21, 1902, page 1111.

6.—See **Philadelphia Medical Journal,** June 21, 1902, page 1113.

7.—Richards, of course, replies in the affirmative to the two questions forming the title of his paper. He then describes the **treatment of adenoids in European clinics.** In a number of the best German clinics he found that the operators did not employ any form of anesthesia and that after using the curette they made no digital examination of the nasopharynx. Where this method was employed he observed that only a small amount of adenoid tissue was removed. In the English clinics he found nitrous oxide used and much better results obtained. The German method he described as brutal. He was authoritatively informed that patients operated upon after the style first described frequently suffered a recurrence of the trouble. Richards urges the use of an anesthetic, preferring ether, and lays great stress upon performing the operation in accordance with the rules of general surgery. [J. H. G.]

8.—To be abstracted when concluded.

9.—Coleman makes a **plea for uniformity in medical practice acts.** He points out the necessity for a more uniform definition of the laws. He discusses the standard for admission to colleges, the curriculum and time of study, and the methods of conducting State Board examinations. [F. J. K.]

AMERICAN MEDICINE.

February 7, 1903.

1. The Surgical Treatment of Puerperal Infection. MATTHEW D. MANN.
2. Relation of the Innervation of an Organ to the Influence of Suprarenal Extract Upon It. S. J. MELTZER and CLARA MELTZER.
3. Methods of Closing the Abdominal Incision. W. D. HAGGARD.

4. Feeding of Infants and Children.
FREDERICK J. MANN.
5. Subsequent Report of a Case of Excision of the Sympathetic for Chronic Glaucoma.
HOWARD F. HANSELL.
6. Hypodermoclysis in Pneumonia, with Report of a Case.
MAURICE KAHN.
7. Electrolysis in Eustachian Salpingitis with Stricture; Report of 75 Cases. ELWOOD MATLACK.

1.—Mann, discussing the surgical treatment of puerperal infection, briefly considers the following operations: **Curettage, the removal of ruptured or inflamed tubes, the removal of infected fibroid or ovarian tumors, the opening or removal of ovarian abscesses, the opening of parametric abscesses, the opening of the peritoneum for exploration; for septic peritonitis; for vaginal drainage in early peritoneal infection, hysterectomy, vaginal or abdominal, removal of thrombosed and infected veins.** He states that, while the more radical operations, except under very special conditions, do not seem to hold out much encouragement, the milder operations, if properly employed, are full of promise and hope. [T. L. C.]

2.—S. J. and C. Meltzer have studied **the relation of the innervation of an organ to the influences of suprarenal extract upon it.** Their results are claimed to demonstrate that the suprarenal extract which in the normal animal causes, by subcutaneous injection, no effect upon the pupil and nearly no constricting effect upon the bloodvessels, causes a distinct and lasting effect when the sympathetic nerve is cut. In other words, a substance which exerts no effect upon a normal organ can exert a considerable effect of long duration if this organ be deprived in some way of nervous control. They suggest that the easy method of instillation of adrenalin into the conjunctival sac might be of diagnostic value regarding the efficiency of the sympathetic inervation. [T. L. C.]

3.—Haggard studies the various **methods of closing the abdominal incision** and presents the following conclusions: (1) The most reliable statistics prior to 1894 show that hernia occurs in from 6% to 29% of abdominal sections. (2) Suppurating abdominal wounds result in from 31% to 68% of hernia (according to the method of suturing). (3) The frequency of hernia is increased with the thickness of the parietal wall. (4) The longer the incision, the greater is the likelihood of hernia. (5) Drainage openings predispose to its production. (6) The site of the incision does not materially add to the occurrence, if suturing is uniform. (7) Abdominal supporters have absolutely nothing to do with the prophylaxis of this condition. (8) Subsequent pregnancy does not influence its occurrence. (9) The best preventive of postoperative hernia is the aseptic healing of the wound. (10) Through-and-through suture is satisfactory in thin subjects with short incisions, and is recommended when rapid closure is imperative. (11) The best method of suture is one which insures accurate coaptation of the fascia. (12) The method of closure in 3 layers by continuous silkwormgut in peritoneum fascia and subcutaneously seems to be freer from objections than any other. Its extended trial is desirable. (13) The patient should be confined to bed from 2½ to 3 weeks to insure thorough organization and consolidation. (14) After a wound is completely healed, no other influence acts deleteriously upon the permanence and resistance of the cicatrix. (15) It is believed that less than 2% of abdominal incisions should become infected, and not over 3% of herniæ should result. [T. L. C.]

5.—Hansell presents a subsequent report of a case of **excision of the sympathetic for chronic glaucoma.** From his study of the literature of this subject and from the final result of the case reported, he concludes that the operation is justifiable in an exceedingly small number of cases, and those selected, of simple, noninflammatory and of hemorrhagic glaucoma only after every other available remedy has been ineffectual and the patient, having been informed of the probable outcome, requests its performance. He holds that **sympathectomy is inferior to enucleation** in sightless, painful, glaucomatous eyes, for the danger in the former is greater and the result less sure. [T. L. C.]

7.—Matlack reports 75 cases in which **electrolysis was practised in Eustachian salpingitis with stricture.** Excluding purely labyrinthine conditions, these applications have been of service in almost all other forms of deafness and especially in cases of moderate degree, in which the most pronounced changes were in the tube. The best results cannot be obtained from its unaided use, so this should be supplemented by any other measures that have formerly been found of service. It is especially important to have free access to the tube, and to this end septum irregularities should always be corrected and hypertrophies of the turbinals cauterized. [T. L. C.]

DEUTSCHE MEDICINISCHE WOCHENSCHRIFT.

December 25, 1902.

1. The Influence of Temperature and Season Upon the Development of Acute Primary Glaucoma.
STEINDORFF.
2. A Special Method of Treating Suppuration of the Middle Ear and the Medicaments that are Chiefly Used in this Condition. EHRENFRIED.
3. Tremor and Urinary Intoxication. A. HOCK.
4. A New Operation for the Cure of Congenital Ectopia of the Testicle. M. KATZENSTEIN.
5. A Further Contribution Concerning Syphilis Bacilli. (Conclusion.) M. JOSEPH and PIORKOWSKI.

1.—The chief conclusion reached by Steindorff is that **acute primary glaucoma occurs principally in the cold season of the year.** This is of importance, because persons that have the prodromes of glaucoma should be especially well cared for in winter, and the possibility of the occurrence of glaucoma should always be kept in mind at such a time. [D. L. E.]

3.—The case reported is of interest because of the fact that the patient had an enlarged prostate with marked retention of urine. **During the period of most marked retention with incontinence he developed an intense tremor of the entire body.** He had great thirst and very little appetite. The condition persisted for a long time, but varied in degree. He said that he passed urine very rapidly, but examination showed that the bladder was tremendously distended. It was emptied by the catheter; and, after constantly catheterizing and washing out the bladder with antiseptics, **the tremor entirely disappeared.** It was thought to have been due to intoxication from the stagnating urine. [D. L. E.]

4.—The chief point of the operation is the new means of holding the testicle in place after it is drawn down into the scrotum. This the author does by **turning over a flap of skin from the adjacent part of the thigh and sewing this to the testicle.** At first the flap shows marked tension; but after a time the tension disappears. When this occurs it is the signal for separating the flap from the thigh and allowing the 2 wounds to heal naturally. [D. L. E.]

5.—Joseph and Piorkowski contribute a long article concerning their syphilis bacillus. They state that they considered it probable that the bacillus might be found in the semen. They, therefore, **made cultures from the semen on a culture medium made from human placenta, and obtained a free growth of bacilli,** which they describe at length. This is present with great constancy in the early stages of syphilis. The authors have **also found the bacillus in the enlarged glands.** They have been unable to find it in any other disease so far studied. [D. L. E.]

MUENCHENER MEDICINISCHE WOCHENSCHRIFT.

December 16, 1902. (No. 50.)

1. Parenchymatous Nephritis and Syphilis. M. WAGNER.
2. A Convenient Object for the Study of the Mast Cells. (Clasmatocytes). L. SCHREIBER.
3. Mesotan: A Preparation of Salicylic Acid for External Employment. H. ROEDER.
4. Contribution to the Mechanism of Hearing.
G. ZIMMERMANN.
5. Reply to the Article of Grunert's: "A New Method of Treating Paracentesis of the Tympanic Membrane in the Treatment of Acute Otitis." O. PIFFL.
6. A New Method of Heating the Carbonated Brine Baths in the Royal Mineral Baths at Kissingen.
K. VANSELOW.
7. The Diagnostic Significance of Leukocytosis in Abdominal Typhoid and Surgical Suppuration. A. KUHN.

8. A Report Upon the Results of Vaccination in the Kingdom of Bavaria in the Year 1901. L. STUMPF.
9. Our Midwives. E. ANGERER.

1.—Wagner reports several cases of **parenchymatous nephritis occurring in the course of syphilis.** The first patient, a man of 27, had had urethritis and chancre with characteristic secondary manifestations. Later he had swelling of the feet, palpitation of the heart, fever, headache and attacks of unconsciousness. The urine contained from 3 to 5 pro mille of albumin. In spite of treatment he gradually grew worse and died. At the autopsy there were found a verrucose myocarditis of the mitral valves, recent and old infarcts in the muscle of the heart; the kidneys were enlarged, red and contained numerous yellow spots, which on microscopical examination proved to be due to extensive fatty degeneration. The patient died 5 months after the intial symptoms. The second patient, a man of 30, acquired syphilis at the age of 25 years. The symptoms persisted for 5 years and then, during treatment, edema rapidly developed and ascites appeared; the urine contained 8 pro mille of albumin and numerous casts; the patient gradually grew worse and died. In both these patients it is remarkable that mercury was being given just before the development of nephritis. The third patient, a woman of 21 years, had had headaches for 3 or 4 weeks. There was some edema of the feet, a diminished quantity of urine which contained 4% of albumin and numerous casts. Under treatment a roseolar exanthem appeared; the patient was treated with mercury and potassium iodide and finally recovered completely. Wagner has been able to find 12 other cases reported in the literature in which nephritis occurred in the course of syphilis, and could be ascribed to the latter condition. (The paper is still unfinished. [J. S.]

2.—Schreiber calls attention to the fact that the nerves of the frog, particularly the sciatic nerve and the nerves of the dorsal lymph-sac, contain numerous **mast cells** upon which the changes produced by various fluids can be carefully studied. The mast cells can even be seen in physiological salt solution. In this solution the effect of various stains can be observed. As a result of various experiments, by which he was able to prove that chromic and acetic acids did not affect the granules, and that osmic acid caused them to disappear, he concludes that they are probably identical with the clasmatocytes. He believes that the proper term, on account of priority, is mast cell. [J. S.]

3.—**Mesotan** is the methoxymethylester of salicylic acid. It is a yellow, clear liquid with a slight aromatic odor, and can be mixed with oil. It is not irritating to the skin, and, when anointed, salicylic acid can be recognized in the urine. Röder has employed it in 8 cases of chronic subacute articular rheumatism, administering it by inunction. In all patients treated there was a prompt and satisfactory result. In 4 patients the localization of the pain in the joints or muscles was doubtful. No effect was noticed. In 6 patients there was some tenderness over the joints, limitation of movement and occasionally some crepitation. In all there was some improvement, and one of these patients subsequently failed to show any improvement upon aspiration. In 5 patients there was chronic or subacute articular rheumatism with swelling of the joints. These patients improved. In some patients with gout there was improvement. In 2 cases of acute polyarthritis there was improvement, but neither was carried through to a cure. In 8 cases of acute muscular rheumatism there was prompt relief. In a case of chronic muscular rheumatism there was at first some relief, but afterward the remedy apparently lost its effect. There was some relief of the pain in rheumatoid arthritis, but no effect upon neuritis or sciatica; in fact in the cases of neuritis the effects were unfavorable. The remedy is applied either pure or mixed with olive oil, painted over the part and not rubbed in. It may then be enclosed in a woolen or cotton bandage, but this is not necessary. The effect is often instantaneous and indicates that the remedy acts upon the peripheral nerve filaments. [J. S.]

4.—Zimmermann reiterates his views regarding the **physiology of hearing.** He believes that sound is transmitted directly through the tympanic cavity and not through the auditory ossicles; that the latter serve merely for the purpose of regulating the intratympanic pressure, and, therefore, for keeping the basilar fibers of the membranes in such a state of pressure as to enable them to perceive most accurately the vibrations of the air. He discusses the various arguments that have since been advanced against this theory. [J. S.]

5.—Pifll insists that he is justified in objecting to Grunert's doctrines upon perforation of the tympanic membrane in acute otitis. He thinks, for several reasons, that this often increases the danger of the case. [J. S.]

6.—Vanselow describes the different methods employed for heating carbonated brine baths in order to produce the proper temperature without too great an escape of carbonic acid gas. He finds that coils of steam-pipe passing through the horizontal cylinders give the most satisfactory results. The baths can be brought to the proper temperature in 3 minutes, and the amount of carbonic acid gas lost varies between 8% and 10%. [J. S.]

7.—In continuation of his article upon the **leukocytes in abdominal typhoid and surgical suppuration,** Kühn describes some interesting cases, all of which contributed to prove that, when there was no leukocytosis, acute suppuration was not present. Often, after operation upon patients with suppurative processes, there is an elevation in the number of leukocytes, possibly due to the entrance of some of the germs into the circulation. This occurred in one of his cases. He concludes that the behavior of the leukocytes is a valuable symptom of various forms of suppuration and in surgical diseases and inflammations of various character. It must be remembered, however, that severe septic processes or general infection may be associated with a normal or subnormal leukocytic count, and that in chronic inflammatory processes hyperleukocytosis is less pronounced, and may entirely disappear in fully developed and encapsulated abscesses. [J. S.]

8.—Stumpf continues his discussion of **vaccination** in the Kingdom of Bavaria during the year of 1901. He mentions some serious complications that occurred after the pustule had appeared. In one patient death was ascribed to rough handling during vaccination. Investigations showed, however, that no roughness had been employed, and at the autopsy tuberculous meningitis was found. One case of smallpox occurred, was isolated and all persons were vaccinated who came in contact with the patient. No other cases were reported. [J. S.]

9.—Angerer discusses the **legal responsibilty and obligations of midwives,** and concludes that women desiring to follow this profession should be carefully selected, more thoroughly instructed and, after they have received their diplomas, should be given better opportunity for earning money. Among the poor, disinfectants should be given free of charge. [J. S.]

BERLINER KLINISCHE WOCHENSCHRIFT.

January 5, 1903. (40. Jahrgang, No. 1.)

1. Operation Without the Direct Use of the Finger. KOENIG.
2. Investigations upon the Ability of Tubercle Bacilli to Pass Through the Gastro-intestinal Walls of Young Animals. DISSE.
3. Immunity to Syphilis, Especially with Reference to the So-called Law of Profeta. VON DUERING.
4. Tubercular Laryngeal Tumors. LUDWIG NEUFELD.
5. The Symptoms and Treatment of Perforative Peritonitis in Gastric Ulcer. F. WEBER.

1.—On account of the impossibility of completely sterilizing the hands, König believes **operation should be performed without the fingers coming into direct contact with the wound.** He has performed over 600 different operations in this manner. Of 100 recent operations on bones and joints, recovery followed without the slightest disturbance. He uses only sterilized instruments in touching the wound. His technique is fully described. He does almost all operations in this way. [M. O.]

2.—Disse describes **the structure and staining peculiarities of the walls of the stomach and intestine of young animals.** His investigations show that for some time after birth the **mucous membranes** of the gastro-intestinal tract **can absorb antitoxins and tubercle bacilli,** when they are ingested with food. This critical period varies in length with the different species. [M. O.]

3.—Von Düring has collected a great mass of statistics from the literature to show that **the so-called law of Profeta, the congenital immunity to syphilis, does not exist.** He concludes that there is no such thing as an inherited immunity to syphilis, or a weak form of the infection when the descendants of syphilitic patients contract syphilis. [M. O.]

4.—Neufeld reports the case-histories of 2 men of 51, with **tubercular tumors of the larynx.** Tubercle bacilli were found and the tumors removed. The diagnosis between such cases and syphilitic or malignant tumors is very difficult. The literature is reviewed. [M. O.]

5.—Weber reports a case of **perforative peritonitis following gastric ulcer,** in a man of 42, with a full description of the symptoms and laparotomy, in spite of which death occurred 9 days after operation. Peritonitis developed very slowly; vocal fremitus could be heard over the entire abdomen; perhaps, had jejunostomy been performed instead of simply suturing the perforation, recovery might have followed. [M. O.]

WIENER KLINISCHE WOCHENSCHRIFT.

January 8, 1903. (XVI. Jahrgang, No. 2.)

1. Subcutaneous Injections of Paraffin. LUDWIG MOSZKOWICZ.
2. Two Cases of Dupuytren's Contracture of the Fingers with Tabes and Multiple Sclerosis. WILHELM NEUTRA.
3. Phleboliths in the Female Genitalia. K. CZERWENKA.

1.—Moszkowicz reviews the literature of the past 3 years upon **the subcutaneous injection of paraffin** for correcting superficial deformity. Clinical observation shows that paraffin is never absorbed by human beings. Experiment also shows that such injections are never toxic. The deposit of vaseline does not move, if care is taken to prevent injury for the 2 weeks following the injections. Emboli into the lungs are also prevented by care. The minute details of the technique are given with a number of case-histories, illustrated by photographs before and after the injections. The value of this method is shown in saddle noses, progressive hemiatrophy of the face, all kinds of scars, after enucleation of the eyeball, for replacing sphincter muscles in the anus and bladder, prolapse of the rectum, vagina or uterus, cleft palate, herniæ and atrophic rhinitis. [M. O.]

2.—Neutra reports in full the histories of **2 patients with tabes and multiple sclerosis,** aged 71 and 45 years, **who showed Dupuytren's contracture of the fingers early in the disease.** A review of the literature is given. The contracture of the fingers was considered to be due directly to the spinal affection, most probably. [M. O.]

3.—Czerwenka reports the case-history of a woman of 40, with genital hemorrhage. On examination, **small, hard, immovable, nodular masses were palpable along the walls of the vagina.** While curetting the uterus for hemorrhagic endometritis, one of these masses was removed. On examination it was found to be mainly composed of calcium phosphate and carbonate, a **phlebolith.** The hemorrhagic endometritis was probably due to local stasis. Both the phleboliths and the stasis resulting were most likely caused by her last pregnancy, from the pressure of delivery. [M. O.]

BOLNITCHNAIA GAZETA BOTKINA.

October 16, 1902. (Vol. XIII, No. 42.)

1. On the Question of Treating Articular and Muscular Rheumatism by Dr. Bourget's Method. A. A. SCHEPINSKY.
2. Two Cases of Bilateral Injury of the Pleura. F. F. LIBICH.
3. On the Paper of Dr. Dimant "City Free Medical Aid in the City of Moscow Outside of the Hospitals, in Connection With its Organization at the Eighth Pirogoff Congress." I. TCHULKOFF.
4. In Commemoration of Rudolf Virchow. L. V. POPOFF.

1.—Schepinsky attests to the efficacy of **external application of salicylic acid** in the treatment of articular and muscular rheumatism. The action is the same as when taken internally, except that the patient is free from the objectionable gastric disturbances which frequently accompany the internal administration of the drug. That the salicylic acid is readily absorbed is shown by its presence in the urine within 6 to 12 hours after the application of the salve. The drug may be applied in one of the following forms:

1.	Acid. Salicylic.	
	Ol. terebinth.	aa 10 gm.
	Lanolini	30 "
	Ung. paraffini	50 "
	M. F. Ung.	

2.	Acid. salicylic.	
	Lanolini	āā 1 gm.
	Auxung. porci. (lard)	3 "
	M. F. Ung.	

3.	Acid. salicylic	
	Oil. terebinth.	
	Lanolini	āā 10 gm.
	Auxung. porci	80-90 "
	M. F. Ung.	

Several illustrative cases are reported. [A. R.]

2.—Libich reports 2 cases of **bilateral penetration of the pleura** complicated with pneumo- and pyothorax. Despite the very severe injury, both patients made a good recovery. [A. R.]

October 23, 1902. (Vol. XIII, No. 43.)

1. Vacuolization and Hyaline Degeneration of the Malpighian Bodies of the Kidneys. F. JA. TCHISTOVITCH.
2. A Case of a Burn of the Right Shoulder and Wrists Caused by an Electric Current. P. P. LAPSAKOFF.
3. On the Question of Dead-Houses. A. BALOFF.

1.—Tchistovich's investigations in Prof. Orth's laboratory have, as yet, unsolved the problem of **the difference between the hyaline substance of the tufts and that of the capsule** as well as the origin of either. A histological examination of a series of 20 kidneys affected with hyaline degeneration led him to the conclusion that the hyaline substance of a vacuolated Malpighian body is derived from the swollen and chemically altered membrana propria of Bowman's capsule, while the central portion of the hyaline mass, which is more granular and is stained orange by van Gieson's method, owes its origin to the walls of the capillaries of the tuft. Three excellent microphotographs accompany the paper. [A. R.]

2.—Lapsakoff reports a case of **severe burns caused by an electric current** of 2,000 volts. The patient, an electrician, 23 years old, came in contact with a live wire and received severe burns of the head, chin, right shoulder and wrists. The burn of the head was followed by necrosis of the bone and suppuration of some of the gray matter, for which the patient was trephined. After a protracted illness the man made a good recovery. [A. R.]

3.—Treated editorially in the **Philadelphia Medical Journal,** February 7, 1903, page 225.

October 30, 1902. (Vol. XIII, No. 44.)

1. On Hereditary and Intra-uterine Transmission of Agglutinating Properties and on the Elaboration by the Fetus of Agglutinins. V. A. JUREVITCH.
2. From the Past of Russian Medicine. M. LACHTIN.
3. Concerning a Case of Transverse Tubercular Myelitis. F. JA. TCHISTOVITCH.

4. Vacuolization and Hyaline Degeneration of the Malpighian Bodies of the Kidneys.
F. JA. TCHISTOVITCH.

1.—Jurevitch, by experiments on rabbits and guinea-pigs, established the fact that if the blood of the mother agglutinates typhoid bacilli, as the blood of some normal rabbits often does, the offspring may in some instances possess agglutinins and in others not. If the mother's blood does not agglutinate typhoid bacilli, the blood of the offspring is also free from agglutinins. Further, if a pregnant guinea-pig is subjected to typhoid immunization and develops agglutinins the blood of the offspring will in the majority of cases possess agglutinating properties, the degree of agglutination, however, being about 10 times weaker than is the case with the mother's blood. That the agglutinins in the blood of the fetus are not elaborated independently, but are merely transmitted through the placenta was shown by injecting ready agglutinins in the form of antityphoid serum into pregnant animals and obtaining agglutination with the blood of the offspring. The agglutinins rapidly disappeared from the blood, which would not have taken place were they elaborated as a result of direct infection. The author also found that it is possible for the mother to transmit to the offspring an inherited disposition to elaborate agglutinins. Thus, if animals are immunized prior to conception and the immunization discontinued during pregnancy, the fetus will develop agglutinins in greater proportion than they are to be found in the mother's blood. In the case of rabbits, the offspring commence to elaborate the agglutinins 3 weeks after birth. [A. R.]

2.—Will be treated editorially.

3.—Tchistovitch reported last year, before the Society of Russian Physicians, of St. Petersburg, a rare case of **transverse tubercular myelitis**, but at the time could not find the tubercle bacilli in the lesions. (The tissue was fixed in Müller's fluid and stained by Kühne's method.) Now he announces that he has again investigated the tissues, using Ziel-Neelssen's stain, and discovered a number of **tubercle bacilli** within the giant cells and around the caseous foci. [A. R.]

MEDICINSKOIE OBOZRENIE.

Vol. LVIII, No. 16, 1902.

1. Concurrent Affection with Erysipelas and Scarlet Fever. P. K. GALLER.
2. A Case of Smallpox Developing After Varicella and Vaccination. K. PH. FLEROFF.
3. On Tubercular Stenosis of the Intestines. A. V. NIKOLSKY.
4. What is Sarcoma Angioplastique of Malassez and Monod? G. V. VLASOFF.

1.—Galler reports what he considers a rare case of **co-existence of erysipelas and scarlet fever**, in a girl, 16 years old. Both affections developed simultaneously and were typical in their manifestations, although the course of either was milder than is usually the case when occurring alone. A streptococcus, staining by Gram's method, was isolated from the vesicle at the site of the erysipelas. In view of the fact that in scarlatinous sore throat a streptococcus is always found, the author would use the polyvalent antistreptococcic serum also in scarlet fever. [A. R.]

2.—Fleroff reports the case of an infant who developed **chicken-pox which showed many of the characteristics of smallpox** and was diagnosed as such. There were prodromal symptoms of smallpox, namely, an elevation of temperature for 4 days before the appearance of the eruption, which was vesiculopustular and umbilicated. Vomiting was also present. The eruption commenced to disappear on the seventh day, and the temperature lasted for 12 days. The child was vaccinated on the seventh day, after the first appearance of the symptoms, and a typical vaccine pustule developed in due time. A few days later, or soon after the fever due to vaccination subsided, another attack of unmistakable **smallpox developed**, terminating fatally. [A. R.]

3.—Nikolsky reviews the subject of **intestinal stenosis due to tubercular infection.** He collected from the literature records of 150 cases, and from a careful analysis of these he concludes that we are justified in making a diagnosis of stricture of the intestines whenever the patient complains of sharp paroxysmal pains in the abdomen accompanied with gurgling, meteorism and disturbance of the bowels; if the disease has developed in the course of several years, becoming progressively worse, but with occasional periods of improvement; and, finally, if the patient is between 20 and 40. The diagnosis becomes still more certain if there is a family history of tuberculosis, and especially tuberculosis of other organs. The discovery of tubercle bacilli in the feces renders the diagnosis absolute. His general conclusions are as follows: (1) Tubercular stricture of the intestines, at least in half of the cases, is secondary; (2) the disease attacks more frequently patients between the ages of 20 and 40; before 10 or after 60 it is extremely rare; (3) the stricture is more frequently found in the lower portion of the ileum; (4) multiple strictures are observed as frequently as single, and when operating it is necessary to examine carefully the entire intestinal tract; (5) strictures of many years' standing are, in the majority of cases, of a tuberculous nature; (6) the tuberculous nature of a stricture is indicated by the existence of tubercular foci in the organism and a tubercular family history; (7) cases of intestinal strictures with an obscure etiology are, in the majority of instances, tuberculous; (8) the treatment of the disease should be exclusively surgical, (resection), and the sooner the operation is performed, the more successful is it likely to be. [A. R.]

4.—Vlasoff discusses the nature of **angioplastic sarcoma,** presenting a review of the literature as well as the results of his own extensixe investigations, and concludes that the tumor is *sui generis* an **epithelioma of the testicle**, developing from an incompletely differentiated epithelium of embryonic glands of the tubules. In contradistinction to cancer, the intertesticular stroma of the tumor is not a product of an overgrowth of old connective tissue, but is of embryonal origin from mesodermal cells. In the metastatic growths, as in the testicle and other organs, there is no new-formed stroma, nor is there any testicular structure as is the case in chorio-epithelioma. In contradistinction to other epithelial growths, the author proposes the term **epithelioma syncytiomatodes testiculi.** [A. R.]

LA PRESSE MEDICALE.

December 10, 1902. (Volume II, No. 99.)

1. The Pathogenesis of Tabes Dorsalis. J. NAGEOTTE.
2. Phosphorus and Its Derivatives in Tuberculosis. A. F. PLICQUE.

1.—Nageotte concludes that **tabes** is characterized anatomically by an inflammatory lesion which attacks any number of sensory or motor roots, where they leave the subarachnoid space, accompanied with a generalized syphilosis of the meninges. Tabetic degeneration is mainly a progressive destruction of posterior roots, moving from the extremity of the neurons in the spinal cord, toward the trophic centers in the ganglions of the roots. While all the fibers in a bundle are not equally affected, the affection is always a slow, progressive atrophy. The anterior roots do not escape. The meningitis found is typically syphilitic, the vessels always showing alterations. Diffuse syphilitic meningomyelitis, like lymphocytosis, is found in all the clinical forms of nervous syphilis. The minute histological changes found are described. There is always **radicular neuritis in tabes dorsalis.** [M. O.]

2.—Milk, wine, malt extract, broths, lecithine and oysters are **valuable in tuberculosis**, because they contain **phosphates.** Phosphorus itself is useless. But zinc phosphide, phosphoric acid, hypophosphites and hypophosphates are also of value. Creosote phosphite and the glycerophosphates are best given by enema, since they easily upset the stomach when taken through the mouth. [M. O.]

Special Articles.

IMMUNIZATION FROM TUBERCULOSIS.

By SIMON FLEXNER, M. D.,
of Philadelphia.
Professor of Pathology in the University of Pennsylvania.

In experimental medicine it is the unattainable that is almost constantly being achieved. The dictum is emphasized and illustrated at the present time by the publication of Behring's and Pearson and Gilliland's researches on the immunization of cattle to tuberculosis. Two years ago Koch startled the civilized world by the announcement of the independence and incommunicability of bovine and human tuberculosis. The storm of criticism, the result of his authoritative utterance, has apparently daunted him little, for we saw him only the other day, at the second tuberculosis congress, reiterating his statement; but the energy with which the problem of the unity or plurality of human and bovine tuberculosis has been attacked illustrates the beneficial effects of sturdy criticism. Out of this energy new data have already come; some are old facts in new guises, others new facts in old habiliments; all are welcome additions to our knowledge, and not a few have shed important light where it is most needed.

All sciences, medicine not excepted, grow by oscillatory rather than purely progressive movements. Just now and in respect to a deeper knowledge of tuberculosis, growth is being accomplished by drawing upon the perennial fountain of Pasteur's clear and convincing principles.

Protective vaccination against pathogenic germs can be achieved through the use of attenuated cultures of that germ. Thus can animals be protected against fatal anthrax, chicken-cholera and *Rauschbrand* infection. The data upon which this conclusion rests have not been seriously shaken since laid down by Pasteur's inspirited and painstaking labors. Relationship, close and intimate, between the germs used for vaccination and that causing infection is the necessary condition of the successful application of the experiment and the foundation of the principle. The inhibition which one disease sometimes exerts against another is feeble, uncertain and often more apparent than real. Such, for example, is the old belief in the antagonism between tuberculosis and cancer; or in its more modern form the resistance to anthrax given experimentally to animals by inoculation with the bacillus pyocyaneus.

That protective vaccination should ever come into use for the elucidation of relationship between allied bacterial forms would seem not to have occurred to Pasteur. This possibility is the outgrowth of later discoveries, chief among which are the agglutination test of Gruber and Durham, and the cytolytic reaction of Bordet and Pfeiffer. The great service rendered by the application of the phenomena in the differentiation of typhoid, cholera, dysentery and other bacilli is common knowledge. In coming to our aid in giving us a new basis for belief in the unity of bovine and human tuberculosis this ripe knowledge has burst into full flower.

What, now, are the facts: In 1901 and 1902 McFadyean reported upon some immunization experiments against tuberculosis in cattle. The first inoculations were made with avian bacilli, probably of very low virulence for cattle. The later inoculations were made with tuberculous materials from various sources. The inoculated cattle died of tuberculosis after two or three years from the beginning of the experiment, and in each instance the chief lesions were found in the kidneys and the brain or covering membranes. There seems little doubt that the inoculated animals were rendered remarkably resistant to tuberculosis, as they lived for a long period in spite of repeated injections of large quantities of tuberculous matter of proven virulence for inoculated cattle.

Von Behring, who has also studied the subject, reported, at the end of 1901, that he had either treated or had under treatment, with tuberculin and tuberculous material, a series of cattle in which he has produced resistance. Although the animals are still alive, and a final opinion upon the experiment cannot, therefore, be expressed, the fact that they have survived quantities of virulent tuberculous material, sufficient to kill untreated cows, indicates that they are highly resistant to infection. Behring now uses for injections a suspension of a dried "sputum-culture" of tubercle bacilli which he has cultivated since 1895.

Perhaps the most conclusive experiments have been made by Pearson and Gilliland. Numerous experiments, conducted by many investigators, have proven that tubercle bacilli obtained from human sputum are comparatively nonvirulent for cattle. By using suspensions of cultures of human bacilli for inoculation of healthy cattle Pearson and Gilliland have succeeded in affording a protection, almost absolute, for bovine bacilli otherwise virulent for these animals. Their experiments led them to the important conclusion that, after repeated intravenous injections of cultures of tubercle bacilli from human sputum, the resistance of young cattle to virulent tubercle bacilli of bovine origin may be increased to such an extent that they are not injured by inoculations with quantities of the latter bacilli sufficient to cause extensive tuberculous disease or to produce death in animals not so protected.

The interpretation of the experimental results given seems clear and unmistakable, and their significance cannot readily be overestimated. We are now led, by a new and slightly devious path, to conclusions of the first importance. It would seem to be an unphilosophical and unprofitable, if not unpardonable, attitude to assume longer any genetic distinction between bovine and human bacilli. A relationship that brings about such close interaction as here set forth is, with our present knowledge, conceivable only upon a basis of similarity of constitution as we know only among members of a species.

But in bringing thus together the body of somewhat divergent facts of human and bovine tuberculosis, and in providing a refoundation for the precautions against bovine tuberculosis on account of its dangers to man, the whole results of the new facts have not been gathered. There is another aspect of the greatest economic importance that must not be overlooked: the use of protective inoculation in preventing bovine tuberculosis. Should this be accomplished, the saving in capital would, in a few years, be enormous and compensate many times over the expenditure of public moneys which have been made for agricultural research. That this possibility is being kept clearly in mind is to be observed from the concluding paragraph of Pearson and Gilliland's paper.

To whom belongs the credit of protective inoculation against tuberculosis? In biological science, as in the physical sciences, discovery proceeds not by isolated independent observation of fact but by orderly procession. Even the newest, most unexpected and startling discoveries are bound up with previous knowledge. The successful attempts to produce immunity from bovine tuberculosis do not stand out as isolated performances, but are merely the ultimata of many unsuccessful and some partially successful experiments which have gone before. It is a matter of congratulation and national pride that the two essential prerequisites to the later important studies upon tuberculosis just cited should have been supplied by American investigators. The first of these was the demonstration by Theobald Smith of the differences between bovine and human tubercle bacilli; the second, the protection by Trudeau of rabbits and guinea-pigs from certain tuberculous infections by previous inoculation with tubercle bacilli of diminished virulence. Because of the high intrinsic value of Trudeau's experiments and because they have generally been overlooked in the published accounts of the protective inoculation of cattle, it is only just that they be recalled and be given the high place they deserve among the facts of this recent important addition to our knowledge of tuberculosis.

The papers of Trudeau, bearing upon the artificial production of immunity in rabbits to tuberculosis, appeared in 1892 and 1893 (*Transactions of the Association of American Physicians*), and the successful results were summarized in a brief paper read at the meeting of the British Medical Association, at Montreal, in 1897 (*British Medical Journal*). We quote from this last paper: "I found (in 1893) that, by subcutaneous preventive inoculations of living cultures of avian tubercle bacilli, I was able to increase the resistance of the rabbit to infection with virulent living mammalian cultures . . . The test inoculations were made in the eye, where the immediate results could best be studied and controlled. The eyes of the controls were gradually destroyed by the progressive tubercular process, while those of the vaccinated animals, after undergoing a certain inflammatory reaction, returned more or less completely to the normal condition. Unfortunately, many of the animals died of the attempt at vaccination, and complete immunity was manifested only in a few, while, in others similarly treated, the eyes were eventually either partially or wholly destroyed. I have also obtained a marked degree of success in protecting guinea-pigs by cultures of mammalian bacilli attenuated by prolonged growth on artificial media."

The significance of the successful experiments conducted by Trudeau is evident and not to be lightly dealt with, for not only did he establish the fact of protection to virulent tubercle bacilli, even in small animals, through the use of attenuated bacilli, but he also chose for his field of observation the most delicate and only transparent structure that the body affords. The changes which took place in vaccinated and unvaccinated animals were followed from day to day and they exhibited in a brilliant and convincing manner the different modes of reaction of the treated and untreated animals: "In the controls, two days after the introduction of the virulent material into the eye, little or no irritation is to be observed, and little is to be noticed for two weeks when a steadily increasing vascularity manifests itself. Small tubercles appear in the iris, which gradually coalesce and become cheesy. Intense iritis and general inflammation of the structures of the eye develop, and in six or eight weeks the eye is more or less completely destroyed. . . . In the vaccinated animals the introduction of the mammalian bacilli at once gives rise to a marked degree of irritation. From the second to the fifth day the vessels of the conjunctiva are tortuous and enlarged, whitish specks of fibrinous exudation appear on the iris and in the anterior chamber, and more or less intense iritis supervenes; but, at the end of the second to the third week, when the eyes of the controls begin to show progressive and steadily increasing evidence of inflammatory reaction, the irritation in those of the vaccinated animals begins slowly to subside and the eyes to mend . . . ."

We return to an earlier stated proposition: Sciences grow by oscillatory rather than by purely progressive movement. In recognition of this fact let us not overlook those who have given the first impulses and blazed the path along which with gathering momentum the ball of progress speeds. Above all, American medicine and the world owes too much to those patient and intrepid spirits who, like Trudeau, toil successfully and incessantly in remote places to permit their labors to be forgotten or disregarded.

TROPICAL DISEASES.

FOURTH LECTURE IN A COURSE ON TROPICAL DISEASE, ETC.*

By CAPTAIN CHARLES F. KIEFFER,
Assistant Surgeon, U. S. Army.

Gentlemen: We take up for discussion to-day four diseases very closely allied to dysentery.

Epidemic Gangrenous Rectitis.

Epidemic gangrenous rectitis is a contagious disease, appearing as a rapidly spreading ulceration of the anus and rectum, accompanied with severe dysenteric phenomena, and, if the patient survives long enough, prolapse of the ulcerated rectum and gangrene.

This disease was first observed in Central and South America. Recent observations seem to show that it is of very widespread occurrence. It is found in the Fiji Islands and in many others of the South

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*Fourth lecture delivered at the Jefferson Medical College, Philadelphia.

Pacific groups. It is fairly generally distributed in tropical South America. I have observed at least two cases in Luzon. It occurs in the Celebes group and is said to be common in New Guinea. It is encountered throughout the purely tropical belt, where the humidity is very high.

The disease, described by Ackers, of Curaçao, was observed by him as a disease of fowls and the smaller domestic animals, although calves are occasionally infected. In Venezuela and Guiana the disease seems confined to children of the poorer classes, and in the rest of the tropical world it also holds true that children are most frequently attacked.

The disease begins with local symptoms referred to the anus and lower rectum. There is burning and quite intolerable itching, followed by the rather rapid development of severe dysenteric symptoms. After 12 to 24 hours there is a more or less constant and severe tenesmus. The evacuations, at first feculent, become mucoid and, finally, consist of mucus and blood. The distress rapidly grows more urgent, the effort and pain become continuous, and there is a constant flow or bubbling out of slimy mucus stained with blood or almost pure frothy blood. The evacuations are very fetid. At this stage, indeed, the disease has little to differentiate it from a dysentery localized low down in the rectum. As the disease progresses, there is great collapse. Nervous symptoms supervene, and the patient becomes either delirious or comatose. In children the severe symptoms are accompanied with convulsions. Emaciation is quite rapid and usually death occurs in convulsions or coma. If the patient survive this stage, the rectum is extruded and undergoes very rapid necrosis and sloughing. One case, which I saw in Luzon, was that of an Ygorrote who was a prisoner of war. He began with, what was thought to be, an acute dysentery. The motions became smaller and very much blood-stained by the end of the second day of the illness. By the evening of the third day I found the man on his bed with a draw-sheet, and the nurse reported that for several hours the movements had been continuous. There was a constant flow of frothy, bloody mucus. The man was delirious and almost in collapse. Emaciation had progressed to a marked degree. On the afternoon of the fifth day the rectum was fully prolapsed from the anus in the form of a sausage-like tumor five inches long. It was covered with deep ulcers and patches of necrosis. The man perished on the morning of the sixth day with the extruded rectum completely gangrenous and very offensive. The temperature range was very moderate, rising to 102° F. on the second and third days; on the fifth day and until death it was subnormal. The bacillus pyocyaneus was recovered from the greenish pus.

The *etiology* is quite obscure. Very little is known of the causation of this curious condition. Manson quotes Acker, that it is the common belief of the natives in Venezuela, that this disease is caused by eating unripe maize of which the children are very fond. This hardly seems probable, yet I must recall to you what I said in my first lecture about the popular knowledge of local diseases, and reiterate to you that these beliefs are always worthy of your investigation. The phenomena of pellagra due to fermented maize are familiar to you, and it seems possible that, in some cases, the ingestion of unripe maize may account for the symptoms, although you must remember that this disease has been observed in countries in which maize is, practically, an unknown food product. I am inclined to believe the one case I saw was due solely to infection with the bacillus pyocyaneus, and this may be a common factor, since the common report of the presence of "grass-green pus" in these cases is suggestive of this organism.

The pathological condition is fairly clear. I regard this disease as an expression of a localized dysenteric process rather than a separate morbid entity. What the causes may be that might lead to such a restricted and intense localization we can only conjecture. Pathologically, however, we distinguish two forms: the low form with limitation of the lesion to the rectum between the sphincters and the anus, and the high form above the sphincters and extending to the sigmoid. You will recall the liability of children to intussusception in dysentery. It seems fairly clear that the prolapsus is caused in much the same way at the outlet as the intussusception above the sigmoid.

The native treats this disease along proper lines, although his means are crude. The Venezuelan treats the rectum locally with lemon-juice or with diluted "aguardiente," which you know is a highly alcoholic spirit. The extruded rectum is kept dusted and dry with wood-ashes. Your treatment would consist in antisepsis of the rectum with creolin or hydrogen peroxide, adding opium to the local treatment for the relief of pain. If prolapse of the rectum occurs, it should be covered with an antiseptic powder or, better still, with freshly ignited charcoal. This disease is very fatal, but patients may recover after the comatose stage and even after the prolapse and sloughing of the rectum.

Chronic Rectitis

is a condition to which I will briefly refer. This is a slow inflammatory process in the rectum which seems to follow dysentery but may occur without it. McDill, of Manila, first called my attention to these cases. During my service in the tropics I saw many patients who sought relief for hemorrhoids in whom the hemorrhoidal condition was very trivial and quite insufficient to explain the amount of rectal distress. Examination showed the whole rectum to be deeply red. The mucosa appeared to be thickened and in some cases eroded and ulcerated. After this, I saw many such patients without hemorrhoids. They all complained of burning pain on defecation and great rectal pain and distress lasting for several hours, or an unsatisfied feeling after stool. The disease was very stubborn and resisted every plan of local treatment. The only procedure of service was a wide divulsion of the sphincter and the insertion of a tube, wrapped with iodoform gauze, in the manner commonly employed in hemorrhoid operations, excepting that the tampon was made slightly larger, so as to include all the inflamed rectum. The tube was retained three days. This procedure gave very satisfactory results. These patients must particularly guard against constipation or, if the disease has followed dysentery, against balling of the stools.

Hill Diarrhea.

An acute morning diarrhea with white stools and attended with marked flatulency. This disease is observed in colonists who have become acclimated and is not seen in the newcomer. It is observed when business or relaxation takes the settler to the mountainous portions of the tropics. It is consequently common in the hill sanatoria of tropical countries, particularly in India, where it was named hill diarrhea.

The etiological factors seem to be, first of all, prolonged residence in the hot areas with the establishment of acclimatization; then an unaccustomed altitude, 5,000 to 6,000 feet, with a high atmospheric humidity. These conditions being present, the dweller in the low, hot plains, going to the hills, is very prone to fall a victim to this form of gastro-intestinal disturbance.

You will observe, when we discuss sprue, that hill diarrhea bears a very close resemblance to it. Indeed, the cardinal symptoms differ only in degree. But the tendency of hill diarrhea is so constantly to recovery and that of sprue so constantly downward that we can more profitably consider them separately.

Shortly after arrival in the mountain district, the patient is troubled with ill-defined dyspeptic symptoms attended with a morning diarrhea. The diarrhea becomes more pronounced and finally reaches 8 to 10 movements. It comes on usually in the early morning at or near dawn with sudden and imperative calls to stool. This diarrhea continues during the forenoon and ceases about midday. It may amount to little more than a looseness of the bowels, but, on the other hand, there may be twelve or more large evacuations. There is very little pain and that only as a vague, indeterminate discomfort over the colon and no tormina or tenesmus. The bowel movements, instead of being attended with increase of this local discomfort, bring relief. The movements are usually large and frothy. They are practically devoid of coloring matters and look like thin mortar or whitewash. They have an unpleasant odor, something like macerating anatomical specimens, but this is not very pronounced.

The dyspeptic symptoms are quite pronounced. There is distress after eating, particularly in the morning, and marked flatulence. Some patients complain chiefly of the drum-like distension of the abdomen.

Very little is known of the pathology of this peculiar condition. It seems to be quite clear that there is a temporary suspension of the functions of the liver and pancreas. These are probably expressions of an exhaustion, resulting from the extra drain on already overworked organs, in seeking to adapt themselves to another change of climatic conditions.

As I have already told you, the tendency, in the vast majority of cases, is to prompt readjustment and restitution. This takes place within one to two weeks, about the time when the respiratory, circulatory and hematogenic functions have adjusted themselves. A small proportion of these cases persist and may end in typical sprue. Crombie reports cases in which cure has only taken place when the patients returned to the plains, in which, indeed, every visit to the hills was followed by this diarrhea.

The treatment of these cases is directed to the restitution of intestinal digestion and the maintenance of a relative degree of rest to the tract by liquid or milk diet. Small doses of the mild mercury chloride are of value. This initial treatment should be followed by the exhibition of ingluvin or takadiastase, as adjuvants to the digestive process. It is well to advise these patients to keep to their beds during the diarrhea hours, and this they will readily accede to, as the sudden calls to stool render attention to either pleasure or business at this time out of the question.

Sprue, Psilosis or Atrophic Enteritis.

The brief outline I shall give you of this disease, gentlemen, will, I think, be of more value to you than any one other subject in this brief course. Whether you ever go into tropical countries or not, every one of you should be able to recognize this disease. In every town and village of this country you will be apt to encounter cases. These will be in travelers, soldiers or returned colonists who bring with them the liability to its development even years after having left the tropical zone. Cases of this disease are being shown all over in clinics and medical societies as chronic dysenteries and chronic diarrheas, when they are pure cases of sprue. Now I want to weld into your memories so forcibly the principal features of sprue, that you will never forget them, and in future days, when you encounter these perplexing cases, as you are sure to do, you will know how to handle them, and you will feel repaid for making the extra effort to add this branch to your scientific equipment.

Sprue is a disease of the entire tropical world. The location of its greatest development seems to be the Malayan groups. Manila has always been particularly bad. South China, Amoy, Ceylon, Java and the Malayan peninsula are favorite points. It extends into the subtropical portions of this section of the globe and is seen in Japan and Northern China.

It has been known by various names in different countries. Differing as the predominance of one or another of the chief symptoms impressed the observer, it has been known as diarrhea alba, aphthæ tropicæ and Ceylon sore mouth. The name sprue was given to it by the Dutch who found it a veritable plague in their Javanese possessions.

Sprue is not a distinct morbid entity. It seems quite clear that it is but a terminal condition of many devitalizing and depressing factors. Sprue is a chronic catarrhal inflammation of the entire alimentary tract, tending finally to most extensive atrophy of the gastro-intestinal glandular structures. It is an expression of exhaustion and atrophy following prolonged hyperactivity of these organs and of the liver and pancreas as well. Clinically it presents three cardinal symptoms: (1) Sore mouth, (2) flatulency and (3) diarrhea.

Sprue is a disease with a very slow, chronic course. When fully established, it tends always downward to a death from asthenia or some terminal infection. It commonly develops in the tropics, but, not infrequently, does not attack the colonist until his return to his home in the temperate zone. Indeed, it may lay dormant for years. So you see its importance, even to the general practitioner, in this country. Now what are the conditions that predispose to this terminal state? First and foremost, amebic dysentery and its sequelæ, chronic ulceration of the bowel and abscess of the liver with long-continued suppuration. Next in order in my experience are the parasites, ankylostoma, anguillula stercoralis, tricocephalus, etc. Thirdly, chronic malarial poisoning and, lastly, syphilis. You will observe, gentlemen, that this is the list of the chief ailments of the colonist in tropical countries and nearly in their order of incidence. To these you must add, as etiological factors, prolonged residence in hot countries or the endemic zones, even without acute illness, and the following depressing causes, some of which are physiological: Child-birth and miscarriage are occasional causes of sprue; suppurating lesions, particularly about the colon and rectum; excessive fatigue, as in long marches and campaigns, and the prolonged exhibition of the iodides or mercury.

Filariæ and numerous organisms have been identified as specific causes. The anguillula was regarded in Cochinchina as the cause of sprue. So, too, in many cases the amebæ and various of the typhocolon bacilli, but these are all accidental occurrences or, better perhaps, remnants of former pathological conditions.

Some of the cases are very chronic. A course of one to two years is the rule, but cases are seen lasting ten years or even more. The patient is emaciated and anemic, the complexion is muddy and sallow. He complains of great lassitude and weakness with pronounced inability or disinclination for work either physical or mental. He complains of loss of sleep, loss of memory and a curious variability of temper. In the slower cases the disease goes through periods of recrudescence and periods of comparative well-being, but the general tendency is always downward. The three cardinal symptoms, sore mouth, diarrhea and flatulence, are always present in varying degrees. Let us consider them in detail.

The *mouth lesions of sprue* are quite peculiar. The patient complains of soreness of the mouth that may be limited only to the tongue or may spread to the palate, uvula and entire buccal mucous membrane. He particularly complains of burning or stinging pain on the ingestion of sapid, salty or highly seasoned foods. The pain is commonly present on deglutition, and, indeed, the progress of the food bolus down to the stomach is indicated by a burning and smarting pain down the gullet, showing that the esophagus is in the same condition as the mouth. When we examine the mouth and tongue, we find the latter is clean. There is no coating, but the organ is very small, pointed and somewhat yellowish, if there be pronounced anemia. The dorsum of the tongue, its edges and the under-surface, particularly along the line of the frenum, are red and raw looking. It and the entire buccal membrane may be covered with fine vesicles, or minute ulcers, covered with a fine aphthous pellicle. These aphthous spots may be present on uvula or palate. More commonly, perhaps, the tongue is covered with very superficial erosions, ⅛ to ¼ inch in diameter, frequently coalescing and resulting in a serpiginous appearance. If you could imagine a ringworm of the tongue, you would have a graphic idea of the appearance. The condition of the tongue, in older patients, may be much accentuated, and you may see extensive fissures developing. During the periods of calm, the tongue and mouth may clear up considerably, but they still have a red, raw and varnished look that is very characteristic.

The flatulence is usually quite pronounced. These patients are swollen up until their abdomens are tense and drumlike. When in this condition, the appearance of the very much emaciated figure with extremely thin arms and legs and large inflated abdomen is quite characteristic. The flatulence always increases after taking food and is, to some extent, relieved by the bowel movements. There is a great deal of borborygmus. Other dyspeptic symptoms are uncommon.

The *diarrhœa* is the most distinctive symptom. In color the bowel movements are much as described to you in hill diarrhea. Manson describes them as looking like recently stirred whitewash. They are frothy, white, pasty in consistence, with a fetid, mouse-like odor. There may only be one or two movements daily or as many as ten or twelve, but they are always very much larger than normal. Sometimes they are phenomenally large, and the patients say they pass more material than they ingest. The reaction is commonly acid in contrast to the stools of dysentery which are alkaline.

You can readily understand the clinical picture that will ultimately be evolved in such a case in full development. Emaciation and asthenia are extreme. The skin is particularly dry and scurfy, and the patient, with inability to assimilate food or, in many cases, his abstention from food on account of the severe pain in mouth and throat, constantly declines. At this stage you are apt to find very painful excoriations about the anus and also the vagina in women.

Post mortem examination of these patients shows, of course, the complete loss of subcutaneous and mesenteric fat. It also shows extreme dryness of all the tissues. The small intestine is thin and transparent. There is extensive atrophy of all the mucous surfaces. The glandular structures seem entirely destroyed. The serous coat is normal. Of course, if there has been an antecedent dysentery, remnants of that condition will be found. Many cases show advanced fatty degeneration of the pancreas, liver and kidneys. There is some question as to whether there is a total absence of bile or only of the biliary coloring matter. Bacterial forms are very abundant, although the dysenteric species are uncommon, probably on account of the increased acidity.

The diagnosis presents no difficulties when the existence of such a disease as sprue is once known and its cardinal symptoms fixed in your minds. Incomplete cases in which one or the other of these symptoms may either predominate or be absent may give you some little difficulty. I hope none of you, after hearing this lecture, will confound sprue and chronic dysentery. It is true that chronic dysentery may gradually shade off into sprue, so that it might be difficult in any one day or week to say, here dysentery ends or sprue begins. In extensive mouth disease with fissuring of the tongue these cases have been diagnosed as syphilis.

If treatment is instituted before the atrophy of the bowel is too far advanced, cure is the rule. If, however, so much of the secreting surface of the bowel is destroyed as to make assimilation impossible, death is, of course, inevitable. The reaction to treatment will speedily demonstrate the amount of working bowel surface left.

The *treatment* consists in putting the patient on absolute milk diet. He is, preferably, kept in bed and milk is administered in frequent small feedings. It should be sipped from a spoon so as to be taken slowly. Manson advises in asthenic cases the use of a nursing bottle. The quantity of milk is increased as rapidly as possible, the mouth symptoms being the index that must guide you. If there be any increase in the amount of soreness, the milk must be reduced for a while, and later another attempt at gradual increase must be made. The quantity is pushed until the patient can take and assimilate a gallon of milk a day. By the time this stage is reached the mouth symptoms will have disappeared, the flatulence greatly diminished and the bowel movements become solid. The important rule laid down is that, from this point in the disease, the milk diet must be continued for from four to six weeks. Then very gradually soft diet is resumed, and in the course of months, with extreme care, mixed diet may be assimilated. The rationale of this plan of treatment is to give the bowel as complete a rest as possible, going on the assumption that the disease is an exhaustion from overacidity. The inability to take milk diet, which is encountered in some patients, is a real calamity in the disease. You must then makeshift with dilute animal broths, possibly with rectal alimentation. These patients should leave the tropical zone and never return to it.

CENTRALBLATT FUER INNERE MEDICIN.

December 13, 1902.

Bromoform Poisoning With a Fatal Issue in a Three-Year-Old Child. E. KIWULL.

The child, whose case is reported, was brought in an unconscious condition to the physican in attendance with the statement that it had been given a prescription for whooping cough that had been ordered for an eleven-year-old brother. The prescription contained 12 parts of bromoform in 100, and was to be taken in teaspoonful-doses 3 times a day. The symptoms of poisoning did not appear until the last dose in the bottle had been administered. The child then exhibited convulsive movements and became unconscious. In spite of ether injections and prolonged artificial respiration, the child soon died. The post mortem examination showed slight congestion of the lungs; the blood in the heart and in the great vessels was fluid; there was almost no fluid in the cranial cavity, the pia was much injected, and the brain showed numerous points of congestion. A chemical examination of the contents of the stomach and the intestine did not show the presence of bromoform. In spite of this the author believes that it was a case of bromoform poisoning. The reason that the symptoms appeared only after numerous doses had been given is probably that the heavy bromoform had sunk to the bottom of the bottle. [D. L. E.]

Original Articles.

A PHYSICIAN'S HOLIDAY IN VICHY.

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Topography and History.

The distance from Paris to Vichy is accomplished by express trains in an uneventful journey of six hours, but the two days occupied in covering the same distance by automobile is a pleasant memory, including, as it does, many noteworthy features invisible from the railway train, with lodgings and lunchings in out-of-the-way places, possible otherwise only to the traveler by carriage; while the tedium of the latter is replaced by the exhilaration of more rapid motion in the open air, over roads that are marvels of smoothness and a country the surface of which is like a garden in the luxuriousness of its cultivation. The approach to Vichy is not, however, impressive, as the town is neither prominently situated nor approached from a commanding point. But as our vehicle winds its way through streets crowded with pedestrians and lined with villas, hotels and shaded parks, interest is quickened and anticipation raised.

More precisely, Vichy lies on a moderately elevated plateau, about nine hundred feet above the sea, on the right bank of the river Allier, in the department of the same name, about 225 miles southeast from Paris. It has a permanent population of 12,000, with over 80,000 annual visitors. While less picturesquely situated than some of the spas on the mountain sides and in the valleys, it is correspondingly less damp, and there are more clear days. The heat of summer is tempered by storms which come down from the neighboring Auvergne Mountains. Outside the healing virtues of its waters the attractions are artificial rather than natural, but no expense has been spared by the Vichy Company to make them all that can be desired. The handsome parks, the old and the new, the latter extensive and bounded by the river, afford pleasing promenades, while longer walks are available by good paths to interesting places in the vicinity, notably Cusset with quaint old streets and houses, also the seat of several springs; Busset with its interesting Château; La Montagne Verte with fine view of the peaks of the Auvergnes; Hauterive, one of the most important springs; Château Billy with interesting ruins, and others more distant. The crowning place of amusement is a beautiful casino and theater, just remodeled and provided with every convenience and comfort calculated to amuse and divert. In addition to opera, theater and concert, usually in the afternoon and evening, there are halls and salons, reading and conversation rooms tastefully decorated and invitingly furnished.

Though Vichy cannot boast of the long line of historical associations which add to the interest of Carlsbad, it is, nevertheless, an ancient town, appearing in Gallic and Roman history, being called by the Romans *Vicus callidus*. From the fondness of the Romans for baths it may be expected that they availed themselves to the utmost of Nature's gifts, though no traces of Roman baths remain. It was early the seat of an abbey founded about 390 A. D., by St. Martin, Archbishop of Tours. This with the town was sacked and destroyed by the Normans, A. D., 845. The sturdy Normans had, however, little appreciation of such luxuries as baths, and, though they rebuilt the city, they did not revive its former splendor and seemingly ignored the waters.

Authentic information as to use of the waters of Vichy dates only from the founding of the Convent of Celestins by Louis II de Bourbon in 1411, when the baths were used by the Sisters for the treatment of the sick who sought their aid. Jean Banc, a physician of Moulins, referred to Vichy in his book entitled "Les Merveilles des Eaux Minerales," as did also the physicians in ordinary to Louis XIV, Nicola de Nicolai, de Duclas and Claude Fouet. Vichy was, however, first brought prominently to notice by Madame de Sévigné, who took a cure there in 1676. The erection of the first modern bath establishment was undertaken in 1785 by the Ladies Adelaide and Victoria, aunts of Louis XVI, but was interrupted by the French revolution of 1789, and, although Napoleon I. ordered the work to go on, it was not until 1814 that the Duchess d'Angoulême laid the first stone of the Thermal Establishment, after the completion of which health seekers commenced to visit the place from every quarter. Napoleon III did much to increase the popularity of Vichy, improving the city and building a châlet for the Empress Eugenie, which is still shown, as, indeed, is that of Madame de Sévigné.

The springs and Thermal Establishment are the property of the State, but are leased by the Compagnie Fermière de l'Etablissement Thermal de Vichy, or Vichy Company, as it is briefly called, by which all improvements are made. The bathing house was completed in 1820 and further enlarged in 1853. It is now an extensive establishment provided with baths which are designated first, second and third class, the last two being much less expensive, although the difference in the appointments is not great, and all the baths are scrupulously clean and inviting. This establishment, large as it is, is to be greatly surpassed by another new building, which, when finished, will doubtless be the most extensive and complete in the world. It will take the place of the baths of the first class, the site of which will be occupied by a promenade and drinking hall, covering the Grande-Grille, Chomel and Lady Springs, and an audience hall seating 1,300 persons. At the date of my visit the erection was sufficiently complete to permit one to form a good idea of the extent and completeness of the new establishment which is under the direction of Dr. Lejeune. The part devoted to mechanotherapy, the Zander Institute, is now finished and in active operation under Dr. Vermeulen, who informed me this treatment had already outgrown its new accommodations and the Institute would have to be enlarged.

Like all similar places, Vichy is provided with numerous hotels and boarding-houses of every grade of appointment and expense, so that those in moderate circumstances as well as the rich may avail themselves of the cure. For drinking at the springs the waters are free to all, while the Company is required to allow a large number of free baths annually, so that even the very poor may share them. Vichy is, moreover, not nearly so expensive a place as one might suppose.

Composition and Temperature of the Vichy Waters.

As with Carlsbad so with Vichy, there are quite a number of springs in the town and vicinity, but like it also the waters present a composition remarkably uniform, but a temperature widely different at different springs.

PRINCIPAL MINERAL INGREDIENTS.	Gra' de-Grille	Chomel	Puits-Carré	Lucas	l'Hôpital	Célestins	Parc
Acid carbonic (free)	0.908	0.768	0.876	1.751	1.067	1.049	1.555
Bicarbonate of sodium	4.883	5.091	4.893	4.004	5.029	5.103	4.857
,, of potassium . .	0.352	0.371	0.378	0.282	0.440	0 315	0 292
,, of magnesium .	0.303	0.338	0.335	0.275	0.200	0 328	0.213
,, of strontium . .	0.003	0.003	0.003	0.005	0.005	0.005	0.005
,, of lime . . .	0.434	0.427	0.421	0.545	0.570	0.462	0.614
,, of protoxide of iron.	0.004	0.004	0.004	0.004	0.004	0.004	0.004
,, protoxide of manganese	traces	traces	traces	traces	traces	traces	traces
Sulphate of sodium	0.291	0.291	0.291	0.291	0.291	0.291	0.314
Phosphate of sodium	0.130	0.070	0.028	0.070	0.046	0.091	0.140
Arsenate of sodium	0.002	0.002	0.002	0.002	0.002	0.002	0.002
Borate of sodium	traces	traces	traces	traces	traces	traces	traces
Chloride of sodium	0.534	0.554	0.534	0.518	0.518	0.534	0.550
Silica	0.070	0.070	0.068	0.050	0.050	0.060	0.055
Combustible organic matter	traces	traces	traces	traces	traces	traces	traces
Total	7.914	7.959	7.833	7.797	8.222	8.244	8. 601

It will be seen that the chemical differences are minor, being largely in the amount of free carbonic acid gas. Of this the Lucas spring has the largest quantity, 1.751 gm. per liter, and the Chomel the smallest, 0.768; after the Lucas comes the Parc with 1.555 gm., l'Hôpital with 1.067 and Celestins with 1.049. The most abundant constituent is sodium bicarbonate, about 5 gm. per liter, or 75 grains per quart, the Celestins leading with slightly more, while the Lucas contains one gram less to the liter. The total solids equal about 7 gm. per liter. Hauterive, the analysis of which is not included in the above, is similar in composition to the Celestins, but contains rather more iron and sodium arsenate. Though the quantity of iron seems small, it is easily demonstrable by the addition of tannic acid. From some waters, as the Hauterive, the iron is precipitated from solution in transit. I had long been in the habit of advising my patients to add a little red wine to a glass of Vichy to remove the flatness of taste before I became aware that the mixture becomes dark and unpleasant to look at in consequence of the reaction between the iron of the water and the tannin of the wine.

It is evident that the waters are to be classified as alkaline waters, including those of Vals, Ems and Fachingan. While sodium bicarbonate is the chief mineral ingredient, the physicians at Vichy are not inclined to ignore the other constituents, small as their quantity is. They say, perhaps with reason, that these are as essential to its full properties as the tartaric salts, the tannin and ether to wine, to say nothing of Nature's handicraft in contributing the bouquet of the latter; and that one may as well expect to make good wine by adding 10% of alcohol to water as to make true Vichy by adding sodium bicarbonate to plain water. As stated, the temperature of the waters at the springs varies decidedly, the warmest, Chomel, being 45° C. (113° F.), Grande-Grille 44° C. (111.2° F.), essentially the same; that of l'Hôpital is 31° C. (87.8° F.); of the Parc 18° C. (64.4° F.); Mesdames 15° C. (59° F.); Hauterive 14° C. (57.2° F.), while that of Celestins is 12° C. (53.6° F.). The most agreeable water to drink at the springs is, therefore, the Celestins because the coolest, though the Parc, the Hauterive and Mesdames are also agreeable for the same reason. As at Carlsbad so at Vichy, the warmer waters are spoken of as the stronger and more active.

Therapeutic Uses of the Waters.

The two principal methods of using the waters are by drinking and bathing. All authorities agree that the internal method is by far the more important. Notwithstanding the similarity of composition, the physicians of Vichy specialize the internal use of the waters to a degree which would not seem justified from the standpoint of chemical composition. Such effect can only be explained, as Dr. Raymond Durand-Fardel says in one of his papers,* by supposing a sort of elective affinity between the different waters and the organs affected. These elective effects, he says, have come to be acknowledged by physicians and public alike. Briefly, it amounts to this, that l'Hôpital is the water for the stomach and intestines, the Grande-Grille for disease of the liver, while the Celestins is especially efficacious in affections of the kidneys, the urinary passages and bladder.

Not only this, but contra-indications are pointed out which limit the application of the waters. These contra-indications include acute, congestive and irritable states of the various organs, recent lesions and lesions easily cured, while the waters are especially indicated in chronic and torpid states. Thus, quoting Durand-Fardel again, in a case of acute biliary lithiasis in a person of nervous or congestive habit the waters of the Grande-Grille ought to be avoided, whereas in cases of chronic hepatic engorgement with torpidity, in old malarial subjects, or in the chronic stage of biliary lithiasis, these waters are especially indicated.

The waters of Vichy stand strong in contrast to those of Carlsbad in being in no degree laxative. On the other hand, they have a slight tendency to produce constipation, doubtless due to the iron they contain. They have the effect of increasing the renal secretion, of making the urine alkaline and of maintaining this alkalinity as long as their use is continued. In addition to the properties alluded to, there is claimed for Vichy, as for other mineral waters, a general and a local effect, the former influencing nutrition in general, impressing the diathesis, the latter being elective for organs. The former is shared by all waters alike, the Mesdames and Hauterive springs being, on account of their larger proportion of iron and arsenic, especially indicated in anemia. The waters are usually drunk in divided doses a short time before the meal—from two to five ounces before luncheon and before dinner. Larger quantities are sometimes taken, especially by diabetics, who may drink a liter in the 24 hours.

The general or physiological action of the waters taken in moderate quantities during a cure of three weeks is thus described: Succeeding its ingestion follows a sedative effect on all uncomfortable sensations in the stomach. The symptoms of gastric indigestion, such as gaseous distension and feeling of weight, disappear rapidly. This effect is ascribed partly to its temperature and partly to direct action of the gaseous and alkaline constituents. The secretion of gastric juice is stimulated. Hence the appetite is increased, sometimes even exaggerated, during the first days of the cure. Diuresis is copious, and the acid reaction of the urine diminishes until finally alkalinity results and is maintained during the use of the water. Oxidation is said to be increased and organic changes are accelerated. In other cases at about the twelfth day signs of indigestion appear. The appetite diminishes, the tongue becomes coated, the bowels, which are usually constipated, become loose, probably because of overeating. These symptoms are easily relieved, however, by laxatives or an interruption of treatment for a few days.

The physicians of Vichy are emphatic in the belief that it is not simply by alkalizing the blood that these waters influence so profoundly the gouty diathesis, nor by alkalizing the bile and acid urine that it causes hepatic and renal lithiasis to disappear, nor by neutralizing the acids of the stomach that it cures dyspepsia and counteracts the intense acidity of hyperchlorhydria. They insist that they exert a regulating effect upon assimilation; that they excite cellular reactions, especially upon the cells of the organs of assimilation, viz., the liver, the kidneys, the stomach and intestines. That alkalization may be a factor they admit; that it is the sole mode of action they deny.

The external treatment is by baths and douches. Though of less importance than the internal use of the waters, it is still considered of great value in furthering the effects derived from drinking only. The mineral baths are said to be better borne, admirably by persons readily fatigued, than baths of plain water. The bathing water is commonly made up half mineral water and half ordinary water, or *l'eau douce*, as they call it. The baths are ordered daily at a temperature of 35° C. (95° F.) and of half an hour's duration. Formerly the bath was continued an hour or more. Other modifications as to strength, duration, etc., are made as circumstances determine. The baths, too, have their contra-indications. Among them are included idiosyncrasies, the congestive temperament, advanced cardiac disease, irritable gout, certain skin affections, special susceptibilities of the respiratory apparatus and cases in which the douche is more especially indicated.

The douche is given hot or cold under various degrees of pressure. The cold douche is especially indicated when it is desired to excite innervation and stimulate the circulation; also in cases of torpid anemia, atonic dyspepsia and in diabetes, when it is desired to stimulate tissue metamorphosis. It is applicable, too, to neurodyspeptics and neurasthenics, and to conditions in which the plunge bath may be for any reason contra-indicated.

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*Indications et Contre-Indications de la Cure de Vichy. Reprint from the Gazette des Eaux, Paris. 1899.

The special affections to which the Vichy treatment is applicable include quite a long list containing every form of dyspeptic derangement, including gastric, intestinal and hepatic congestion, gout, renal gravel, obesity, arthritic eczema, some rosacea and urticaria, the last more especially when associated with gastrohepatic diseases. While the treatment is particularly recommended for hypopepsia and hyperchlorhydria, seemingly thus to blow hot and cold at the same time, the principle of administration is different in the two classes of cases. In the former, small doses of the waters are recommended and are said to increase the activity of the gastric secretion. In hyperchlorhydria it is given freely in association with large doses of the alkalis which are intended to neutralize the hyperacidity, while the mineral water regulates the secretion of the gastric cells by influencing their nutrition.

Ulcer of the stomach is included among the diseases benefited. While at Vichy, one of the most conservative of the resident physicians told me that he had come to Vichy originally on account of a severe form of gastric ulcer among the symptoms of which were large hemorrhages. He felt that he had been cured by the use of Vichy waters, which he thought acted diathetically rather than locally. So, too, in dilatation of the stomach the internal use of the Vichy waters with lavage by the same is considered as beneficial. It is held that cases of intestinal indigestion are benefited at Vichy more especially when they are the result of deranged gastric secretion. Among these are included the intestinal affections of tropical climates, especially Asia and Africa. Hence, the French Government has a military hospital at Vichy used by officers and soldiers returning from these countries. But it is the very numerous class of gastrohepatic affections which are suited to the Vichy treatment—cases with enlarged congested liver, with mild icterus, pale tongue and deranged bowels, cases of alcoholic, infectious or malarial origin. Cases of hepatic congestion due to heart disease, to dysentery and to other affections of hot countries are included in this category. While cirrhosis of the liver is not regarded as amenable to the Vichy treatment, the precirrhotic congestive stage of alcoholism is. My attention while at Vichy was especially called to cases of enlarged liver, apparently congestive, which responded to treatment with decided reduction in size. I have mentioned that various forms of nervous dyspepsia associated with neurasthenia are suited to this treatment. These include cases in which cardiac symptoms are simulated or which may be due to alimentary toxins—ptomaine poisons.

Especial efficiency is claimed for the Vichy waters in biliary lithiasis of all varieties, with or without hepatic colic, and with or without biliary obstruction. The waters are regarded as efficacious, not by exerting an expulsive effect upon the stone, but as modifying the function of the hepatic cell in such a way as to diminish the lithogenic process. Hence local physicians hold that in all cases, before surgical procedures are instituted, a trial of this cure should be made unless there be evident danger in delay, due regard being had to acute contra-indications represented by inflammatory complications, including suppurative angiocholitis and cholecystitis.

Gouty patients have of late years been less numerous at Vichy, according to Raymond Durand-Fardel, because of the unsettled views as to the pathogenesis of gout and the apprehension that the alkaline cachexia or alkaline anemia may add itself to the gouty cachexia. The alkaline anemia he regards as an imaginary condition the possibility of which is refuted by the marvelous effects of the cure of the colonists who come to Vichy in large numbers for the cure of true anemia acquired by residence in hot countries. As to the new views regarding the pathogenesis of gout, if we suppose gout to be caused by an overproduction of uric acid due to too rapid destruction of nucleins, plus deficient renal elimination, the waters may act favorably by influencing vitiated nutrition including that responsible for the renal affection. This is based upon the dictum generally accepted that there can be no gout without uric acid; and the second dictum promulgated by Levison, of Copenhagen, less generally allowed, that with uric acid there can be no gout without chronic nephritis.

Special efficacy in renal gravel is claimed for Vichy. As with hepatic lithiasis, the Vichy physicians say it is not through alkalinity or by flushing the urinary passages, but rather by its diathetic influence upon cellular metabolism. Lavage of the urinary passages, they say, is better accomplished by the sulphated calcic waters, of which Contrexville is the type. Simple uric acid sediments without calculous concretion or colic disappear promptly under the Vichy cure. For many years I have been treating uric acid gravel with Vichy water, and it is a rare event for a person thus treated to have an attack of colic. My practice is to continue the use of the water without intermission. For I have known nephritic colic to return when the use of the water has been discontinued, and again disappear after it was recommenced. For this purpose I find a quart daily suffices—one-fourth before each meal and at bedtime. I confess I have thought that it was by its direct solvent effect through its alkalinity and dilution rather than by influencing cell action that it acted. I was somewhat surprised to find that no efficiency is claimed for Vichy in the cure of oxalic diathesis, for, while alkalis exert no solvent action on oxalate of lime, the oxalic diathesis appears to be due to the same vitiated nutrition as that which underlies the uric acid tendency. Naturally, the alkaline diathesis which is responsible for phosphatic sediments is increased by Vichy waters. They are, therefore, directly contra-indicated.

Very little is claimed for Vichy in the treatment of albuminuria. When associated with marked Bright's disease, it is allowed to be a contra-indication rather than otherwise. Associated with gout or gravel, albuminuria offers no contra-indication in the absence of marked nephritis. The Vichy treatment is held to be especially efficacious in the albuminuria associated with diabetes, the albumin and sugar disappearing *pari passu.*

In diabetes, too, great virtue is claimed for the Vichy waters. It is admitted, however, that the cases benefited are the stout, florid diabetics, with large fatty livers and without grave complications like tuberculosis. Acetonuria is no contra-indication. In my own practice I am in the habit of flushing with Vichy water all my patients threatened with diabetic coma, often adding potassium citrate to increase its alkalinity. On the other hand, the diabetes of the lean, whether pancreatic or nervous, receives no benefit. The same is true of the diabetes of the young. As the first-named variety is that relieved almost anywhere by treatment, it is plain that no specifically curative virtue can be claimed for the waters.

Obesity, especially when associated with large fatty liver, is also benefited at Vichy, by internal use of the water combined with massage and the douche conjointly. It is admitted, however, that there are no results comparable to those at Marienbad.

It is evident that efficiency is claimed for both Carlsbad and Vichy in the treatment of the same diseases. Is there anything in either cure which makes one more suitable than the other? The only effort of which I am aware, that contrasts the two cures, is a paper prepared by the two Drs. Durand-Fardel, father and son, in 1895.** Both these physicians were long resident in Vichy and have had a large experience with its waters. The elder, a member of the Academy of Medicine and entrusted with numerous responsible positions, is lately deceased. The younger I had the pleasure of meeting at Vichy. I shall draw on their paper freely because my own experience with either cure is too limited to justify conclusions, while my personal examination into the cure and methods at both places may in a measure fit me to appreciate their deductions.

First, to compare and contrast the chemical composition of the waters. Both contain a large proportion of sodic bicarbonate, the Vichy waters nearly three times as much as the Carlsbad—Grande-Grille, taken as the type for Vichy, containing 4.88 gm. to the liter, while the Sprudel at Carlsbad contains 1.29 The Vichy waters are, however, simple sodic bicarbonate waters, the sodium bicarbonate being the dominating constituent, while the Carlsbad are called complex sodic bicarbonate waters, containing also sodic sulphate and sodic chloride in considerable amount, 2.4 gm. and 1.04 gm. respectively. The amount of free as well as fixed carbonic acid is considerably more in the Grande-Grille at Vichy than in the Sprudel at Carlsbad. Of both waters it may be said that, while they are furnished by many springs, the composition of the waters at these various sources is nearly the same, the main difference being in the temperature, some being hot, others intermediate and others cold. The first at Carlsbad being represented by Sprudel at 73° C. (163.4° F.), the second by Schlossbrunn at 49° C. (120.2° F.), and the third by Spitalbrunnen at 35.2° C. (95.3° F.). The different sources of Carlsbad water, like the different sources of Vichy water, differ also in the quantity of carbonic acid gas. In general, the warmest waters and those most liberally charged with carbonic acid are regarded as more stimulating. The Vichy waters, although similarly classifiable as to temperature, are of much lower temperature, those of highest temperature, Grande-Grille, being 42.° C. (108.5° F.), Puits Chomel 43° C. (109.4° F.), l'Hôpital 31.7° C. (89° F.), and Celestins 14.3° C. (57.5° F.).

The quantity of water administered and the mode of administration also differ. At Carlsbad the water is rarely taken except in the morning before breakfast, when five to seven ounces are drunk, repeated two or three times while the patient is exercising moderately by walking slowly up and down the pavilions. At Vichy the dose is much less, only two to five ounces four times daily before meals.

In both places bathing is associated with drinking. In Vichy as in Carlsbad the baths are advised daily, but at the latter place the duration of the bath is limited to fifteen or twenty minutes, while at Vichy it is half an hour to an hour. In each place a course includes twenty to twenty-five baths. Mud-baths for the treatment of rheumatism are given at Carlsbad only. In both places, too, massage constitutes an important part of the treatment, a specialty of Vichy being the association of massage with the douche under varying pressure, particularly employed in obesity and in rheumatism and other arthropathies. At Vichy less importance is attached to the baths than to the internal administration of the waters.

It is claimed to be especially characteristic of the Vichy treatment that it produces no immediate objective effects preceding the beneficial results ultimately established—effects revulsive, irritative, eruptive or painful—nothing objective save a moderate diuresis. Its curative effect, as already stated, is held to be upon nutrition and assimilation—in a word diathetic, acting "gently and silently." The inference is that this is not the case with Carlsbad. But in a recent quite prolonged stay at Carlsbad I saw nothing to justify such conclusion. It may have been a part of the older treatment, when patients were allowed to lie in the baths until the skin was macerated, producing irritations and excoriations. But this is no longer the practice. In fact, the duration of the baths is shorter in Carlsbad than at Vichy.

The Drs. Durand-Fardel contrast the action as follows: The two cures, almost identical in appearance and ultimate effect, act upon the organism in a very different manner. The Carlsbad waters, being to a certain degree stimulating to secretions, are best suited to lymphatic torpid organisms, while those of Vichy, acting without such disturbance, are best suited to excitable organisms. As to the liver, for example, chronic engorgements, such as are caused by malaria, are best treated at Carlsbad, while the treatment at Vichy is best adapted to hepatic colic. These physicians say it is not unusual for biliary colic to be excited under Carlsbad treatment, while this is rarely the case at Vichy, especially under the use of the water of l'Hôpital spring, which ap-

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**Carlsbad et Vichy. A Wallon, Vichy, 1895.

pears to be especially recommended. So, too, abdominal plethora and its consequences are best treated at Carlsbad. And this is conceded by the Vichy physicians. They claim, moreover, that the Vichy cure is better adapted for affections limited to the stomach, while the waters of Carlsbad exercise their influence more especially on the intestines.

As to the dietetic régime which has long been famous for its rigidity at Carlsbad and its liberality at Vichy, ignoring for the present the fact that the extreme rigidity formerly insisted upon is no longer practised at Carlsbad, the physicians at Vichy say that a special dietary—a *régime des eaux*—is necessary at Carlsbad because of the disturbing effect of its waters and the large amounts in which they are taken. At Vichy, on the other hand, the tolerance of the treatment comports with a corresponding tolerance of diet. Hence it is that the *table d'hôte* is not encouraged at Carlsbad, while at Vichy it is the prevailing mode.

On the other hand, the physicians at Vichy do not wish to be considered as indifferent to diet, and hold that there is prescribed for each patient a régimen suited to his case, rather than a diet demanded by the medication itself. An interesting illustration of differences actually practised is seen in the matter of fruits. It is well known that at Carlsbad great stress is laid upon the use of cooked fruits as contrasted with raw fruits, while at Vichy raw fruits are permitted. This quite reasonably, since at Vichy the stimulating and laxative effects of the raw fruits are desirable to counteract the slightly constipating tendency of the waters, while at Carlsbad, since the waters are aperient, no effect of this kind is needed, indeed is to be avoided, while the otherwise wholesome influence of fruits is indicated.

As to other treatment involving the use of water, in addition to the douches already alluded to, it includes appliances for irrigations of the various cavities of the body, including the stomach, bladder, rectum and vagina, either by means of mineral or indifferent waters. A special feature is the carbonic acid bath employed for neuralgic pain, general pruritis and the treatment of gouty subjects who dread the application of water. Inhalations of carbonic acid gas are also employed in certain forms of dry asthma, angina and chronic coryza.

As to the mechanotherapy at the two places, it is essentially the same. Both places are equipped with well-appointed Zander Institutes, both under the control of accomplished physicians, Tyrnauer at Carlsbad, and Vermeulen at Vichy. Dr. Vermeulen showed me some very interesting effects of the vibrating treatment, as applied to the wrists and ankles, upon vasomotor regulations. The application of this to the treatment of diabetes mellitus he promised to embody in a paper to be sent to me, and which I hope to be able to read before this Section before the winter is over. He also showed me some striking pulse tracings exhibiting the effect of the mechanotherapeutic treatment upon lost compensation in cardiac and vascular disease. Among other affections treated in the mechanical institute are articular gout and rheumatism, obesity and affections of the lungs. No more interesting place can be found than this room with its numerous appliances propelled by machinery, all in active operation and in use. The scene is a very busy one. Dr. Vermeulen told me that his department had already outgrown the space provided for him in the new bath-establishment, and it will have to be enlarged in another year.

At both places are prepared by evaporation the dry salts—the Carlsbad salts and Vichy salts, Sels Vichy-état. In them are contained all the solid ingredients of the waters. These are exported in large quantities and are very convenient for travelers' use when dissolved in hot or cold water, for drinking or bathing. Naturally, they are an imperfect substitute for the actual waters. We visited the factory at Vichy where this preparation is carried on on a large scale and found it very interesting. In the evaporating process the carbonic acid is liberated from the sodium, but is again restored to it by an ingenious process, the carbonic acid being derived from its natural source, the springs the waters of which by evaporation furnish the salt.

As to my own conclusions, so far as they are justified, I have no doubt that there are many minor conditions which are equallv well treated at Carlsbad and at Vichy, cases in which change of scene, diversion and a restful life alone are needed. I believe the Vichy physicians are right, too, in saying that pure gastric derangements, such as deranged secretion and fermentation processes, are better treated at Vichy, while cases requiring depletion of the liver and upper alimentary canal are better treated at Carlsbad. So I should be inclined to refer cases of hepatic torpor, biliary lithiasis and gout to Carlsbad. On the other hand, renal lithiasis of the uric and oxalic kinds, I should certainly refer to Vichy. I do not think it makes much difference to which place one sends diabetics, for it is only the mild cases which are benefited at either place. I am inclined to think the needed dietetic regimen is rather more easily carried out at Carlsbad, while the alkalinity of the Vichy waters adapts them rather than the purgative waters at Carlsbad, though the depleting effect of such waters on the liver is also helpful to diabetics. Carlsbad also seems better suited to the stout and strong and plethoric with phlegmatic temperament, while Vichy is suited to the delicate, the nervous and those to whom active treatment is harmful. Finally, persons in whom there is a tendency to looseness of the bowels should go to Vichy rather than to Carlsbad.

When to go to Vichy. "The season" at Vichy commences the 15th. of May and ends the 30th. of September, but the baths are available throughout the year, and, of course, the waters for drinking as well. For the purposes of the cure April and May, or September and October, are very pleasant periods, but the months of June, July and August are those in which Vichy is most frequented. Hence, at this season there is more going on in the way of gaiety and diversion. The theater and concerts are in full swing, the Casino is crowded in the afternoon and evening by promenading visitors from all sections, and the scene is one of great gaiety and brilliancy.

REMARKS ON THE TREATMENT OF PNEUMONIA.

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In this paper the treatment of the prevalent variety of primary pneumonia, that dependent upon the diplococcus of Fränkel, is alone considered. The mortality of this disease varies so widely in accordance with the age, constitution and previous habits of the patient, that some remarks upon its prognosis, as influenced by these factors, are necessary to a proper understanding of its rational treatment.

In early childhood the mortality from lobar pneumonia is very slight and is probably overestimated on account of the liability of confounding bronchopneumonia with lobar, the former being decidedly the more fatal affection of the two in early life. The rarity with which lobar pneumonia is found at the autopsies of children is a fact commented upon by pathologists.

In the report of the Collective Investigation Committee, of Great Britain, the largest number of cases was found to occur between five and thirty years of age. Of the 535 cases reported, 47 died, making a mortality of 8.8%. Between twenty and thirty it is 12%, and in the four years from fifty-one to fifty-five it rises to 30.5%. Above seventy the number of cases is small, but the mortality is about 60%: figures which are in accord with the general impression that pneumonia is the most fatal of the diseases of old age.

As regards the percentage of deaths from pneumonia, there is little difference between the two sexes. In the collective investigation report the percentage was higher in females than in males, these figures being taken from cases treated in general practice; while in the Middlesex Hospital the statistics of Sturges and Coupland show a greater mortality among males. The number of cases upon which the statistics are based is about the same in both reports, about 1000 in each, and, on adding them and striking an average, the percentage of mortality among males is 19.4%, and among females 16.7%.

The general state of the system at the time of the attack is of great prognostic significance. In the intemperate and the destitute the mortality is frightful and on this account statistics taken from large charity hospitals are misleading.

The tendency of acute lobar pneumonia in children and in young, healthy and temperate adults is undoubtedly toward recovery. This statement applies to uncomplicated cases. The various complications add to the danger in direct ratio to their individual gravity. Pregnancy is a serious complication, the gravity of which depends upon the degree to which it has advanced. It need scarcely be stated that in a disease, which makes such extraordinary demands upon the functions of the lungs and heart, a crippled state of either of these organs brings an element of great danger. The prognosis of pneumonia in individuals with chronic bronchitis, emphysema or valvular heart disease is decidedly bad. The mortality of pneumonia undoubtedly varies to a considerable degree in accordance with the *genius epidemicus*.

Prophylaxis. The best prophylaxis for pneumonia consists in protecting the body against cold and dampness with woolen underclothing and the avoidance of prolonged exposure during the inclement seasons of the year. The nutrition should also be maintained by an abundant, nutritious and digestible diet. These remarks are particularly applicable to elderly individuals whose pulmonary tissues seem to afford a peculiarly favorable soil for the invasion of the diplococcus of pneumonia. In accordance with the fact that pneumonia is an infectious disease, the sputum should be carefully disinfected. With this object in view, the patient should be forbidden to deposit his sputum upon handkerchiefs and towels and should be urged to expectorate into a cup or other suitable receptacle in which it may be mingled with disinfectants. For the purpose of disinfecting pneumonic sputum the following somewhat complicated process has been recommended by Finkler: Into the spit-cup is poured a solution containing 3% each of caustic potash and borax which is colored red by a trace of phenolphthalein. In this alkaline solution the sputum is completely dissolved. There is then added enough of a solution of hydrochloric acid and corrosive sublimate (strength not stated) to decolorize the red alkaline solution, and when this has taken place the cup is emptied.

Treatment. The great majority of cases of pneumonia in the young, robust and temperate will recover under any treatment, except a depressing one and, therefore, it is unfair to include them in a list attesting the success of any special therapeutic method. It is also unfair to quote them in favor of a purely expectant method, for they form one end of a scale in which there are all degrees of danger. Considerations such as these show the impossibility of formulating a plan of treatment applicable to all cases of pneumonia. Unanimity in the treatment of disease, *i. e.*, a treatment by routine and "rule of thumb" in which considerations for the patient give way to stereotyped opinions concerning the nature and tendency of the morbid process, has always led to disastrous results. In this connection I may call attention to the significant fact that a particular method of treating any disease is always most successful in the hands of him who originated it. It is useless to inquire whether this be due to greater assiduity and skill in its application, to prejudice in its favor or to ignorance in including under the head of the special disease for which it is recommended cases which would be rejected by one less prejudiced as to therapeutics or more skilful in diagnosis.

The principal *indications for treatment* in pneumonia are the following:

Pain. This is due to the pleurisy which is an almost invariable accompaniment of pneumonia. The pleuritic pain interferes both with respiration and expectoration. The rapid respiration of pneumonia, in its early stages, is doubtless largely due to acute pulmonary congestion and to fever, but its shallow character is due to pain. It may be argued that this involvement of the pleura and consequent pain are provisions of nature to suppress movement, to set the inflamed part at rest. If this be so, nature is stultifying herself by pouring out at the same time into the bronchioles and alveoli a secretion so viscid as to require the strongest expiratory efforts to expel it. One effect, then, of pain is to diminish or suppress expectoration; another is to interfere injuriously with the pulmonary circulation. An individual with pleuritic pain instinctively keeps his chest in an expiratory position which experiments have shown to be, of all others, the least favorable to the free passage of blood through the pulmonary circuit. The relief of pain, therefore, accomplishes two important objects: (1) It promotes expectoration and (2) it relieves congestion. In the majority of cases pain may be effectively relieved by hot applications, either wet or dry, by dry cups and, these failing, by two or three leeches applied over or near the painful area. The local application of cold may be more effectual in relieving this symptom, while, at the same time, it diminishes pyrexia and actually seems to limit, and even sometimes to abort, the inflammatory process. The marked success from the application of ice-bags to the chest, reported by Dr. D. B. Lees, of England, and the confirmation of his statements by Goodhart and others, warrant a thorough trial of this method.

There are patients, however, who are averse to such measures, especially the application of cups and leeches, and others whom they may fail to relieve. In such cases a hypodermic injection of a salt of morphine, employing one-sixth of a grain for a dose, will often give many hours of relief. It is only in the early stage of pneumonia that such a measure is ever needed and, at that time, morphine, if used in the dose and manner mentioned, can exert no injurious effect upon the respiratory centers.

I may seem to be laying too much stress upon relief from pain in the treatment of pneumonia, and it may be objected that pain is not often complained of. This is quite true, but in many such cases the pain is, so to speak, *latent*, being suppressed by an expiratory position of the lung. When the patient attempts to take a deep breath or to cough, the latent pain becomes manifest.

To recapitulate: Pain, when it interferes with pulmonary function, is injurious and demands relief. This may be obtained, in the majority of cases, by external applications or leeches. Occasionally these will fail and a small dose of morphine should be injected beneath the skin. This is only to be administered during the early stage of the disease.

Hyperpyrexia. Another indication for treatment may be furnished by hyperpyrexia. Pyrexia is a necessary concomitant of pneumonia, and an evening rise of temperature to 104° or 105° F. need, *per se*, occasion no uneasiness. If, however, the temperature remains persistently at a high level and is associated with other marked signs of nervous disturbance, measures must be taken to reduce it. The best of these are sponging with tepid or cold water and the application of an ice-bag to the chest. Of the various antipyretic drugs, I am accustomed to rely the most upon quinine injected beneath the skin. It certainly will not cause the temperature to fall to such an extent as will antipyrine, acetanilid, phenacetine, *et id genus omne*, but our object in adopting antipyretic measures is not so much to abolish pyrexia as to reduce it. Antipyrine, antifebrine, etc., exert a most powerful depressing effect upon febrile temperatures, but often do so at the expense of safety. They certainly tend to produce collapse and cyanosis, the very symptoms which, in pneumonia, are fraught with the greatest danger. For these reasons I do not employ these drugs in the treatment of pneumonia.

Delirium and Sleeplessness. These are indications which call for active interference. They are frequently associated with alcoholism and, when this is the case, the delirium is of the same kind as that of *mania-a-potu*. In fact, pneumonia is often the exciting cause of the *delirium tremens* in individuals who, but for the pulmonary affection, would never have manifested a sign of it. As alcoholism undoubtedly predisposes to pneumonia, and pneumonia is powerfully "*synergistic*" to alcoholism, the two diseases, in their mutual relations, furnish one of the best possible instances of the *circula vitiosa*.

In cases of pneumonia exhibiting delirium and sleeplessness, alcoholic stimulants are imperatively demanded, especially if the patient has been accustomed to their use in health. The dose must be graduated in accordance with the effect produced by them, and this depends largely upon individual tolerance whether natural or acquired. As to drugs, the bromides, especially the ammonium salt, paraldehyde, hyoscine and chloral are those from which the greatest benefit is to be expected in such cases.

Cough and Expectoration. Any drug that lessens the viscidity of the pneumonic exudate is undoubtedly indicated in the treatment of pneumonia, always provided that it is not too depressant in its action. Such a property is ascribed by Beverly Robinson, of New York, to oxysulphuret of antimony, the so-called *kermes mineral.* I have used this drug sufficiently to convince me that it is of decided service in the early stages of pneumonia, prescribing it, as recommended by Robinson, in doses of 1-32 grain every two hours, dissolved in water or in equal parts of syrup of acacia and orange flower water. Unlike tartar emetic, this preparation of antimony is unirritating to the gastro-intestinal tract and does not seem to depress the system.

I will now mention some of the principal drugs commonly employed in the treatment of pneumonia and the objects with which they are administered.

Digitalis. This drug is administered by some practitioners as a matter of routine in pneumonia; by others as an antipyretic. For the latter purpose doses so large as to be depressant, and, therefore, unsafe, are required. It is supposed by those who administer this drug in a routine fashion that its action on the heart is invariably beneficial, but this is a gratuitous assumption. When arterial tension is relaxed and the veins are engorged, in other words, when the circulation is of the same type as prevails in cardiac disease with failing compensation, digitalis may be of decided service, but when arterial tension is increased, digitalis is unnecessary and may be injurious.

Ammonium. This substance has been administered in a routine manner with the object of preventing the formation of heart clot. The property of preserving the fluidity of the blood was ascribed to ammonium in consequence of the late Sir Benjamin Ward Richardson's theory of the coagulation of that fluid. Richardson supposed coagulation to be due to the escape of ammonium from the blood and wrote a good-sized book in which he upheld this view with many ingenious arguments. As this theory of coagulation has been thoroughly refuted and even renounced by its originator, it is futile to administer ammonium with a view to any specific action upon the blood. It is, however, a cardiac stimulant and may be employed with advantage in connection with digitalis. It is also believed by some to facilitate expectoration by lessening the viscidity of the pneumonic exudate, and it is possible that it may have such an effect.

Strychnine is a drug much employed in the treatment of pneumonia and often with decided benefit. It is not only a stimulant to the cerebrospinal centers, but it has been proved experimentally to diminish the frequency and increase the force of the cardiac contractions. It may be given by the mouth or hypodermically, or by both methods combined. For example, it may be given continuously by the mouth in doses of 1-30 grain every three hours, with an occasional hypodermic injection of 1-50 or 1-40 grain.

Oxygen Inhalations. I have been somewhat disappointed with the result of oxygen inhalations, although they occasionally afford marked palliation to the distressing sense of dyspnea. On the other hand, they sometimes seem to annoy the patient and add to his discomfort. They may be employed tentatively in all cases in which there is marked pulmonary congestion with a consequent tendency to accumulation of blood in the systemic veins.

Nitroglycerine. No drug accomplishes the last-named object, that of relieving venous congestion, more effectively than nitroglycerine. It may be given by the method recommended for strychnine, *i. e.*, continuously by the mouth and occasionally beneath the skin.

Quinine. In the writer's opinion the most valuable of the recent contributions to the therapeutics of pneumonia has been made by Dr. Alex. Petzold, of Magdeburg*, who has conclusively demonstrated the value of subcutaneous injections of quinine in the treatment of the disease. During the last three years in which this method was employed in one of the hospitals of Magdeburg, the mortality was 12% less than in the other hospitals of the same city. It would seem from Petzold's statistics that quinine, employed hypodermically, deserves to be regarded as a specific** in cases of lobar pneumonia caused by Fränkel's diplococcus and that it is equally efficacious in cases in which the sputum contains, in addition to the last-named organism, streptococci and the bacillus of Friedländer. The dose for adults is 0.5 of quinine hydrochlorate in 17 parts of water. In children from ten to fifteen years of age the dose employed was 0.25 in 9 parts of water. As regards the number of such injections, Aufrecht, who introduced this method of treating pneumonia, found two such injections in two successive days to be generally sufficient.

Petzold gave 1 injection in 35 cases.
2 injections in 19 cases.
3 injections in 12 cases.
4 injections in 4 cases.
5 injections in 3 cases.
8 injections in 1 case.

In only 7 out of 73 successful cases were more than three injections administered.

The use of quinine subcutaneously does not dispense with other generally accepted methods of treating pneumonia, especially with morphine, from which, when judiciously used, Petzold has seen none but good results. Digitalis, ammonium and chloral were also employed in Petzold's series of cases to meet the indications for which these drugs are commonly employed.

I have used quinine hypodermically in the manner recommended by Petzold and am convinced of its efficacy. I regard it as a valuable addition to the therapeutic agents employed in its treatment. I have generally prescribed the hydrochlorosulphate of quinine for hypodermic use because it is the most soluble of the quinine salts.

Saline Hypodermoclysis. In the spring of 1889, I treated successfully, at the Philadelphia Hospital, several severe, apparently desperate, cases of lobar pneumonia by a method which, I am confident, has often turned the scale in favor of recovery. The method to which I refer is hypodermoclysis, and my experience with it is amply sufficient to warrant me in recommending it strongly in the cases in question. The fluid injected beneath the skin was the "normal saline" solution (about fifty grains of sodium chloride to the pint of water) and I was induced to employ it by the apparent deficiency of water in the system, the absence of chlorides in the urine and the universally recognized condition of hyperinosis. A series of cases illustrating this method of treatment was published by me in the *International Clinics*, Vol. IV, ninth series. Hypodermoclysis is now recognized by the highest authorities as, to say the least, a rational procedure in the treatment of pneumonia, and questions as to priority in its employment have already arisen. They have been definitely settled in an editorial in the *Medical News*, for July 6, 1901, in which the history of the subject is reviewed. The statement has been made that hypodermoclysis alone may be harmful by overloading the right heart, and that it should, therefore, be combined with bloodletting. This is a mere *ipse dixit* insusceptible of proof, as is also the statement that the patient is rendered much more susceptible to the influence of oxygen by the hypodermoclysis, "especially if the oxygen be passed through a wash-bottle containing hot water to which has been added a teaspoonful of a mixture of creosote and turpentine, each one part, and compound tincture of benzoin, two parts!"

It is in the highest degree improbable that the bloodpressure can be materially raised by the gradual absorption of a pint of salt water injected beneath the skin, especially in a disease in which all the signs point to a deficiency of water in the blood.***

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*Deutsches Archiv f. klin. Med., Bd. 70, Heft 3 and 4, 1901.

**The word specific signifies a "remedy which cures, or tends to cure, a certain disease."

Venesection. I have seen few cases in which, in my opinion, venesection was indicated, and it is possible that in these few in which it was employed, the patients recovered, not because but in spite of it. The experience of the past with reference to this measure has proved that it is capable of arresting the progress of the pulmonary inflammation. The extraordinary statement of Bouillaud, in which metaphors are inextricably entangled, that he "strangled pneumonia with the lancet by repeated blows," has not been confirmed by subsequent observers.

The condition of the blood in pneumonia, so far as we are acquainted with it, is such as to furnish indications for addition to, rather than subtraction from, it. Its specific gravity is increased, its fibrin is superabundant and its red corpuscles are reduced on the average, according to Hayem's estimate, to the extent of 1,000,000 per cubic millimeter. The last-mentioned fact would, at first sight, seem to contra-indicate the addition of water, but when it is recalled that anemia generally coincides with diminished volume of the blood**** and that by such addition toxins are diluted, elimination promoted and thrombosis perhaps prevented, the comparatively trivial reduction in the number of the erythrocytes is practically beside the question.

The foregoing somewhat desultory remarks may not serve as a guide to the practitioner in his treatment of pneumonia in general, and they are not intended to do so. In fact, as Dujardin-Beaumetz well remarked: "There is no treatment of pneumonia, there is only a treatment of pneumonics."*****
They are, however, intended to set forth, to some extent, the principles which should govern us in the choice of remedies and the application of such principles to the case in hand. Not one among the therapeutic agents mentioned is necessarily to be employed in every case and, on the other hand, there are cases in which one and all of them may be resorted to with distinct advantage. It is their judicious combination and the application of such combination to the individual case, from which benefit is to be obtained; and the skill with which such application is made can only be the outcome of experience.

THE RÖNTGEN TREATMENT OF MALIGNANT DISEASE.

By CHARLES LESTER LEONARD, A. M., M. D.,
of Philadelphia.

The employment of the Röntgen-rays in the treatment of malignant disease is a method of so recent date that the results obtained should possibly not be considered cures. But, even if recurrence does take place, these results demonstrate the efficiency of this method and that renewed treatment will free the patient from the disease. They also show that this new agent is more potent than any other known in combating malignant growths. Cases that were hopeless from an operative standpoint have apparently been cured, and in others the progress of the growth has been retarded and a retrograde metamorphosis started. In most cases the patient has been freed from pain.

Such results, even without absolute cures, make this method more serviceable than any other, except operation.

In spite, however, of these demonstrated facts, our knowledge is as yet insufficient to justify the treatment of primary operable growths by this method. Early, radical removal of all suspicious tissue by surgical intervention has, so far, been proved to be the most efficient method of treating malignant disease. Surgical removal has given the greatest number of cures and the longest periods of freedom from recurrence. Early radical operation is, therefore, the most scientific conservatism. Any temporizing gives the growth a firmer hold upon the system. The delaying of early operation by the trial of any method that has not been demonstrated to be better is detrimental to the best interests of the patient.

Since the most beneficial results of the Röntgen treatment have followed the treatment of recurrent disease, the best method of treatment seems to be the combination of early radical surgical operation and the Röntgen treatment. The patient then has all the chances offered by the two best methods of treatment known.

The curative and inhibiting power of the Röntgen treatment over malignant disease is not uniform. Those growths, possessing the least tendency to metastasis, apparently yield most readily. They are, however, the most certain to be cured by operation.

Until the physiological action of this new therapeutic agent has been more definitely determined, and wider clinical experience has shown the classes of cases in which it is most efficient, and in which cures can be expected, operation must precede treatment by this method in all but exceptional cases of primary growths.

The action of this new therapeutic agent appears to be both stimulant and alterative. Normal tissue is stimulated to greater activity by a stimulus that injures gross embryonic tissue, malignant tissue and all tissues of low vitality. This action is seen in all forms of diseased tissue under treatment. The breaking-down of the foci of disease in lupus and rodent ulcer precedes the filling out of the necrosed area by healthy tissue.

The action of this agent may be stimulant, alterative or destructive. This is a variation in the degree, but not in the nature, of its action. It is dependent upon two factors: (1) The nature of the individual tumor and its host, and (2) the amount of the alterative agent employed. Both of these factors are, as yet, difficult to measure and cannot be determined accurately in different individuals and

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***In this connection I may quote the following passage from Landois and Stirling: "If the normal quantity of blood be increased 83 per cent, no abnormal condition occurs, because the bloodpressure is not permanently raised."

****In chlorosis and leukemia the blood volume is often increased.

*****"Il n'y a pas de traitement de la pneumonie, il n'y a que le traitement des pneumoniques."

for different types of apparatus. The varied reaction of growths that seem identical in their pathological histological nature shows them to differ widely in their pathological physiology. There are also variations dependent upon the individual.

The dosage, or amount of alterative agent, best adapted to different varieties of tumors has not been determined. In the determination of these quantities variations in the type of apparatus employed form a factor that it is difficult to estimate. The quality and quantity of rays employed vary with the efficiency of the apparatus and the expertness of the operator. Some of the exposures used, as published by certain operators, would produce serious results if efficient apparatus was employed.

The degree of change produced in malignant growths varies widely with the amount and frequency of the dosage. The best results, in the average case, are achieved through the replacing, as the result of a retrograde metamorphosis, of the malignant tissue by fibrous or adipose tissue. More rapid results, but possibly more dangerous, can be produced by the sloughing and necrosis of the pathological tissue.

Clinically, these varying degrees have been noted in patients under treatment. They have been proved by pathological examinations. In one patient (Pfahler) a post mortem showed that the tumor had been converted into fatty tissue, while a gland that had not been in the field of irradiation remained cancerous. Dr. Ellis, of the Jefferson Hospital, has proved by an ingenious method that degeneration is produced. He covered half a tumor, to be removed by operation, with a lead screen during a series of eight treatments. After the operation a careful pathological examination was made of the tumor. It demonstrated the production of marked degenerative changes in the portion of the tumor that had been irradiated.

The effect of these different degrees of alterative action and degeneration upon superficial and subcutaneous growths demands careful consideration.

In superficial lesions the necrosis and rapid destruction of pathological tissue without the injury of normal structures may produce beneficial results. It is, however, possible to produce more cosmetic results by application of this agent that are alterative rather than destructive.

In subcutaneous growths, as mammary carcinoma and recurrences after operation, if these growths are large, there are more urgent reasons for securing the alterative rather than the destructive action.

The destruction and liquefaction of a large mass of malignant disease floods the system, already depressed by the presence of the disease, with an amount of toxin that is too great to be absorbed, and may readily result in auto-intoxication or the production of a fatal septicemia.

Such results as these will not occur if a careful study is made of the patient's general condition. An increase in vitality and body-weight, with an increase in general metabolism, is the general rule in patients suffering from malignant disease while under the Röntgen treatment. The absence of these beneficial results points to a deficiency in the amount of the agent used or, possibly, to an excess, and a consequent depression of the system through auto-intoxication.

It is so often difficult to differentiate between these causes and to adapt the dosage to the individual case. A knowledge that these causes, and that such variations in the action of this remedial agent exist, will aid the operator in determining its action in the individual case. Clinical observation will help him in determining what degree of degeneration he is producing and how to regulate his dosage. Ignorance of the fact that such harmful results can be produced, or the employment of a technique that does not take them into account, may result in greater injury than good to the patient. The fact that this form of treatment has been confined to cutaneous lesions or those readily drained, accounts for the absence of harmful results. Such results have already been noted by some of the most careful operators, while others have erroneously ascribed them to a harmful effect of the rays and said that it hastened the progress of the disease.

In the presence of this agent, which has been shown to produce such marked alterative and degenerative changes, the warning which has already been spoken against its use by those incapable of judging the results they are producing should be frequently repeated. It is not an agent to be employed by the inexperienced. The best results can only be obtained after a careful clinical study of its action by those fitted to judge of the condition of the patient. Clinical experience has shown that alterative changes and the production of fatty degeneration can be best produced by a moderate dosage, repeated with sufficient frequency to keep the tissues under its influence. The aim should be to stimulate the metabolic changes in the healthy tissue with a stimulus that will injure tissue of low vitality and cause its gradual degeneration. The action of this agent is apparently neurotrophic resulting from this stimulation and overstimulation.

It is very difficult, as yet, to make any accurate comparison of the dosage employed by different operators. The length of the exposure and the distance of the tube from the diseased area can be measured, but this in no wise measures the volume or amount of the therapeutic agent employed. These factors are so intimately interdependent upon the efficiency of the apparatus employed that they are generally more misleading than helpful. The dose is not proportionate to these factors, but to the quality and volume of the Röntgen-rays employed. This quantity is difficult to measure and depends upon the efficiency of the apparatus employed and the skill of the operator.

An error may also be committed by employing too weak a dosage. A dose that is too weak to produce destructive changes, i. e., to overstimulate and cause degeneration, will aid the growth of the tumor rather than retard it. The judgment of the operator and his experience are, therefore, taxed in every case to determine the appropriate dose to be employed.

The author has elsewhere reported a case of rodent ulcer of 33 years' standing that has been completely healed by this method. Also a case of atrophic scirrhus of the breast, in which the malignant disease has been replaced by healthy tissue. Other cases of inoperable or recurrent carcinoma of the breast, at present under treatment, present a clinical aspect which shows the beneficial results of the treatment.

They show that no other method is as potent in relieving inoperable cancer or in treating recurrent growth.

In conclusion, it has been demonstrated that this agent has an alterative and destructive action upon malignant tissue, producing retrograde changes that vary in their degree and intensity. These degenerative and destructive effects may be so great that, in large subcutaneous malignant growths of low vitality, such a rapid destruction may take place as to flood the system with toxins and result in a fatal auto-intoxication or septicemia.

The harmful effects, noted by some observers as "a stimulation of the growth of the tumor," were probably due to this cause or to a real stimulation by too weak a dosage.

When the dosage shall be determined for the various manifestations of malignant disease, this agent will undoubtedly prove to be one of the most potent. Until then it must follow operative intervention as a supplement to that method. Operation removing the macroscopical malignant tumor, the subsequent Röntgen treatment dealing with the microscopical residual disease that has escaped the knife. Such a combinatoin is both curative and prophylactic. It destroys any foci that remain, and prevents recurrence. It gives the patient the benefit of the two most potent methods of combating malignant disease.

As a primary method of treatment it has no place, except when operation is contra-indicated or when more cosmetic results can be produced, in cases in which life is not threatened by delay, or in which the disease is already inoperable.

This agent must be employed with as great care as any other possessing such marked alterative properties. The harmful effects must be noted and guarded against by adapting the dosage to the individual patient and watching with care the systemic effects. Stimulation of the disease is the result of too weak a dose, auto-intoxication by the rapid destruction of large areas by too large a dose.

ACUTE URETHRITIS.

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Acute specific urethritis is a severe infectious inflammation of the mucous membrane lining the urethra and characterized by the exudation of serum, emigration of white bloodcells, the growth of a pathogenic micro-organism, the gonococcus, and the production of an irritating poisonous toxin, the gonotoxin. It has a regular period of incubation, usually three to six days, sometimes (it is alleged) as short as 24 hours or as long as 30 days. The gonococcus, the causative factor, is a diplococcus, consisting of two hemispheres which are convex on their outer surfaces and straight or slightly concave on their inner or opposed surfaces. They are found, during the first few days, free and on the epithelial cells, and after that mostly within the puscells. When the gonococcus is deposited on the mucous membrane of the urethra, it elaborates its toxin, which, acting as a powerful local irritant, causes hyperemia, osmosis of serum and emigration of white bloodcells. The phagocytic action of the white bloodcell is inhibited by the toxin. At the same time this toxin, by the laws of osmosis, finds its way into the blood, causing more or less malaise and fever, according to the amount absorbed and the resistance of the individual infected. This inhibitory action on the phagocytes allows, in many instances, the invasion of the system by the gonococcus and other germs, resulting in inflammations of the joints, tendons, heart and other organs. The gonococcus does not produce inflammation of the mucous membranes of the lower animals, as demonstrated by the failure attending all efforts at inoculation in that direction. Its toxin, however, produces poisonous symptoms and death when injected into some animals. In examining for the gonococcus, the suspected pus is thinly smeared over a clean slide and allowed to dry in the air, then passed, film side up, through an alcohol or Bunsen flame to fix it, then it is stained with a few drops of a saturated solution of gentian-violet, which is allowed to remain on for two minutes, when the superfluous dye is absorbed by blotting-paper; next several drops of Gram's solution are deposited on the slide and allowed to remain on for two minutes, when the superfluous solution is absorbed by blotting-paper. The slide is next immersed in pure alcohol until it appears colorless to the naked eye. It is then restained with Bismarck brown, which stain the gonococcus will take up while the other germs retain the color of the Gram's solution. While this method, known as the "decolorization by the Gram's solution process," is a pretty sure test for the presence or absence of the gonococcus, there are a few other diplococci which react in the same way and which, morphologically, are identical with the gonococcus, notably the diplococcus intracellularis meningitidis of Weichselbaum, which, furthermore, has the same culture peculiarities, and the diplococcus mentioned by Richardson, which is in almost every way indistinguishable from the gonococcus.

Acute nonspecific urethritis is an inflammation similar to specific urethritis, but without any regular period of incubation, not so severe and caused by germs other than the gonococcus, by alcoholic or venereal excesses, by chemical irritants, by traumatism or by the passage of unclean instruments into the urethra. Under the head of nonspecific urethritis, due to germs other than the gonococcus, would be included those cases of relapsing urethritis in which alcoholic or venereal excesses act as excitants, causing exacerbations of chronic low-grade inflammations of the urethra in which the gonococcus formerly held forth, but is now absent and replaced by other germs, notably staphylococci and streptococci. Among the chemical irritants we would include irritating leukorrheal discharges, menstrual blood, persistent excessive phosphaturia, the use of medicaments as injections for prophylactic procedures after suspicious intercourse and as tests in exciting discharges in low-grade chronic urethritis for purposes of examination to see if the gonococcus be present; traumatism by the passage of sounds and other instruments, the introduction of foreign bodies by masturbators, etc.

The diagnosis of the location of urethral inflammation is accurately made by the four-glass test, in the following way: The anterior urethra is thoroughly washed with warm water and the washings caught in a clean glass until the flow returns clear. We then know the extent of any inflammation which may be present in the anterior portion of the canal. The patient now passes an ounce or two of urine into the second glass, which carries with it the inflammatory products from the posterior urethra, and an ounce or two into the third glass tells us the condition of the bladder. If the prostate gland be now gently massaged and the patient passes the balance of his urine into the fourth glass, the absence or presence of any inflammation in this region will be satisfactorily determined.

The prognosis of acute anterior specific urethritis is good for uncomplicated cases, and the time required is variable. Under proper treatment 2 weeks would be considered a short time. This disease seldom stops at the anterior urethra, but in nearly every case passes the triangular ligament and invades the posterior urethra, making the time, especially in primary attacks, from four to eight weeks. The prognosis of nonspecific urethritis is good, and the inflammation lasts, according to the cause, from a couple of days to two weeks.

The symptoms of anterior urethritis are variable, depending upon the severity of the inflammation and the temperament of the patient. There is generally pain, due to the mechanical distension of the swollen mucous membrane by the urinary stream, and burning, due to the acidity of the urine. In posterior urethritis we may or may not have added to the above, frequency and urgency in urination, nocturnal micturition and the passage of blood at the conclusion of urination, accompanied by more or less tenesmus. The constitutional symptoms sometimes noted are due to the absorption of the gonotoxin.

The complications of anterior urethritis are periurethritis or chordee, periurethral abscess and Cowperitis. The complications of posterior urethritis are prostatitis, prostatic abscess, seminal vesiculitis, funiculitis and epididymitis.

Treatment.—Prophylactic measures may be employed by using instillations into the fossa navicularis. Several drops of a 2% silver nitrate solution or a 20% protargol solution may be tried. Irrigations composed of a 1-5000 solution of permanganate of potash are also used. Abortive treatment is given by swabbing the urethra with a 10% solution of silver nitrate. This is generally resorted to after a slight discharge has been established and the gonococcus has been found present. Hardly a favorable report is made of its efficacy; on the contrary, most observers unite in condemning it.

The treatment of nonspecific urethritis consists generally in modification of the urine by internal remedies, and, in severe cases, local treatment in addition. The removal of such causes as stricture of the urethra, chronic folliculitis and prostatitis is, of course, essential to complete cure.

In the treatment of specific urethritis we rely mainly on local measures. However, we usually administer internal medication in the form of alkalis and antiblenorrhagics. Of the latter, the following answers very well: Citrate of potash, 10-15 gr.; oil of sandal wood, gaultheria or eucalyptus, m. 10-40, in a menstruum of syrup of acacia. When there is much pain, codeine sulphate, ¼ to 1 gr. may be exhibited.

Local treatment has for its object the mechanical removal of the gonococcus and its irritating toxin and the further destruction of as many other microorganisms as we are able to reach in this manner. It is given in the form of injections, irrigations and instillations. Of the many antiseptic hand injections, protargol, in the strength of from ½% to 2%, has been the most extensively written about. The patient injects it into the urethra and retains it for 10 or 15 minutes three times a day. The reports claim cures in as short a space of time as one week, and the disappearance of the gonococci from the discharge as early as two days. I have used protargol in the beginning of acute urethritis, and while I find that, in most cases, the free discharge ceases in from a week to ten days, and the gonococci disappear in the same time, I have never seen a cure from protargol alone used as a hand injection by the patient. While the discharge grows less and the gonococci disappear, a careful examination of the urine at each visit will show, in the great majority of cases, a posterior urethritis. Of course, when the posterior urethra is once involved, the hand injection is absolutely useless as far as a curative agent is concerned. The patient cannot treat his posterior urethritis and, consequently, must depend on internal treatment alone or pass into the surgeon's hands to receive the proper treatment. As an adjuvant to urethral irrigations by the surgeon, protargol in the hands of the patient is useful, being a powerful antiseptic, decidedly reducing the discharge, the number of gonococci and the disagreeable symptoms; but, unfortunately, not limiting the disease to the anterior urethra. Irrigations are certainly, for several reasons, a better and safer method for the treatment of acute urethritis. In the first place, the surgeon has the patient more completely under his control and knows just what the indications are and what changes are necessary from time to time. In the second place, they more efficiently remove the cause of the disease and its symptoms by acting as antiseptics, as mechanical movers of the gonococcus and its toxin, and by reason of their heat they produce an edematous condition of the mucous membrane, which is a poor soil for the propagation of the gonococcus. The symptoms are, consequently, much alleviated and complications less frequently seen. In the irrigation of the anterior urethra it is necessary to have complete and even distension of the canal, so as to allow the solution used to come into contact with all parts of the mucous membrane. The Chetwood nozzle and alternating shut-off will be found to be in this particular eminently satisfactory. It is less cumbersome than others and portable. It can be used for the posterior urethra and the bladder, as well as the anterior urethra. In irrigating the anterior urethra with this instrument, the fountain-syringe or irrigating-jar containing the solution to be used is held about two feet above the pubes. This force is sufficient to distend the anterior urethra without forcing the fluid into the posterior urethra. The nozzle is snugly fitted into the meatus and, by using the scissor-like alternating shut-off, the anterior urethra is alternately distended and emptied without taking the nozzle away. If we now wish to irrigate the posterior urethra without a catheter, the nozzle is simply held, fitted into the meatus and the reservoir is raised several feet above the pubes, usually from 4 to 6 feet, and the patient told to relax his perineal muscles as if urinating. This allows the fluid to pass the cut-off muscle much easier and the bladder to become filled.

There are two agents which, in spite of many newer and highly vaunted remedies, must still be considered best in the treatment of acute urethritis, viz., potassium permanganate, in solution of 1-10,000 to 1-4,000, and silver nitrate in the strength of from 1-10,000 to 1-6,000, the former in the early stages alone and later combined with silver nitrate, or silver nitrate alone toward the end of the trouble. About one quart is used for the anterior and the same for the posterior urethra, according to the existence or not of disease of the latter. As a rule, very gratifying results are obtained in a week or ten days. A thick purulent discharge becomes mucopurulent, if not altogether arrested. In many cases, however, when we arrive at this satisfactory stage, the progress of the case seems to be less marked and rapid. This is explained by the fact that either the potassium permanganate does not penetrate deeply enough into the tissues, or that the process has extended to the posterior urethra. When the former is the case, the addition to the permanganate solution of silver nitrate in the above-mentioned strength will often prove exceedingly gratifying. When it is due to the latter cause, irrigations of the posterior urethra are indicated.

Instillation of a 1% silver nitrate solution into the deep urethra will give, in many cases, speedy relief to the imperative frequency of urination and tenesmus in those cases in which the inflammation is of a high grade.

The points I would like to emphasize in closing are:

(1) That the malaise and, to a certain degree, the pain and burning are due to the gonotoxin, a subject in former years hardly considered, but of late receiving much attention from competent observers.

(2) That protargol as a hand injection, while powerful, and, compared to silver nitrate, a very unirritating preparation, is useful only as an adjuvant in the treatment of urethritis and does not prevent the infection of the posterior urethra. The patient, after all, must seek the constant care of the surgeon and receive irrigation treatment. This applies to all other hand injections.

A CONTRIBUTION TO THE THERAPEUTICS OF CHILDREN.

By N. G. PRICE, M. D.,
of Newark, New Jersey.

The various preparations of belladonna, as well as those of kindred drugs, hyoscyamus and stramonium, have for centuries been our sheet-anchor in many conditions in children requiring an antispasmodic, sedative or analgetic.

The belladonna preparations have, in the experience of the writer, by no means always proven satisfactory. He urges five serious objections, which detract materially from their range of usefulness. Firstly, they are uncertain in action, failing in precisely those cases in which we most urgently desire their therapeutic effects. Secondly, in pale, anemic, debilitated children, particularly those of light complexion, even minimum doses may produce alarmingly toxic symptoms, namely, erythema, dilated pupils and active delirium. Thirdly, they give rise in all cases to a disagreeable parching of the mouth and fauces, an agglutination of the tongue to the palate and consequent polydipsia. Fourthly, they clog up the bowels and bring on constipation with its train of evils. And fifthly, they disorder the digestive apparatus, interfering with the secretion of gastric juice and injuriously modifying its peptogenic properties.

Because of these defects in the belladonna group of remedies the author has for some time discarded them, employing as a substitute heroin hydrochloride.

The antispasmodic, sedative and analgetic properties of heroin in adults have already been recognized and confirmed by the best medical authorities. The drug, in fact, is already beyond the experimental stage. In pediatrics, however, it has not yet received the attention which its merits deserve. The writer feels, therefore, that his pioneer labors in this field, in which he has had abundant clinical material, may not be entirely without interest to his colleagues. He must confess that at first he employed the remedy with timidity bordering on scepticism, being unassisted by any literature on the subject. At present he considers heroin hydrochloride the most powerful weapon in his armamentarium directed against catarrhal and spasmodic conditions.

The indications for the use of heroin in the treatment of children are numerous. In acute bronchitis, when the cough is still harsh and dry, this remedy allays the respiratory irritation, checks the painful cough, relieves the congestion and restores the airtubes to their normal condition. In the first stage of bronchitis the writer gives 1-240 grain of this drug, every two hours, to a child one year old, and increases the dose in accordance with the age and the exigencies of the case. When moist rales have already succeeded the sibilant rales of the first stage, he combines with heroin ¼ minim of fluid extract of ipecac in a one-year-old infant to prevent clogging of the secretions.

In whooping cough this remedy has given most convincing proof of its antispasmodic properties. It diminishes both the frequency and the violence of the paroxysms and insures undisturbed slumber. It apparently shortens the duration of the disease and seems to prevent the pulmonary complications which so frequently occur in the course of this malady. This result is brought about because heroin abates the violence of the spasmodic cough, thus minimizing the mechanical injuries to the delicate air-vesicles—injuries which play the most important part in the formation of a nest for pathogenic bacteria.

False croup, the boisterous disease in which the stridulous, jerky breathing and the harsh, barking cough bring terror to the heart of many a mother, and in which the physician often mumbles unhallowed words about emetics in general and ipecac in particular. This condition yields submissively to the antispasmodic influence of heroin hydrochloride. Here this remedy works most effectively if administered by hypodermic injection. In the course of ten to fifteen minutes the spasm relaxes, the breathing is quieted, and the child is lulled into a peaceful slumber. No toxic symptoms have followed the hypodermic administration of this drug, nor were there any abscess formations at the point of penetration. The dose should, of course, be less than in its usual method of administration.

We have had ample opportunity to employ heroin in epilepsy and convulsions arising particularly from difficult dentition and intestinal irritation; the patients were very favorably influenced. Heroin has a markedly sedative effect upon the brain and spinal cord; it soothes irritations of the nervous centers, diminishes congestion and controls spasm. In convulsions, just as in false croup, we have employed the hydrochloride hypodermically, with excellent results. The almost instantaneous control of the seizure in some cases is remarkable. A hot mustard bath enhances the activity of the drug, bringing about a state of quiescence and repose more readily.

Incontinence of urine, the result of a hypersensitive state of the neck of the bladder, responds more readily to heroin hydrochloride than to the usual combination of belladonna and nux vomica. The urine must, however, be rendered bland and unirritating; if highly acid, the alkaline preparation of sodium or ammonium should be given, and, if ammoniacal, benzoic acid. In addition to these remedies the tilting of the foot of the bed or the cradle upward three or four inches will often be found serviceable. This procedure shifts the center of gravity, raises the neck of the bladder, thus diminishing the pressure upon it and the consequent irritability.

In the beginning of dry pleurisy this remedy has succeeded in checking the pain and in rendering the respirations quieter and deeper. It has in a few cases apparently nipped a pleurisy with effusion in the bud, retarding its progress and bringing about a *restituto ad integrum.*

Diarrhea, the wholesale murderer of infants, is beneficially influenced by heroin. Necessarily the ingestion of food or the frequency of nursing must be primarily regulated, and the bowels must be unloaded of indigestible material before this remedy is administered; otherwise harm will be done through toxic absorption. Irrigation of the bowels with warmed olive oil will occasionally be necessary in conjunction with heroin. The uniformly favorable results we have had with this remedy have rendered it our staple diarrheal preparation. Heroin controls excessive peristalsis, diminishes excessive intestinal discharges and reduces the congestion of the intestinal mucous membrane. It also has apparently bactericidal power over the germs infesting the intestines, thus answering to all requirements of an ideal antidiarrheal agent.

We have further tested the antispasmodic qualities of heroin hydrochloride in chorea. Combined with Fowler's solution and general hygienic measures we have obtained better results than with the bromides, which we have hitherto employed. The patients have shown only good results, though this remedy has been sometimes in constant use over a month. If cardiac symptoms are present, it is best to combine heroin with digitalis, for heroin seems to have no effect upon such symptoms. It seems to have no deleterious influence upon the intellect; the children remained bright and cheerful and as acutely frisky as little ones usually are. We have, however, not yet had sufficient opportunity to speak authoritatively about its efficiency in chorea; we can merely affirm that in those cases in which we employed heroin we had the results mentioned. Perhaps, others can enlighten us further by their experience with heroin in this disease.

A few cases of asthma, in which, because of the inefficiency of the standard remedies, the writer has employed heroin hydrochloride, have been materially benefited. This drug did not prevent the recurrence of the attack, but it shortened the individual seizures and placed the patients in a more comfortable condition. The respiration became quieter and less gasping, and the bronchial irritation accompanying this disease was allayed.

To illustrate the action of heroin as an antispasmodic, sedative and analgetic in diseases of children, we deem it appropriate to cite a few characteristic cases.

Case I. B. K., a baby girl, 14 months old, had been ill for several days and treated by the mother with domestic remedies. I was called in because the child had convulsions. The baby was poorly nourished and presented signs of rachitis; it was bottle-fed and suffered from enteritis, the stools being frequent, watery, foul-smelling and contained cheesy clumps. I washed out the rectum, ordered a mustard bath and gave bromides and chloral per rectum. The convulsions did not abate; the movements continued. An hour after my arrival I resorted to heroin hydrochloride hypodermically, 1/240 grain. The movements then ceased, the child being covered with perspiration. I prescribed

1/240 grain of heroin every two hours and gave directions for reguating the nourishment. The child had a temperature of 103° F. The next day the patient was improved; the temperature 101° F; stools less frequent, less malodorous and of hard consistency. No return of convulsions. There was progressive improvement, and recovery was complete in four days. The above were the only remedies employed, except cod-liver oil.

Case II. I was consulted by Mrs. A. B., whose five children, ranging from one to ten years, were affected with whooping cough. The attacks in all were well marked and frequent. All of them, according to the history, were infected through the same source. I gave an expectorant mixture combined with tincture of belladonna. The only result was diminution of appetite, disordered digestion and parched throat, the attacks being just as frequent and as violent as before. Heroin was now prescribed in doses ranging from 1/240 grain for the youngest to 1/48 grain for the eldest. Immediate improvement followed in every one of them; they slept well, the attacks were less violent and harassing and not so numerous. In two weeks the children made a perfect recovery. Apparently the attacks were shortened several weeks. They had received no other remedy than heroin hydrochloride, and pure fresh air.

Case III. A. O., a boy of twelve, suffering from epilepsy, caused, judging from the history, by masturbation, a practice he had acquired at school three years before. He had four to six attacks daily when he came under observation. They were typical attacks terminating in coma, lasting from half an hour to an hour. On examination I found a long prepuce, adherent to the glans, with a small perforation. I advised circumcision, but the mother is a great believer in the infallibility of Nature, and she would not consent at the time. I, therefore, ordered heroin 1/48 grain every three hours and delivered a lecture upon the dangers and viciousness of masturbation. The seizures in a few days became less frequent. In two weeks the attacks were apparently under complete control. Three days after there was a total relapse. He had, in spite of my orders, discontinued the medicine, because he "wasn't sick any more." He had also forgotten or disregarded my lecture, having again resorted to his old habit, self-abuse. I circumcized the boy and continued with heroin. He is materially improved, has had no attacks for two weeks, and recovery is in sight. The patient is still under observation.

Case IV. R. L., a girl, poorly nourished, 8 years of age, suffering from chorea of a well-marked type; movements of both hands twitching of facial muscles; rolling of the eyeballs. There was present a mitral regurgitant murmur which was quite distinct. She complained of headache and vertigo. The disease had been caused, it seems, by a fall from a considerable height, and it lasted two months before the case came into my hands. I gave bromides and chloral, but in a few days the patient became covered with a bromide rash. Heroin hydrochloride, 1/96 grain and tincture of digitalis, 3 minims, were then administered every three hours. The case progressed favorably the choreic movements became less and less pronounced, the headache and dizziness disappeared, the child slept well and had a good appetite. Because of a sudden change in the pulse I employed tincture of strophanthus in place of digitalis, but continued heroin without interruption. In four weeks the disease was completely under control. In addtion to the above remedies we had employed Fowler's solution and insisted upon wholesome nourishing diet and a quiet out-door life.

Case V. F. D., a boy, 5 years old, of light complexion with flaxen hair. Body robust and dimpled. The boy wet himself both day and night and had to urinate as soon as the desire seized him. If he could not find a suitable receptacle at once, he was apt to void his urine upon any object or person in his immediate vicinity. I insisted upon abstinence from fluids as much as possible, especially toward evening, and ordered heroin hydrochloride, 1/120 grain and tincture of nux vomica one minim per dose every three hours. After two weeks' treatment the boy was able to hold his urine and no longer soiled the bed-clothes. The remedy was continued one week longer to guard against a relapse. I omitted to state that the urine had shown no abnormality in specific gravity, reaction or constituents. The heroin apparently relieved the hypersensibility of the prostatic urethra, and the nux vomica invigorated the cut-off muscle.

Case VI. I was hastily summoned at 1 A. M. to the house of an old patient and found an infant girl, six months old, in the throes of catarrhal croup. There were present barking, frequent cough, stridulous, whistling breathing, and the other accompaniments of this condition. Pulse 150; temperature 102° F. The child had a dry cough for several days. I ordered hot applications over the larynx, inhalation of steam and administered syrup of ipecac till emesis was brought on. The symptoms, however, were not at all ameliorated, and the spasm was not relaxed after an hour's stay at the bedside. The child became more and more exhausted. Resort was had to heroin hydrochloride, 1/240 grain, hypodermically. The spasm now yielded almost instantaneously, the breathing became quieter, the cough lost its barking quality, and the child soon fell into a peaceful slumber. I left orders that a solution containing 1/240 grain of heroin be given every three hours. The next night there was no recurrence of the paroxysms, and the child made an uneventful recovery.

These are but a few of the numerous cases in which heroin hydrochloride has demonstrated its efficiency. But, since "brevity is the soul of wit," the writer does not desire to burden the readers of this article with any further detailed account of his experiences.

As the result of my observations I, however, feel justified in drawing the following general conclusions concerning heroin in the treatment of diseases of children:

1. Heroin is a nonirritating remedy, the only untoward symptom I have ever met with being vertigo of a transitory character. Its dose should be limited to that ordinarily given by me, namely, 1-240 grain, to a child one year old.
2. It possesses antispasmodic properties more potent than the bromides and the belladonna group of remedies.
3. It is a sedative to all mucous membranes, but particularly to the mucous membrane of the respiratory and genito-urinary apparatus. It soothes irritation and allays congestion.
4. It diminishes peristaltic hyperactivity and hypersecretion of the intestine.
5. Heroin is rapidly absorbed by the rectal mucous membrane when previously washed free from fecal accumulations, exerting in this manner of administration its usual influence. The dose per rectum should be double the dose per mouth.
6. This drug is completely oxidized in the system and produces no cumulative symptoms.
7. Heroin hydrochloride is preferable to the alkaloid itself, because it is readily soluble in all vehicles and more rapidly absorbed. Heroin is not adapted for mixtures or for hypodermic use because of its insolubility.
8. Heroin hydrochloride is compatible with the expectorants and with the other antispasmodic, analgetic and sedative remedies.

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NOTES ON X-RAY THERAPY AND A SCREEN FOR THE PROTECTION OF THE PATIENT.

By G. E. PFAHLER, M. D.,

of Philadelphia.

One of the most important steps in advance in X-ray therapy is the treatment of tuberculosis. Early in the history of the X-rays, physicians had noted relief from pain and to a degree relief from the other symptoms in tuberculosis of the joints, in cases which had been examined repeatedly by means of the rays. Definite reports, however, have been slow in coming forth. It is with pleasure, therefore, that we note the encouraging results reported by Dr. John B. Murphy.

He has treated two cases of tuberculosis of the knee-joint, involving the synovial membrane. They were injected without producing the desired effect. The X-rays were used, and one patient, in whom the effusion had existed for nine months, was discharged from the hospital twenty-one days after admission without a particle of effusion or the slightest diminution in the range of motion of the affected joint. He also reports three cases of tuberculosis of the spine treated with the X-rays and followed by the most striking and gratifying results.

The first case was one in which the patient had developed paraplegia following overexertion. A hypodermic needle was inserted into the body of the vertebra and a drop of pus and tubercular debris removed. The diagnosis was confirmed by Dr. John B. Deaver, of Philadelphia. The patient was subjected to X-ray treatment. The first two days after its application his paraplegia continued to get worse. After the third application of the rays his pain disappeared, after 25 applications his paraplegia had entirely disappeared, and he was able to go home. He was able to go hunting and, incidentally, shot off his foot.

The second case was one in which the author had performed laminectomy a year before. The patient got worse after the operation. A number of fragments of bone discharged in the year that had elapsed. Twenty-one exposures closed the sinus completely. It did not help his paraplegia, nor was it expected to do so.

The third case was that of a paraplegic who was taking one-third of a grain of morphine daily for the relief of pain. Two exposures relieved the pain. After twenty-three exposures he was walking about with crutches. Dr. Murphy also reports remarkable improvement in the cellular elements of a very large carcinoma of the breast, treated by Dr. Pusey. Microscopical study of the tumor after 26 applications showed changes of 2 kinds; first, an increase in the connective tissue, and second, a decrease in the cellular elements of the carcinoma. There appeared to be no strangulation of the cells by the newly formed connective tissue. The cancer cells showed vacuolization.

In deep-seated carcinoma of the intestinal tract he had noticed no pronounced effect.

If tuberculosis of the vertebræ can be cured by the X-rays, it is only a step farther to cure tuberculosis of the lung. One patient with well-marked tuberculosis of the lung which I have under treatment at the present time is improving. His cough is less and he is gaining in weight. This improvement, however, must only be taken for what it is worth, for time alone will decide its true value. I am making the applications three times a week and direct the rays from different points toward the affected area in the lung. The applications last 10 minutes, the tube is 15 inches from the body, a vacuum corresponding to an air spark of about 4 inches, and about 5 amperes of current are used. I have treated one other patient afflicted with tuberculosis of the lung with apparent benefit.

Hazleton has been treating phthisis with the X-rays. He makes his applications an hour long, but gives no other details of the treatment nor the results.

Lawrence reports a case of tuberculous rhinitis which is improving under the effects of the X-rays. Many cases of lupus have been reported cured, by various authors.

Sequeira reports 80 cases of rodent ulcer treated with the X-rays. Thirty-four were healed and the others were still under treatment. Some patients have had small recurrences which were easily controlled. Others have remained well 2 years. By microscopical study he has determined that the rays have 2 definite effects. First, the epithelial cells are destroyed, the nucleus and protoplasm undergoing lysis. In some cells a definite fatty change was seen. Second, there is stimulation of the connective tissue elements, leading to the filling up of cavities and to the formation of a sound, healthy tissue.

Hall-Edwards says 9 out of 10 cases of rodent ulcer can be cured within the space of a few weeks without pain or inconvenience, and that the results are more certain, quicker and less painful than by the light-treatment. He exposes each or every other day at a distance of from 3 to 8 inches until a well-marked dermatitis is visible around the ulcer. In ordinary cases he then considers the work done. Cases which fail are those in which bone or cartilage is laid bare.

The reports of the use of the X-rays in deep-seated carcinomata and sarcomata are very encouraging, but not enough cures have yet been reported to enable us to draw any definite conclusions.

Morton thinks the treatment has a curative effect in internal cancer, and that in the X-rays we possess more nearly a solution of the problem of curing carcinoma than by any other method of treatment.

Good results in deep-seated malignant growths have been reported by Phelps, Burdick, Pennington, Skinner and Gibson at the annual meeting of the Röntgen Ray Society, at Chicago.

Turner reports a recurrent scirrhus of the mamma which had been operated upon 4 times and which disappeared after 8 exposures of 5 minutes each. He also reports 8 other cases, four of the mamma, one of the larynx, one of the neck and one of the glands of the groin with marked and substantial benefit.

Delevan has treated very advanced carcinoma of the larynx with some improvement. The patient died of nephritis after 2 weeks, in which time 18 applications had been made.

At the present time we are working with the most advanced cases, those in which all other treatment is of no avail, and considering this condition we have reason to be encouraged from every good result reported.

It is to be regretted that more details of the technique used in these treatments are not given. As a rule, however, a high vacuum tube at a distance of about 8 inches, for 10 minutes 3 times a week, will give good results.

Edwards has used the X-rays in a number of cases of tabes with most excellent results. In several cases there has been a return of the lost knee-jerk with marked diminution of the ataxic symptoms. He uses the high tube over the lower dorsal and lumbar regions, making the exposures in the usual way.

With all these encouraging results we must ever keep in mind the untoward results that may follow the effects of the X-rays. The case of death possibly due to the X-rays reported by Rubel is, I think, far-fetched, since the symptoms with which the patient died were only an aggravation of the symptoms for which he first sought relief. There being no autopsy, the case is very inconclusive. We do have severe burns, however, of which Rubel's case is a type. Besides the various degrees of burns, we have added a number of cases of telangiectasis which seem to follow the burns.

Weisner reports a case of X-ray dermatitis which showed a round intact patch in the center of the extensive dermatitis. This, with other features of the case, leads him to believe that the dermatitis is trophoneurotic in origin, and that the X-rays penetrate the skin and cause some chemical irritation in the molecules surrounding or in the nerve terminals.

Rudis-Jicinski recommends that exposures be made 5 minutes at first and after a week 10 minutes. If, after 2 weeks, no reaction has occurred, there is no idiosyncrasy and the patient may be irradiated every day until a reaction occurs. At first the distance should be 6 inches and later less. If itching of the skin occurs, stop the treatment for a while. If the whole area cannot be treated at once, begin at the edges.

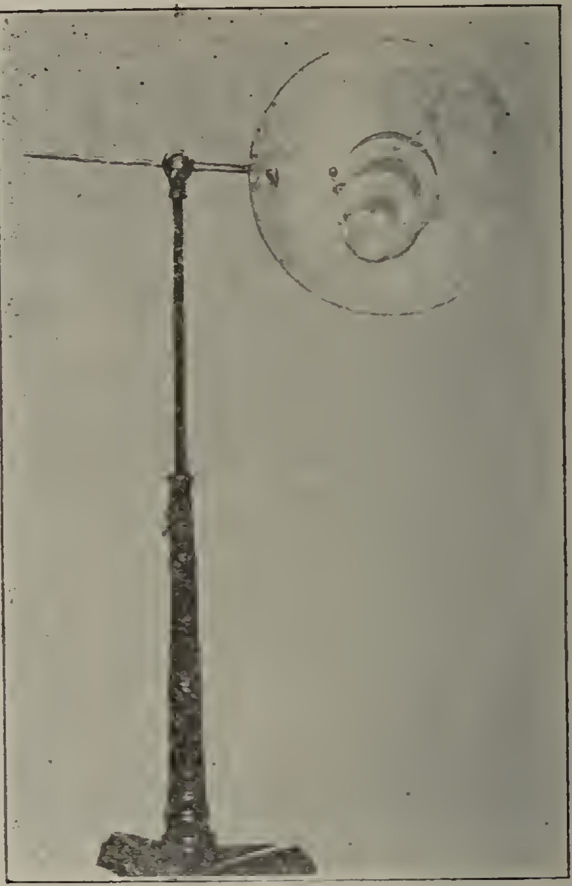
Brokaw notices a susceptibility to the rays in cases of chronic rheumatism and in elderly subjects. I have not observed any unusual susceptibility in this class of patients.

Freund, of Vienna, has made some interesting observations as to the physical properties and the physiological action of the X-rays. He says that all radiant phenomena have the same physical basis, and that they possess chemical, fluorescent and electrical properties. The effect ranges from mere stimulation to actual destruction of the tissues. He believes that the effects of the X-ray treatment are due to the X-rays themselves and that, for the removal of hair, ringworm, favus, sycosis, hypertrichosis, the rays are much more effective than the light-treatment, also that it is equal to the Finsen method in the treatment of lupus.

Grubbe says that the treatment lessens hemorrhage and discharge, and prolongs life. Postoperative treatment of cancer brings about more cures than any other method.

Both Marsh and Dunham have noted that when leukocytes diminish during the course of treatment the prognosis is bad. Dunham says that the leukocyte which should be watched is a large mononuclear cell which stains faintly. When this leukocyte diminishes he feels encouraged, especially if this decrease is associated with an increase in the polymorphonuclear variety.

AN ADJUSTABLE SCREEN.



The need of an adjustable X-ray sceen for the protection of the patient during the applications has been felt since the rays were first used for therapeutic purposes. Sheet lead, lead-foil, etc. have been used to cover the patient, but this has the objection of weight. It also makes the patient very warm, which is a decided objection in the summer time or in a warm room. These sheets, coming in contact with the patient, become soiled and, therefore, objectionable. To keep enough sheets to cover the greater part of the body in each case soon requires a special room for storage.

To overcome these objections I have constructed a very simple device of an ordinary photographic head-rest. The head-clamp is removed and with the thumb-screw a circular board, 18 inches in diameter, is attached, as seen in the cut. This board is covered with sheet-lead. An opening is made, 5 inches in diameter, and over this 3 circles are arranged which make an adjustable diaphragm, as shown in the cut. When this is placed near the tube, practically all the divergent rays are cut off. The opening in the center can be selected to suit the part to be treated. A small sheet of lead-foil can then be placed about the growth to fit it more exactly, and thus obstruct the stray rays. The cone of light can also be regulated by changing the distance of the tube from the screen and the distance of the screen from the patient.

The screen can be used in the vertical position to treat the patients in the sitting posture or can be turned horizontally to treat the patient in the recumbent position. I prefer the latter method because the relative positions are less likely to be disturbed.

Besides serving as an opaque screen, it serves as an electric conductor which seems to be desirable with some workers. I trust that this brief suggestion will be of value to some and thus justify my report.

REFERENCES.

Murphy. Electro-Therapeutic and X-Ray Era, Dec., 1902.
Hazleton. Lancet, Vol. I, 1902, p. 121.
Sequeira. British Medical Journal, Vol. II, 1902, p. 1317.
Dodd. Boston Med. and Surg. Jour., Oct., 1902.
Shattock. British Med. Jour., Vol. II, 1902, p. 1769.
Edwards. American Electro-Therapeutic Era, Dec., 1902.
Lawrence. Lancet, Vol. I, 1902.
Hall-Edwards. Archives of the Roentgen Ray, Vol. VII, 1902.
Morton. British Med. Jour., Oct. 25. 1902.
Cleaves. Medical Record, (N. Y.) Dec., 1902.
Delevan. Medical Record, (N. Y.) Oct., 1902.
Duncan. Interstate Med. Jour., Oct., 1902.
Turner. Brit. Med. Jour., Vol. II, 1902. p. 976.
Weisner. Muenchener med. Wochenschrift, June 24. 1902.
Rudis-Jicinski. New York Med. Jour., Nov. 15, 1902.
Rubel. Jour. American Med. Association, Vol. II, 1902, p. 1321.
Brokaw. New York Med. Jour., 1902.
Freund. Brit. Med. Jour., Vol. II, 1902, p. 1316.
Grubbe. Medical Record. (N. Y.) Nov. 18, 1902.
Marsh. Electro-Therapeutic Era. Dec., 1902.

DIE THERAPIE DER GEGENWART.

January, 1903.

1. Oxygn Therapy. FRIEDRICH KRAUS.
2. Normal Salt Solution Injections. WILHELM ERCKLENTZ.
3. Chinaphenin. CARL von NOORDEN.
4. The Local Treatment of Surgical Infections. E. LEXER.
5. The Pathology and Treatment of Knee Joint Affections. A. HOFFA.
6. Valvular Heart Disease as a Complication of Pregnancy. J. VEIT.
7. Calomel Injections in the Treatment of Syphilis. E. LESSER.

1.—After a full descriptive review of the experiments and opinions of earlier investigators, in which Kraus gives minute historical details, he adds the experience of the nineteenth century upon **the treatment of pneumonia**, etc., **with oxygen**. There seems no doubt that dyspnea with pneumonia improves at once when oxygen inhalations are begun, yet this influence is only temporary. It is only recently that the process of oxidation in the cells of the organism has been thoroughly understood. When oxygen is inspired, the blood and the body juices become richer in oxygen than before. The only changes noted are slight slowing of respiration, which becomes deeper. Exertion becomes easier, and one recovers in a shorter time. Kraus reports recent experiments; but, as a rule, he has not seen any permanent improvement follow the use of oxygen in pneumonia, bronchitis with marked dyspnea, etc. In tuberculosis it is also **useless**. Some good is often noted with cardiac insufficiency and dilatation, but none with cyanosis. While oxygen is especially valuable in carbon dioxide poisoning, it is not worth much in the coma following morphine poisoning. In anemia, leukemia, diabetes and other constitutional diseases it is **worthless**. Kraus admits **but one true indication for the use of oxygen, stenosis of the respiratory passages**. [M. O.]

2.—**Normal salt solution injections, both intravenous and subcutaneous**, were first used after hemorrhage, then for treating the intoxications and infectious diseases. Following these injections the general condition of the patient improves, the heart's action becomes quieter, the erythrocytes multiply more rapidly, and arterial pressure increases. Most important are the facts that the circulating poison is diminished and rapidly eliminated, especially through the kidneys, by increasing diuresis. In uremia, even though diuresis does not follow, the effect of the injection is also good. By experiment Ercklentz found that the effect was excellent in various forms of poisoning. Clinical experience confirmed these results. In septic conditions, uremia and severe anemia, the results in cases reported were also excellent. Here, too, the effect is due to diluting the circulating poison. The technique of the injections is given. [M. O.]

3.—After describing 3 new quinine preparations, aristochinin, bromochinol and **chinaphenin**, von Noorden reports the results of his experiments with the last, the ethyl-ether of chinin-carbolic acid, closely related to euchinin, which von Noorden considers of value in malaria. Chinaphenin is a white, tasteless powder, almost insoluble in water, but easily soluble in alcohol. It has given successful results in **pertussis**, up to 4 grains 3 times a day. It is of value as an **antipyretic**, in **neuralgia** and **malaria**. Several case-histories are given to show its good effects. [M. O.]

4.—For local treatment Lexer divides **surgical infections into 3 groups**. In the first group there is a certain amount of poison brought to the wound, a purely toxic wound infection, as in the bite of a venomous snake. In these cases absorption of the poison must be prevented by **applying a tight bandage** above the wound, followed by cauterization, excision or incision. In the second group there are bacterial infections which may lead to general disease by metastases, multiplication of the bacteria in the blood or by total absorption of their poison, as in **anthrax** and other septic conditions. Here general infection must be prevented, yet no operation is indicated. Applications to the carbuncle, with fixation and internal treatment, suffice. Operative interference may cause general infection; yet, when abscess forms, it should be thoroughly evacuated. A dry dressing is advised; in some cases iodoform gauze and pure carbolic acid are good. In all but very slight conditions moist dressings are contra-indicated. In the third group Lexer places infections which rapidly cause general infection, causing death quickly, as **tetanus, hydrophobia and glanders**. Here local treatment is of little use; antitoxin is the best treatment. If abscesses occur, they should be incised and drained. He concludes that the tissues should be spared as much as possible in the local treatment of surgical infections. [M. O.]

5.—Many patients complain of **pains in the knee joint**. On examination **arthritic muscular atrophy, internal derangement of the knee joint or solitary lipoma** is found. Arthritic muscular atrophy is often marked, from inactivity of the muscles, generally the quadriceps, following after some previous joint affection. The pain is due to the relaxed joint capsule being caught between the femur and the patella. This is reflex, and massage and gymnastics are of service in the treatment. In internal derangement of the knee joint one meniscus (somtimes both) of the joint is torn or luxated. The condition follows indirect violence or some accident. On examination a very sensitive spot can be felt. In some respects this condition resembles a joint-mouse. In the treatment extripation of the torn bit of cartilage is advised. The third condition, a subsynovial solitary lipoma, is generally found on the inner surface of the joint. Here the pain is sudden: the objective finding cannot be mistaken, for it is typical. Here, too, extirpation is advised. The symptoms of these 3 conditions are frequently very similar. [M. O.]

6.—Veit reports the case of a woman with **mitral insufficiency and stenosis** and a **contracted pelvis**, complicated **with pregnancy**. Her 2 previous children were born after slow labor, but without difficulty. Parturition is always a serious proceeding in such a woman. He reported several cases to show the fatal results which may occur suddenly. Diet and hygiene are important during pregnancy. If loss of compensation persists for any time, abortion should be induced soon. For this may at least save the mother. But in most cases ordinary treatment of the heart condition suffices, and parturition occurs normally. If severe symptoms appear, abortion can still be induced. Care is always necessary during and after the birth of the child, even during the puerperium. At the time of labor, small doses of morphine and as rapid delivery as is possible, with the aid of forceps if necessary, are best. The after-birth should not be hurried; Veit simply places a weight on the woman's abdomen. He concludes that **pregnancy in a woman with valvular heart disease is only a complication** which necessitates care and exact observation, so that, if grave symptoms appear, pregnancy may be ended at once. [M. O.]

7.—**Injections of calomel in the treatment of syphilis** were first given in 1864. In 1883 this method was attempted again. Even Fournier, in 1896, advised it for severe phagedenic chancre of the tongue, malignant syphilis, tertiary sclerotic glossitis, severe laryngitis and obstinate tongue affections. It has also been used in iritis, galloping syphilis, etc., with varying success. The dose may reach 1½ grains. But these injections cause unpleasant effects, fever, erythema, stomatitis, nephritis, enteritis and, finally, all the symptoms of mercurial poisoning. Lesser concludes **that this method** of administering mercury in syphilis **is dangerous** and is only indicated in exceptional cases, in which all other less severe methods have failed. [M. O.]

SURGERY.

Tendon Transplantation for Flatfoot.—The treatment of flatfoot by the transposition of tendons has hitherto been employed by shortening the tibialis posticus (Hoffa, Franche), sewing of the tibialis anticus to the under surface of the first metatarsal bone (Franche), and by transplantation of a part of the tendo Achillis to the tendon of the tibialis posticus (Nicoladoni). Müller (*Centralblatt für Chirurgie*, Jan. 10, 1903) endorses the principle of tendon transplantation for the correction of this deformity and describes his technique, which consists in transfering the tendon of the tibialis anticus to the scaphoid bone. He has performed the operation 13 times on 7 patients, and is well satisfied with the results. A curved incision is made from the inner side of the ankle reaching as far as the base of the first metatarsal. The insertion of the tibialis anticus is searched for and the tendon severed close to the bone. A canal, the caliber of which is about the thickness of a lead pencil, is drilled through the scaphoid bone, and the tendon of the tibialis anticus is pulled through this canal by means of a thread. The arch of the foot is then restored by pressure, while strong traction is applied to the anterior tibial tendon, the end of which is reflected onto the surface of the scaphoid and sutured. A plaster-of-Paris bandage is applied for 4 weeks, at the end of which time and passive motion and massage are applied for 4 weeks. The arch of the foot is supported by a sole until the muscles have become sufficiently strong. Before beginning the operation the tendo Achillis is cut. In some cases section of the tendo Achillis is all that is required.

Wiring and Electrolysis in the Treatment of Aneurysm.—Hare (*Therapeutic Gazette*, Jan. 15, 1903) reports a case of aneurysm in which he obtained temporary improvement by wiring and electrolysis; the patient dying later as a result of rupture of the sac. From an experience of 8 operations of this character, he concludes that electrolysis in properly selected cases of aneurysm is a valuable measure and prolongs life. The operation itself is neither dangerous nor painful. The failure of permanent cure dose not depend so much upon the failure of the operation to limit the disease locally as to the fact that the adjacent parts of the bloodvessel are weak, and, when the bulging area is solidified by the clot, these lateral areas may later on give way. Even in these cases life is prolonged by the closing of the weakest area, and it is not to be forgotten that in at least one case (Stewart's) life was prolonged 3 years, death taking place from an alcoholic debauch.

Simplification of Suture in Applying Murphy Button.—Rehm (*Centralblatt für Chirurgie*, November 29, 1902) has experimented on dogs with a method of suturing the Murphy button in place, which materially shortens the time. One part of the button is inserted in the incision in the intestines and pressed close against one end of the wound. The incision below is drawn together by single buttonhole suture close to the button, which is thus held firmly. If the incision is unduly long 2 or more sutures may be required, but if just the right length, one is sufficient. In an end-to-end anastomosis the button is inserted in the small incision and a buttonhole suture—a single stitch—taken each side of the button. In the experiments on two dogs the button was passed after 4 days, and, when dissected, the bowel was found in perfect anastomosis with a smooth cicatrix.

Gastroduodenostomy.—Kocher (*Centralblatt für Chirurgie*, Jan. 10, 1903) describes his method of gastroduodenostomy for stenosis of the pylorus. An oblique incision is made parallel to and 2 fingerbreadths below the right costal margin. The liver is drawn up, the stomach pushed to the right and the colon displaced downward. The vertical part of the duodenum is isolated, and an incision is then made through the posterior parietal peritoneum 3 cm. or 4 cm. to its right. Two fingers are now inserted beneath the parietal peritoneum, and the duodenum separated from the vertebra, vena cava and eventually the aorta, so that the duodenum may be turned over and anastomosed with the stomach. By this method the descending portion, the inferior flexure and a good portion of the inferior duodenum are made so movable that the anastomosis may be conducted outside of the abdomen. The operation has been performed 5 times with good results.

An Intra-abdominal Operation for the Treatment of Intractable Cystocele.—Chiaventome (*Annal.d.Mal.d.Org.Gen-Urin.*, May, 1902) reports a case of large cystocele associated with uterine prolapse which he treated in the following manner: With the patient in the Trendelenburg position, a median abdominal incision was made and the space between the bladder and uterus exposed by displacing the uterus backward. The peritoneum in this region was incised with a knife and the bladder separated from the uterus by blunt dissection. The bladder was then drawn upward in order to effect reduction of the cystocele, and fastened to the anterior surface of the uterus with sutures, care being taken to avoid the ureters. Finally the uterus was sutured to the anterior abdominal wall. The result was highly satisfactory.

The Subcutaneous Injection of Paraffin for the Correction of Deformity.—Lynch (*Virginia Med. Semi-Monthly*, Nov. 7, 1902) employs soft paraffin or white vaseline for subcutaneous injection in the treatment of sunken noses, etc. The melting-point of the injected material should be above 99° and below 104° F. If the paraffin be too soft it will be absorbed by the lymphatic vessels and if too hard sloughing of the tissues may ensue. After sterilization of the operative field, of the paraffin and of the instruments, the part to be operated upon is anesthetized by infiltration with a 4% cocaine solution. The paraffin is melted and drawn into the syringe where it is allowed to cool until it emerges in a worm-like mass. The needle is then introduced into the part to be filled out, and the paraffin is slowly injected, the mass being moulded with the fingers to the desired shape. All the dressing that is required is a small patch of collodion over the needle puncture. After a time the paraffin becomes encapsulated and assumes the consistency of cartilage. One injection is usually enough, although in exceptional cases it may be necessary again to inject a few drops of paraffin.

The Operative Treatment of Cancer of the Stomach.—Mayo (*St. Paul. Med. Jour.*, December, 1902) believes that the operative treatment of cancer of the stomach will give as favorable results as will operations for any other form of carcinoma. Permanent cure may be obtained in from 5% to 8% of the cases. Alleviation of the symptoms in from one to 3 years is to be expected in many of the cases. Those which are not operated upon die within one year. Gastro-enterostomy gives an average prolongation of life of 3 months, and a radical operation gives an average of 13 months. The greatest obstacle to be overcome is the difficulty of diagnosis before the disease becomes inoperable. Mayo urges early exploratory abdominal section in suspected cases, because of the fact that the appearance of a tumor, while settling the diagnosis, also stamps the case as inoperable, although occasionally a small movable mass in the region of the pylorus becomes palpable before it has reached the inoperative period. Repeated and painstaking examinations of the stomach contents gives but little aid to the diagnosis. Mayo has performed pylorectomy 20 times with 3 deaths. One patient lived 3 years and 5 months; several are still alive, but have not reached the 3-year limit.

Reducing Luxatio Anterior Humeri.—Borchgrevink (*Tidsskrift f. d. Norske Laegerfor*, XXII, quoted in the *Journal of the American Medical Association*) recommends a method of reducing this luxation based on the principle that, when the arm is adducted, the upper wall of the capsule, and especially the coracohumeral ligament is stretched, which prevents the head from rotating on its axis at that point and compels it to turn toward the cavity of the joint. As the arm is raised the coracohumeral ligament and the edge of the rent in the capsule become relaxed, while the lower wall of the capsule is drawn taut, and this forces the head near or into its normal position. If it is not entirely in place, inward rotation will bring it completely into its normal relations. The operation described is in 4 stages. The dislocated arm is first placed in extreme adduction. The upper arm is then slowly and cautiously twisted over and outward in this position, the elbow still at a right angle, until the front of the arm is in the frontal plane. While this outward rotation is maintained, the upper arm is raised in the sagittal plane to the extent that is possible without application of force. The arm is then rotated inward and the head of the humerus will be found in its cavity.

The Treatment of Aneurysm of the Innominate Artery.—Jacobsthal (*Centralblatt für Chirurgie*, August 23, 1902) reports a case of aneurysm of the innominate artery in which the right subclavian and carotid arteries were tied. The patient died at the end of 51 days, no improvement having been noticed. He concludes that the operation probably increases rather than lowers the intravascular pressure. Of 94 cases collected by Poivet, 7.4% were cured, of 23 cases collected by the writer, 13 were partially relieved by the operation, but in no case was the patient under observation for a longer period than one year, and in no case was a definite cure recorded. The immediate mortality is said to be 55.7%. Of 33 cases treated by other methods than distal ligation, 15 were improved and one patient, in whom filipuncture and electrolysis were used, died at the end of 3½ years, the autopsy proving that the aneurysm had been cured.

Flatfoot.—Shands (*Washington Medical Annals*, November, 1902) points out the difference between flatfoot and weak foot. Congenital flatfeet are not here discussed. The static variety, he says, is most commonly seen in young persons at the time of approaching puberty, with weak development and occupation requiring great strain on the muscles or ligaments that support the arch of the foot. Rapid growth favors it. Injuries of the ankle and ordinary strains, are often the cause of the condition and impairment of the strength of the ligaments and muscles, especially those that support the arch and those of the calf or tibials, the peroneus longus on the outer side in particular. Long standing causes them to tire, and the time to give way, thus flattening the arch. Ill-fitting shoes and acute rheumatism of the muscles are frequent causes, also osteitis, phlegmons about the sole of the foot and contracted tendo Achillis. The diagnosis of flatfoot is easily made, but weak foot is not so easy. It is the primary stage of flatfoot, and, if recognized early and properly treated, flatfoot will be avoided. He says a line let fall from the center of the knee cap should fall normally just to the outer side of the second toe, and any deviation from this is apt to indicate a weak condition of the supporting structures of the plantar arch. Eversion of the foot is the most common position of weak foot. Pigeon-toe is often due to it also and can be cured by support. The prophylactic treatment of flatfoot should be begun as soon as the weakness is discovered, and the author insists on the value of strapping the foot, especially in cases of sprained ankle, preventing serious infiltration and giving support until nature replaces the fibers of the tendons and ligaments. The treatment of flatfoot is simple, but the ordinary shoe never properly conforms to the condition. The principal thing is to have the sole of the shoe slightly raised on the inner side. In the mild form of weak and painful foot about all that is necessary is to apply the adhesive plaster strips and then support the arch with a soft pad, fitted so as to conform to the arch as nearly as possible. He applies a pad over the adhesive plaster, holding it in place with two strips of the plaster, and over all applies a snug roller bandage. This is changed once a week, increasing the thickness of the pad each time until the arch is somewhat exaggerated and the painful symptoms have subsided. Then the treatment is continued by leaving off the adhesive plaster and applying a soft pad attached to an inner sole, being careful that the pad is high enough to support the arch in its normal position. In severer cases the Whitman flatfoot plate will be of use. In conclusion he insists on prophylaxis as the most important thing.

An Operation for Thrombosis of the Cavernous Sinus.—Voss (*Centralblatt für Chirurgie*, Nov. 22, 1902) reports a case of thrombosis of the cavernous sinus which he treated by incision and drainage, the patient dying later of meningitis. A curved incision is begun a fingerbreadth in front of the ear at the level of the zygoma, carried upward and forward as high as a line transecting the upper margin of the orbit, and finally downward to the malar bone. The zygoma is now cut at each end by the chisel or saw, and a flap consisting of skin, muscle and periosteum is separated from the skull by the raspatory. By means of the chisel and rongeur forceps the bone is removed until the foramen ovale is opened and the third branch of the trigeminus is freed. The brain is retracted, care being taken not to exert undue pressure, and the Gasserian ganglion exposed. The middle meningeal artery is ligated if necessary. The sinus is found immediately mesial to the first and second branches of the ganglion. In the case reported, the sinus was opened with a knife and a tube surrounded by gauze introduced. If the thrombosis originates in the orbit, the incision may be carried forward to the outer canthus, the soft structure scraped from the bone, and the outer wall of the orbit opened near its middle. The posterior part of the outer wall of the orbit may then be removed by forceps until the optic foramen is opened. The venous plexus in the orbit furnishes the guide to the sinus. This operation may also be used for the evacuation of an abscess at the apex of the pyramid. The value of the operation can only be determined by future experience. It is a question whether in some cases the opening will not have to be made on both sides rather than unilateral.

Auto-etherization.—Buller (*Montreal Med. Jour.*, November, 1902) describes the method of etherization which he has used for 25 years and which he thinks increases its safety and adds to the comfort of the patient. The patient assumes a sitting posture and etherizes himself in this position, which prevents embarrassment to breathing. The cone employed is made of leather and packed with cotton wool. From 1½ to 2 ounces of ether is poured into the cone, which is handed to the patient with instructions to apply it closely to the nose and mouth and to take long full breaths; if the vapor be too strong or a sensation of choking be experienced the patient is allowed to withdraw the cone. When the patient's hands drop, any brief operation may be performed, or the anesthetizer may take the cone and continue the etherization.

Scopolamine-morphine Narcosis. — Blos (*Beiträge zur klinischen Chirurgie*, Band XXXV, Heft 3) presents a contribution on this subject. Scopolamine is related to the atropine group. The therapeusis of the drug is hampered by the unreliability of its composition, as it often contains isomers. Scopolamine, unlike atropine, has a distinct sedative effect, a fact that has been recognized by ophthalmologists, psychiatrists and Kobert, who found that by application of the drug to the cerebral cortex its excitability was much diminished. When scopalamine and morphine are administered together, they each exert a sedative effect on the brain, but are antagonistic in their effects on the peripheral nervous system. Scopolamine increases the pulse-rate, raises the bloodpressure and deepens and quickens the respiration. Morphine has an antagonistic action to scopolamine in every respect, except hypnosis. Because of the rise in bloodpressure, bleeding must be more carefully looked after. Shock, pneumonia, nephritis, jaundice and vomiting are prevented. The method was employed 105 times for operations of all kinds. One death is reported in the case of a patient in whom the pubic bone, the ischial tuberosities and the sacrum were resected for tuberculosis; in this patient the kidneys were blamed for tardy elimination of the scopolamine. Scopolamine, gr. 1/120, and morphine, gr. 1/3, make an effective combination. When the pupil dilates, sleep begins; narcosis is complete in from ¾ to ½ hour and persists for about ½ hour. The pupil is to be watched: when mydriasis occurs narcosis becomes superficial, and more scopolamine is needed. In all cases an injection of ½ the usual dose of scopolamine was given the day before operation. If the effects of this small dose were embarrassing, the method of anesthesia was not employed. In some patients it may be necessary to inaugurate anesthesia with a few whiffs of ether.

Congenital Dislocation of the Hip.—Heusner (*Zeitschrift für Orthopädische Chirurgie*) remarks that Lorenz, in 450 reductions of congenital luxation of the hip, has a record of 11 fractures of the neck of the femur, one of the pubis, one of the ilium, 3 transient paralyses of the perineus nerve and 5 of the crural, with 3 permanent paralyses of the sciatic nerve and one case of gangrene of the leg in a girl of 13, probably due to the unduly tight cast. In several cases Narath's hernia was observed, and frequently there has been stiffness from imperfect fitting of the parts jointed. In only 2 of the latter cases have there been permanent disturbances. Heusner and Hoffa have not been so fortunate in this respect. The acetabulum cannot become shaped to hold the head in the few months of treatment. Altering the shape of the acetabulum is, therefore, not the aim to be striven for, but merely the shriveling of the capsule and musculature to induce the most favorable position for the retention. It is, therefore, better to renounce the attempt to secure functional weight-bearing in patients who display a tendency to recurrence of the dislocation. The head is liable to be forced out of its cavity, instead of being pushed into it, if the patient is allowed to use the limb. Ducroquet, of Paris, has secured better results from the Lorenz method than Lorenz himself, Heusner asserts, as he does not allow his patients to be up and about. The chief merit of Lorenz's method is the extreme abduction which counteracts the injurious influence of the shortened abductors, and the head is brought to the front of the pelvis. But this method does not pay sufficient attention to the anteversion position of the neck and the stretching of the shortened abductors. The tendency of the foot to abduction is the result of the insufficient stretching of these abductor muscles, especially of the gluteus maximus, by this method. The thigh must be held in inward rotation to the utmost possible extent, in order to stretch these muscles. This requires a case extending below the knee and even including the foot, in order to use the leg as a rotating lever, but Lorenz disregards this point and ends the cast above the knee, in order to allow the child to be up and about. He is skeptical as to the necessity of this inward rotation which Lange, Hoffa, Schede and Heusner himself considers so necessary. The danger of redislocation is that of outward rotation, and Schede has inaugurated the latest phase in the treatment of congenital dislocation of the hip joint, by working against this tendency. He uses an extension apparatus, stretching both the sound and the affected leg, with counterpressure at the perineum with a padded leather band. The legs are drawn far apart and the head of the femur is gradually pulled down on a level with the acetabulum. It is then slowly rotated inward, with strong pressure from behind against the trochanter with the fist, when the head can be heard grinding into its proper place. The Lorenz method of manipulating the capsule is then followed, on an ordinary table, and his cast applied with an abduction splint and leather pelvis girdle later on. In case of bilateral luxation, a leather contrivance like swimming trunks, with a screw to exert pressure against the trochanters. Heusner does not agree with Lorenz that it is better to wait until a child is two years old before attempting intervention. He thinks that early infancy, with its energetic growth, offers the best prospects for regeneration, while delay invites rapid aggravation of the deformity. He illustrates the various devices that have been found most useful by himself and others. (Quoted from the *Jour. Amer. Med. Ass.*)

Functional Improvement of the Defective Hip Joints.—Lorenz (*Zeitschrift für Orthopädische Chirurgie*) does not refer to any special affection, but to the various pathological conditions of the joints from different causes in which the function of the joint is seriously compromised with pain when weight is borne on it. He has been strikingly successful in such cases, he states, by a method of overcorrection, securing an ultraphysiological position of the joint, in cases of irreducible congenital luxations and in luxation fractures of the neck of the femur. The results obtained encouraged him to extend the scope of the intervention to healed coxitis with imperfect acetabulum formation and abduction contracture, also to arthritis deformans coxæ. The aim is to induce a habitual ultraphysiological overcorrected abduction. This abduction is carried beyond the physiological limits of the excursion of the joint and is combined with ultra-extension. This combined position has never yet been applied in the treatment of the above categories of defective hip joints. The upper end of the femur is transposed forward, while the limb is placed in ultra-abduction. The manœuvers are accomplished without force. He commences with modeling redressement in order to widen the sphere of abduction. The contraction of the abduction is gradually overcome by blunt, bloodless efforts. Subcutaneous tenotomy is rarely required. By sawing with the ulnar border of the hand it is possible to carry abduction almost to a right angle. Manual rhythmic tractions are the next step. The extension screw is scarcely used at all now. Extension by 2 assistants, one pulling on a towel wound around the ankle, supplements the pressure of the operator from above on the trochanter and is usually amply sufficient to mobilize the upper end of the femur vertically and gain 2 or 3 cm. in length. The joint is then overstretched, aided by elevation of the pelvis, maximal flexion of the other leg and a weight of 20 to 25 kg. If the soft parts will not yield, it is necessary to do at once a subcutaneous fasciomyotomy. The resistance of the subspinal soft parts can seldom be overcome without this. The result gradually obtained is that the front surface of the thigh is far behind the frontal plane, and the joint is thus in ultraphysiological overextension. When this has been accomplished, the head of the femur is mobilized. The neck may be fractured during these manœuvers, but the bone does not separate, and the head can be brought into place just the same. The intervention concludes with the final transposition of the mobilized head forward near the spina ant. sup. This is accomplished without further resistance by extreme overextension combined with a degree of abduction in which the previous shortening becomes overcorrected. This position of the thigh, which is not so extreme as is required for retention of an actual reposition, is maintained by a cast enclosing pelvis and thigh to the knee. The patient is enabled to walk by raising the sole of the sound foot. After 3 or 4 months he corrects the abduction nearly to a parallel position of the legs, without quite reaching it. The overextension is rigorously maintained. This new position is immobilized for 3 or 4 months. The patient is then able to walk without pain or trouble and with remarkable freedom from disturbances of any kind in comparison to his previous condition. The after-treatment consists in active and passive exercise, in overextension and abduction to maintain the habitual abducted position and prevent the head from resuming its previous backward dislocation. The patient should be able to raise the limb almost to a right angle when lying on his side, and carry it back far behind the frontal plane, to demonstrate the overextension that is possible with the nearthrosis. The results have been highly satisfactory in all cases. The patients are able to walk without disturbance and limp much less. The limb was lengthened from 1 to 2 cm. One or two years are required to ensure the function of a nearthrosis. (Quoted from *Jour. Amer. Med. Ass.*)

Permanent Results of Forcible Reduction of Spondylitic Hump.—Vulpius (*Zeitschrift für Orthopädische Chirurgie*) exhibited 2 patients in 1898 whom he had straightened by forcible reduction of the hump according to Calot's method. Five years have now elapsed, and he gives photographs of each, which show that the perfect results attained have been permanent. The spine is straight, although possibly a trifle shorter than normal. Joseph has explained how this can occur in such cases by the wedging into each other of the diseased vertebræ. The hump was reduced in horizontal extension, the processes of 4 vertebræ were resected and a cast applied to the trunk from the back of the head to the knee or thigh. One patient was five and the other eight years old at the time. In both cass there was a large abscess in the abdomen.

PEDIATRICS.

On the Role of Sterilized Milk in the Production of Infantile Scurvy.—H. Neumann (*Deutsche med. Woch.*, August 28, 1902) recalls the fact that a precipitate occurs in heated milk. He thought that possibly this precipitate might contain iron; but on examination no appreciable quantity of that substance was found. He then calls attention to the fact that substances like hydrogen sulphide are produced by heating milk. These substances are not harmless, and he believes that it is possible that the toxic substances produced in milk by heating it may be concerned in the production of infantile scurvy. He refers to 4 cases in which there was hemorrhage from the kidneys during the course of the disease, in 3 of which the use of the proper food resulted in the disappearance of the condition. In the fourth case the patient was given pasteurized milk continuously and finally died. He reports also the cases of 2 boys who developed nephritis after the use of milk that had been heated to a high point as a steady diet. The author refers to a class of cases in which the only hemorrhagic manifestation is a moderate degree of hematuria, and in which the child keeps his legs, which are tender, drawn up upon his abdomen. Such cases he calls abortive scurvy. The proper treatment is with the use of raw or carefully pasteurized milk and the administration of vegetables.

On the Treatment of Melena Neonatorum With Gelatine.—H. Fuhrmann (*Münch med. Woch.*, September 2, 1902) reports the case of a boy who began to vomit blood the day after his birth. In spite of the injection of 20 cc. of a 2% solution of gelatine the hemorrhage continued and the patient died. He reports a second case in a baby who commenced to bleed 4 days after birth. The injection of 20 cc. of gelatine solution resulted in immediate improvement and ultimate recovery. He reports a third case in which the child commenced to bleed on the third day after birth. The hemorrhage was accompanied with a state of collapse, but 50 cc. of gelatine solution produced immediate arrest of the hemorrhage and the patient finally recovered. The third case appears to the author to indicate considerable value for this method of treatment.

The Treatment of Tuberculous Peritonitis.—F. C. Shattuck (*Amer. Jour. Med. Sciences*, July, 1902) reports the statistics of 98 cases of tuberculous peritonitis treated at the Massachusetts General Hospital. On the medical service the treatment of this disease was symptomatic, and on the surgical service it consisted in abdominal incision with, perhaps, removal of the ovaries and tubes and all masses of tuberculous material. Of these 98 cases the final result is known in 57, and it appears that medical treatment gives a mortality of 68%, while the death-rate after surgical treatment is 37.5%. It appears that tuberculous peritonitis may be followed by complete recovery either under medical treatment, tapping or incision. Medical treatment including tapping is justifiable for a time, but if the patient fails to gain within 6 weeks incision should be resorted to.

The Serum Treatment of Whooping Cough.—C. Leuriaux (*Semaine Médicale*, July 16, 1902) has prepared a serum from the blood of horses which were treated with increasing injections of filtered cultures of an oval, aerobic, motile bacillus which he obtained from the sputum of patients suffering from pertussis. He believes that if the treatment of the disease with this serum is begun early, immediate amelioration of the symptoms results, with cure in about 8 days. Out of 66 cases treated in this manner there was no immediate improvement in 5 only.

On the Treatment of Epilepsy.—William H. Thomson (*New York Med. Jour.*, November 15, 1902) believes that in many cases of epilepsy mercury biniodide and pharyngeal applications are of value in many cases. He also uses capsicum, belladonna, the bromides, cod-liver oil, phosphorus and antipyrine.

On the Treatment of Tetanus.—Hugo Neumann (*Zeitschrift für Heilkunde*, August, 1902) reports a case of tetanus in a boy, aged 14 years. He was treated with rest in bed in the dark, chloral, bromides and baths and recovered. He received 2 injections of antitoxin, but the author believes they had no effect upon the disease.

On the Prevention of Intestinal Diseases in Infants During the Summer.—Charles Gilmore Kerley (*New York Med. Jour.*, November 22, 1902) believes that intestinal diseases in infants may be prevented by administering clean, suitably prepared and properly cared-for milk. He considers country homes, floating hospitals and such institutions of value in the prophylaxis of summer diarrhea.

The Treatment of Scarlet Fever.—Adolf Tobeitz (*Arch. für Kinderheilkunde*, Vol. 34, Nos. 3 and 4, 1902) says that oil of turpentine is most effective in the treatment of scarlet fever, especially when it is complicated with nephritis.

The Treatment of Tetanus.—W. Essex Wynter, (*Lancet*, November 15, 1902) reports a case of tetanus in which recovery followed treatment with bromides, chloral, physostigmine and morphine in addition to antitetanic serum. Improvement began 10 days after the onset of the symptoms. Six hundred cc. of antitoxin were given in 10 cc. doses.

Infant Feeding.—Edward T. Abrams (*Medical News*, November 29, 1902) thinks breast milk is the best infant food. No artificial food should be trusted unless it contains the essential elements of breast milk; namely, fat, proteid and sugar. These elements are to be found only in milk; and cows' milk is the only milk available for general use. Cows' milk must be modified in order to bring the percentages of the 3 elements mentioned to correspond with those found in human milk.

The Treatment of Epilepsy.—H. Schnitzer (*Neurolog. Centralblatt*, August 1, 1902) reports the results of the dietetic treatment of 16 cases of epilepsy. This diet was recommended by Balint and consists of 2 gm. of sodium chloride and 3 gm. of sodium bromide added to the food every day. The diet consisted of milk, butter, eggs, bread and fruit. The results were not particularly satisfactory, although in 12 of the patients the attacks were either absent entirely (2) or were very much lighter than they had been on the ordinary diet of the institution. Four patients appeared somewhat worse, and there was no improvement in the mental condition of any. Schnitzer regards the treatment merely as a useful addition to our present therapeutic measures.

Infant Feeding.—Ernest B. Emeron (*Boston Med. and Surg. Jour.*, December 4, 1902) says that in the artificial feeding of infants a failure of the child to gain properly in weight is an indication of insufficient sugar, provided the other elements are in proper proportion. An excess of sugar produces colic or thin, green, watery stools. A harder and dryer condition of the stools than normal indicates too low fat percentage. Vomiting or regurgitation of food an hour or 2 after nursing indicates an excess of fat. The passage of curds in the stools points to an excess of proteid.

The Treatment of Tuberculous Glands in the Neck.—Leonard Freeman (*Jour. Amer. Med. Ass.*, December 6, 1902) says that general treatment, especially hygiene, is of the utmost importance, both in the cure of incipient trouble and in the prevention of relapse following operations on more advanced cases. Residence at the seashore has long been recognized as of great benefit; but there is reason to believe that a high and dry climate, such as that of Colorado, with its rarefied, stimulating atmosphere and abundant sunshine, possesses superior advantages. A point of extreme importance in local treatment is to abolish sources of infection, in the teeth, tonsils, nose, ear, scalp, etc. Nonoperative treatment is often of doubtful utility, except in the beginning of the disease. Pulmonary involvement does not contra-indicate operation, at least in Colorado, except in advanced stages. Curettement is applicable to sinuses, tuberculous ulcers of the skin, and when complete removal would be attended with too much risk. In all other instances a thorough operation should be done. The chance of permanent cure following operation is probably better in Colorado than in lower and less favorable altitudes.

Infant Feeding.—Alfred Hand, Jr. (*American Medicine*, December 20, 1902) says that cows' milk is the best available substitute for human milk. The milk used should be of the best possible quality. He has had considerable success with Meigs' mixture, although in this mixture the fat is usually too high and the sugar too low. When a child is 3 months old or more, he aims to give at least 1.75% of proteid and to increase it as rapidly as the child can digest it. When the digestion is feeble he has had excellent results from the use of a mixture of sodium bicarbonate in compound infusion of gentian before each feeding.

Alcoholism in an Infant.—Follet (*Arch. de Méd. des Enfants*, August, 1902) reports a case of alcoholism in a boy aged 30 days, whose nurse had given him 1¼ drams of brandy daily. He vomited regularly after nursing and slept very soundly all night. After stopping the brandy, the infant lost weight for 2 weeks, but then gained rapidly.

Volvulus in an Infant.—Follet (*Arch. de Méd. des Enfants*, August, 1902) reports a case of volvulus in an infant of 9 months, with sudden dyspnea, tympanites and death in 2 hours. The autopsy showed intestinal occlusion at the end of the ileum, the splenic flexure of the colon and the been noted 3 weeks before.

The Prophylaxis of Diphtheria.—Sevestre (*Rev. Mens. des Mal. de L'Enfance*, June, 1902) concludes: (1) That preventive injections of serum produce immunity in children who have been exposed to diphtheria. They have never given rise to serious complication. Unfortunately, the period of immunization lasts 3 or 4 weeks at most. In rare cases, in which, in spite of the injection, diphtheria has occurred, the disease has been particularly benign. (2) Immunizing injections are particularly indicated for the protection of children in a family in which one case of diphtheria has already developed. (3) The injections are also indicated in children attending a school or confined in a nursery or a hospital ward in which diphtheria has occurred. (4) Even in the absence of a case of diphtheria, preventive injections are indicated in the children admitted to measles or scarlet fever wards, particularly the former. In such instances the serum ought to be given in large doses and repeated frequently. (5) The practice of preventive injections should not induce neglect of disinfection and isolation.

The Treatment of Infantile Atrophy.—Combe and Narbel (*Arch. de Méd. des Enfants*, July, 1902) say that in the treatment of infantile atrophy, intestinal putrefaction must be diminished by gastric lavage, enteroclysis, calomel, tannigen and hydrocarbon diet. The failure of absorption of solids must be combated by giving cereals, puddings, etc. The lack of absorption of fluids should be overcome by the use of hypodermoclysis and enteroclysis. The loss of heat must be supplied by the use of hot water, warm moist applications and the incubator when necessary. Secondary infection may be prevented by washing out the mouth and nasopharynx and by keeping the skin clean and by supplying pure air to breath. Secretion may be excited by orexine tannate, sodium cacodylate and phosphorus. The diet of such infants should contain lecithine, as this increases the body weight and the elaboration of nitrogen and decreases the loss of phosphorus.

The Treatment of Infantile Atrophy.—A. Narbel (*Arch. de Méd. des Enfants*, July, 1902) has treated 5 cases of infantile atrophy with lecithine. It increases the gastro-intestinal functions, improves the general condition, increases the weight and stimulates the appetite and the assimilation. When atrophy is due to syphilis lecithine has no effect.

GASTRO-INTESTINAL DISEASES.

Olive Oil in Ulcer of the Stomach.—As is known, states *Merck's Archives*, the prime indication in the treatment of gastric ulcer is to nourish the patient without irritating the wound. According to Dr. K. Walko, of Prague, (*La Semaine Médicale*, XXII, No. 46), olive oil fulfils this indication admirably, in that it possesses considerable nutritive value whilst being absolutely noninjurious to the gastric mucosa, to say nothing of its freedom from the tendency to give rise to fermentation in the stomach as does the milk diet. In recent cases he begins with several spoonfuls of the oil daily, having the patient rinse the mouth with some mouthwash each time after taking the dose. The quantity of oil is gradually increased up to 150 cc. (5 oz.) per day, taken in 3 portions. If the patient evinces a disgust for the pure oil, it is given as an emulsion through a soft esophageal tube. All other feeding by the mouth is refrained from so long as grave symptoms yet exist—that is to say, for from 3 to 6 days. There is nothing to prevent giving nutritive enemata, since the oil, as a rule, does not produce diarrhea, though it usually relieves constipation commonly present in patients with ulcerated stomachs. Dr. Walko has applied this treatment in 9 cases; it was always well borne. Generally, in 8 days the digestive trouble disappears, but it is wise to continue the oil, associated with an appropriate diet, for a fortnight longer. The treatment in question is particularly efficacious in chronic ulcer of the stomach, even when surgical operation proves of no avail. The author has had two such cases; the use of olive oil soon arrested the gastric pain and vomiting.

GENITO-URINARY DISEASES.

Intratracheal Injection of Mercury in Syphilis.—Carnot (*Presse Médicale*, November, 1902) has suggested that great benefit might be derived from inhalations of mercurial preparations in a closed chamber. This would insure absorption both by the respiratory apparatus and the skin. The mucosa of the respiratory passages is remarkedly tolerant of mercury, and the absorption in the trachea is so rapid that 2 liters of fluid can be injected into the trachea of a horse in the course of an hour without inconvenience, and 40 cc. per kilogram an hour in a rabbit, which is equivalent to 2.5 liters for a man. The rapidity of absorption is comparable to that from intravenous injections, but has none of its disadvantages. Levi, of Pisa, has demonstrated that substances which are caustic for the digestive tract can be injected into the trachea, without any reaction. Botry found that the injection of 0.5 cc. of a 5 per cent. solution of silver nitrate was tolerated by the trachea far better than by the stomach. Injections into the trachea of a 1 per cent. solution of sublimate or of a 0.4 per cent. solution of gray oil were well tolerated in Carnot's experience and never caused prolonged coughing, rales, dyspnea or any unusual cardiac action. If a little was swallowed, the patient complained of prolonged pain in the stomach, while the same solutions in the trachea caused at most a slight tickling or sometimes a little hoarseness. He has found a 1 per 1000 solution of sublimate the most convenient for the purpose, injecting daily about 5 to 10 cc. The results were extremely favorable in the 30 cases thus treated. The impression was derived that the action of the mercury was more prompt by this than by other methods of administration. In case the technique is defective and the fluid is swallowed no harm is done. The procedure is very simple and does not betray the nature of the affection under treatment.

"Gargling" the Posterior Urethra.—Binaghi (*Riforma Medica*, 1902, XVIII) applies this term to the injection of a small amount of an antiseptic solution, the tip of the catheter in the posterior urethra and the fluid injected with force "à coups de piston," a little at a time, until all has been injected. By this means the posterior urethra is dilated and "gargled," and his experience with urethroprostatitis treated in this way has been exceptionally favorable. He uses a solution of boric acid and repeats the manœuver several times times at a sitting, following it with an antiseptic lavage with a 1 per 1000 solution of silver nitrate, using extreme care to prevent pain or spasm. He describes 7 cases in detail to illustrate the merits of this method.

Diet in Gonorrhea.—The dietetic treatment of gonorrhea, according to H. Gilman Thompson, consists in avoiding all alcohol and stimulating food and drinking bland dilutents. In severe cases, and in cases among young children who have in some manner been infected, a skimmed milk diet should be ordered at first. Later, light farinaceous articles, stale bread, milk and rice puddings should be added. They must avoid acid fruits, all highly seasoned and fried foods, condiments and pastry. Alcoholic drinks in all forms are absolutely prohibited. Malt liquors are especially bad, as they are in all diseases of the urethra, bladder or prostate. No late meals should be taken. By observing these directions troublesome chordee and ardor urinæ, so apt to occur in the first fortnight, may be prevented. Large quantities of such waters as soda, seltzer, apollinaris and 2 or 3 quarts of plain water should be drunk. The fluid dilutes the urine, diminishes the danger of cystitis, and has the additional advantage of decreasing the appetite.

LARYNGOLOGY.

Cancer of the Larynx Cured by the X-rays.—W. Scheppegrell, (*N. Y. Med. Jour.*, Dec. 6, 1902), reports a case of carcinoma of the larynx in which a complete cure was obtained by the X-rays alone. The growth involved the left wall and left vocal cord. A high tension Tesla coil was employed, and a tube with a medium vacuum was selected in order to gain some penetration. The face and chest were protected, but the neck was freely exposed in the hope that any involvement of surrounding glands might be influenced by the treatment. At first the platinum reflector (anticathode) was placed at a distance of 15 inches, afterward this was reduced to 7 inches from the neck. The exposure lasted 10 minutes and was repeated daily for 20 days. No dermatitis developed. The platinum reflector was brought to a dull-red heat, and the vacuum was maintained about the same from the beginning to the end of the treatment. At the end of 3 weeks congestion seemed more marked and the tumor unchanged; pain, however, had disappeared after the second exposure. Some 10 days later, upon examination, it was found that the tumor and most of the symptoms had disappeared. Treatment was recommenced and carried on for 10 days, by which time the ulcers were healed. The patient, when seen three months later, seemed in good condition, the aphonia due to the loss of tissue of the left cord had been partially overcome by compensatory overaction of the other cord.

Otosclerosis.—Under this title, in the new edition of Politzer's "Diseases of the Ear," is considered that special form of disease characterized by progressive deafness without catarrhal symptoms of the middle ear. The chief pathological changes noted consisted in excess of bone formation about the oval window and also in the labyrinth near the oval window. The bone spaces and Haversian canals are markedly enlarged, and frequently osteoblasts and osteoclasts are found scattered along the course of the bloodvessels. The bone corpuscles are more numerous and more compact than in the normal ear. The author believes that heredity plays an important part in the etiology of the disease in some cases. Gout and uric acid diathesis also have a distinct influence. Constitutional syphilis is another cause. Otosclerosis is often associated with ozena, and frequently originates during the puerperal state. It also occurs in connection with anemia, mental affections and general nervousness, but there are cases to which no cause can be assigned. The disease does not often occur in children under 15. Tinnitus is usually the worst symptom of the disease, but it may last only for a short time or be entirely absent. The hearing is disturbed by obstruction to the sound waves at the oval window and by changes in the labryinth. The patient finds it difficult clearly to understand the separate words in conversation. The disease becomes bilateral.

Treatment through the Eustachian tube is ineffectual and in some cases even detrimental. On the other hand, pneumo-massage through the external auditory canal sometimes causes improvement, especially in the early stages before ankylosis of the stapes in the oval window has occurred. The massage should last from a half to one minute every two or three days, for four to five weeks, followed by a rest of several months. The relief is temporary, yet as it aids the tinnitus and head symptoms, it should be employed. Internally sodium or potassium iodide is prescribed, 7 to 15 grains a day for a month, and then discontinued for 4 to 6 months.

In typical case the diagnosis is easily made, but when obstruction to the Eustachian tube and middle ear catarrh exist, it may, at times, be hard to establish. It is a comparatively rare disease.

Atrophic Catarrh. Fixation of Stapes.—This is the title given to the disease considered above (Otosclerosis), by A. H. Cheadle, of England, in the chapter on Chronic Nonsuppurative Middle Ear Disease in Posey and Wright's "Diseases of the Eye, Nose, Throat and Ear." His description of the disease corresponds in essential matters to that given by Politzer. Its onset is gradual and insidious with no marked change in the middle ear, nose or nasopharynx. The majority of cases occur in women between the ages of 20 and 40 years. The causes are obscure: Heredity, rheumatism, anemia and parturition, each may play a part in certain cases. Pathological changes consist in an atrophy of the lining membrane with fixation of the stapes and sometimes implication of the internal ear in the later stages. When the middle ear is exposed, one is struck by the wideness, whiteness and dryness of the cavity. The lining membrane is atrophied and the stapes is immobilized by osseous deposits. Trophic causes will not account for bony ankylosis of the base of the tapes, a condition that points to some irritative cause, perhaps of a chemical nature. Thomas's description of atrophic catarrh in which the mucous membrane becomes thinner and atrophied, suggests a process that might account for the condition found in this disease. It may be that the atrophic process continues into the labyrinth with resulting decrease of the perilymph and other fluids. Various writers have found in their cases a primary affection of the labyrinth bony capsule producing ankylosis of the base of the stapes without any involvement of the lining membrane. The left ear is usually first affected, tinnitus often being the first symptom. Tinnitus may, or may not, be marked. The disease may progress slowly or rapidly, complete stone deafness is never observed. Paleness of the soft palate with a blush on each side is usually present (Urban Pritchard). The prognosis is bad. In making a diagnosis this disease is distinguished from internal ear affections by the usual functional tests, when internal ear results are produced by the tuning fork the presence of paracusis will point to this disease.

Treatment must be directed to the general health. Local measures must be used with extreme caution. Occasional catheterization, with injection of paroleine or inflation with the bag, especially if a few drops of chloroform be previously introduced, produce a slight amount of improvement, and is a comfort to the patient. Massage with Siegle's speculum should be gently and cautiously applied, as it is often distinctly detrimental. Mink's method of massage with the drum membrane continually compressed with air, is worthy of investigation. Intratympanic operations are frowned upon with the exception of those directed to the stapes and inner middle ear wall which are on trial. Mechanical aids such as speaking tubes are useful for individual conversation. Lip reading lessons are of great value.

Iodoglycerine Solutions in the Nose.—Iodine acts as a stimulant, alterative and antiseptic. It excites glandular activity and causes hyperemia, this leads to hypertrophy of normal tissues and hastens absorption of hyperplastic deposits. Iodine should *not* be applied when the mucous membrane is anemic from an anemia of the blood, nor to a mucous membrane in a state of acute inflammation or of irritation. The principle to keep in view is to stimulate without causing inflammation. Before using iodine it is well to remove the subacute inflammation that is generally present. It can be recognized by the deep, dull red color of the mucous membrane. This is best accomplished by the use of a Dobell wash or spray, night and morning. Any disorder of the gastro-intestinal tract must be corrected. At the first visit or two the nose is cleansed with a Dobell spray, and an application is made of mildly stimulating solution, such as:

Menthol	5 gr.
Camphor	3 gr.
Liq. albolene	1 oz.

Applications are made to the septum near the floor and carried back about an inch and a quarter, then passed under the lower turbinate and brought forward and out. In chronic cases the middle turbinate may be touched lightly; in atrophic cases, the success of the treatment will depend upon the thoroughness with which every niche and crevice is sought out and rubbed with the solution used. After the subacute inflammation has subsided the underlying pathological changes can be estimated. Presuming that the case is one in which iodine is indicated, a weak solution is applied. The patient may be told to expect some irritation of the nose; he may sneeze, the nose may water, and there may be some burning for an hour. If the irritation continues over 2 hours, the strength of the solution must be reduced. Applications are made 3 times a week, later on twice a week. The strength of the solution is rapidly increased. Three of the solutions will answer for all but the bad atrophic cases:

	No. 1.	No. 2.	No. 3.
Iodine (crys.)	2 gr.	7 gr.	12 gr.
Potass. iodide	6 gr.	21 gr.	36 gr.
Ol. menth. pip.	½ gtt.	½ gtt.	½ gtt.
Glycerine	1 oz.	1 oz.	1 oz.

This treatment, extended over 6 weeks, will bring about all that can be expected from it. If hypertrophies are not entirely reduced, recourse to chromic acid or some other cauterant may be necessary. These destructive agents ought to be used with care; it is not wise to destroy sound tissue when it is already lessened by disease. This really is the great advantage of the iodine treatment, it conserves healthy tissue and favors the removal of connective tissue and other adventitious substances. In atrophic rhinitis (ozena) a cure cannot be expected; the patient can be taught to use the iodine solution, and by applying it regularly, after cleansing the nose with the Dobell solution, he can greatly rid himself of the burden that this disease places not only upon him, but upon those about him. Iodine is not a panacea, but it has a distinct and valuable sphere of usefulness; preceded by the Dobell spray and followed by the oil solution mentioned above, it makes the most convenient and effective treatment for chronic nasal catarrh that can be placed in the hands of the general practitioner.

Laryngectomy for Malignant Disease.—F. Hartley (*N. Y. Med. Jour.*, Dec. 13, 1902) in a long article gives the results of a careful study of this subject. He finds the diminution in the death-rate for laryngectomies from 1889 to 1900 was from 44% to from 8.5% to 14%. The increase in those remaining cured over 3 years has been from 7% to 16%. The increase in those remaining free from recurrences for 3 years has been from 13% to 33%. The reason for this improvement is found in the measures taken to prevent aspiration pneumonia and the infection of the cellular planes enclosing the trachea. Of these measures the use of cocaine must be mentioned. Both Kronlein and Kocher believe that reflex irritability of the trachea and bronchi is avoided by its use, as well as the increased secretion which occurs when ether is chosen. The cocaine shrinks the mucous membranes and defines more precisely the limits of the growth and by its anesthetization diminishes the tendency to a reflex inhibition of the heart and respiration through the superior laryngeal nerve. The dangerous area occupies the middle and upper portion of the larynx. "It would add greatly to the safety of the operation if the incision was first made through the cricothyroid space, then a swab of cocaine passed through this incision and applied to the laryngeal mucosa." Crile, *Jour. Amer. Med. Assoc.*, March, 1900. Another measure is the placing of the patient in the Trendelenburg and Rose posture. This has done away with preliminary and immediate tracheotomies in the more restricted operations and with the various tampon cannulæ. Glück's method of dividing the trachea at the level of the first or third rings, turning its lumen forward and suturing it to the skin, recommended in 1881, has given a mortality of only 8.5%; a mortality not yet attained by anyone with other methods. Operators, to prevent infection of the cellular tissue about the trachea, have tried to close the mouth and pharynx from the wound and incidentally from the lumen of the trachea; these measures have helped to reduce the dangers of the operation. The importance of early diagnosis and immediate, restricted but radical procedure should be borne in mind. A minute description of the technique of the operation is given in the paper.

DERMATOLOGY.

Treatment of Syphilis with the Tincture of Iodine.—Richter, (*Versammlung Deutscher Naturfor. u. Aerzte*, Sept., 1901), uses the tincture of iodine in syphilis, giving it in 10- to 30-drop doses in coffee or red wine three times a day. In 26% of his patients the maximum dose that was well tolerated was 50 drops three times a day.

The Uses of Thiosinamine.—Neisser, (*Annales de Derm. et Syph.*, Oct., 1902), presented to the VII. Congress der Deutschen dermatologischen Gesellschaft, May, 1901, a girl of 6 years, with a violaceous scleroderma of the face, which was successfully treated with cutaneous injections of thiosinamine; a half to one cc. of the following fluid was used:

Thiosinamine	10 grams.
Glycerine	20 "
Distilled Water	70 "

A plaster of thiosinamine also acts well. Alcoholic injections of thiosinamine are very painful. Juliusberg presented a case of lupus of the face greatly improved by thiosinamine. Caspary observed brilliant results in the treatment of keloidal and hypertrophic scars. He injects every second day a Pravaz syringeful of a 10 to 15% solution. Peterson and Herxheimer noticed a more or less severe local reaction after these injections.

Partial Gangrene After Injection of an Oily Solution of Bromide of Mercury.—Pfluger, (*Archiv. für Dermat. u. Syph.* LX., 1902. Page 425), reports a case of localized gangrene following an extremely painful intramuscular injection of the bromide of mercury. Brocq has reported a similar result after a painful injection of the bromide, and Lesser had gangrene occur after 2 injections of mercury bichloride, which were followed by profuse bleeding. The author expresses the view of Brocq that the gangrene was due to a direct injury of the nerve, while Lesser ascribes the condition to the injury of a large bloodvessel.

[The reviewer has given about 300 injections of the mercury bichloride, often with the production of nodular indurations, but never with the development of an abscess or gangrene. Occasionally the injection is followed by the issue of a few drops of blood. J. F. S.]

Injections of Oxygen Gas in the Treatment of Furnuncles and Carbuncles.—Thiriar, (*La Clinique*, 1901, No. 1), reports the results of the treatment of boils and carbuncles by the injection into the lesions of oxygen. The injection is given with an ordinary Pravaz syringe which is attached by a rubber tube to an oxygen cylinder. For boils a single injection into the base suffices; for carbuncles a number of injections are made around the base. The rapidity of cure is remarkable. There is at first produced quite severe pain, but this soon lessens, and the pain disappears entirely. The peripheral edema usually disappears within 24 hours. This method of treatment was used in 18 carbuncles and 24 furuncles in various regions of the body; the cure in all was complete and rapid. The oxygen does not seem to act directly on the staphylococci or streptococci, but appears to increase the resisting power of the tissues.

A Bullous Eruption Produced by Antipyrine.—Troisfontaines (*Annales de la Soc. Méd. Chir. de Liège*, 1901, No. 4, abstracted in *Annales de Dermat. et Syph.*, October, 1902) records the following interesting case: A man, 37 years of age, addicted to the use of alcohol, has been in the habit for several years of taking 3, 4 and 5 grams of antipyrine a day without ill effects. On March 15, after having taken 2 grams in 2 separate doses of 2 hours interval, he was seized with intense gastro-intestinal trouble and a generalized scarlatiniform erythema. Some days later a pemphigoid eruption developed which invaded the entire surface of the body. The liquid of the blebs, treated with the iron perchloride, gave the reaction for antipyrine. Rapid cure with profuse desquamation took place.

SEROTHERAPY.

Accidents of Serotherapy.—Crug (*Brazil Medico*, 1902, quoted in *Jour. Amer. Med. Ass.*) compares the accidents from the use of serum-treatment at Rio with those reported in Europe and announces that they were identical in kind and occurred in about the same proportion. The minor accidents from antiplague serum made at Rio were digestive disturbances, cutaneous manifestations, adenitis or pain in the joints, muscles, etc. Two of the persons thus affected were physicians, and the disturbances were not sufficient to interfere with their practice and vanished in the course of a few days. The more serious accidents included high temperature, intense pain, arthralgias, etc., pulmonary phenomena, delirium, prostration and adenitis accompanied with symptoms which suggested the plague. In the case of a wife of a colleague, after 2 injections of the serum a ganglion became painful, and there was insomnia and agitation, with temperature of nearly 103° F. and chills. A patch of erythema 30 cm. long developed, with urticaria, ecchymoses in the legs, and manifestations in the joints suggesting articular rheumatism. The patient also lost flesh; 42.5 cc. of the serum had been injected in the course of 8 days. The physicians were in doubt as to whether the case might not be true plague, but bacteriological examination was always negative and the patient rapidly recuperated. A single injection of 10 cc. in a woman in the seventh month of pregnancy was followed by a very high temperature and swelling of glands, with intense pains and purpuric patches. All these symptoms vanished by the end of 15 hours. In another case an erysipelatous patch developed on the abdomen accompanied with fever, pain and swelling of the glands, after 2 injections of 10 cc. of the serum. All the disturbances had vanished by the end of the week. Out of the total of 123 patients injected with the serum 58, or 47.17% exhibited accidents, but only 7 were of serious character. Adenitis occurred alone or with other symptoms in 18. The serum used was about a month old. The proportion of accidents observed at Frioul was 44.7% and at Glasgow, 47.3 per cent. Among the incidents which he relates to show the efficacy of preventive antiplague injections is the case of an infected vessel, the *Gundulic*, which arrived with a case of plague on board. The patient was taken to the hospital, and the rest of the crew were treated with the antiplague serum as a preventive measure. No further cases of plague occurred until 20 days had elapsed, when 2 more sailors exhibited symptoms of the disease. The ship had evidently been infected, but the antiplague serum had protected the crew from infection so long as its immunizing effect lasted. This is from 8 to 15 days. After this immunizing effect had worn off, the crew were liable to contract the infection as if they had not been injected. The incident is interesting from the further fact that the two sailors last affected had the dangerous submammary bubo or plague carbuncle, and yet, possibly owing to the influence of the preceding injection, the course of the disease was exceptionally mild. All the serum prepared at the local institute is heated for an hour to 135° F., which destroys the toxic properties inherent in normal serum. No fatal accident has followed the use of antiplague serum anywhere, he concludes, and commends it as a most valuable and indispensable preventive measure.

On the Treatment With Marmorek's Serum.—A. P. Serebrenikova-Glinskaja (*Vratchebnaja Gazeta*, No. 36, 1902) employed antistreptococcic serum in the treatment of 10 patients suffering from puerperal infection, using 10 cc. for each injection and repeating it from 2 to 6 times. The results of the treatment were favorable in all, not a single death having occurred. These results are contrasted with those obtained from other methods of treatment, showing that prior to the employment of serum 11 deaths occurred in 73 cases, or 15%. The duration of the disease since the introduction of serum treatment has also become reduced from 20 to 8 days. The author has also employed the serum in one case of erysipelas, in 5 cases of scarlet fever complicated with adenitis, and 2 cases of diphtheria complicated with catarrhal pneumonia, and the results were equally favorable in all. The success of the treatment depends on the amount of serum used, on the early application and on the repetition of the injections when indicated by the severity of the disease.

On the Treatment of Tetanus With Injections of Brain Emulsion.—Tikanadze (*Russky Vratch*, Vol. 1, No. 35) treated a 14-year-old girl suffering from tetanus with injections of an emulsion of pig's brain. The emulsion was prepared from the fresh brain of a pig in the proportion of 10 gm. of brain to 30 cc. of normal salt solution. Strict asepsis was observed during the entire process of preparation. The injection of 12 cc. of the emulsion was repeated on each of 3 successive days with the result that each injection was followed by an amelioration of the symptoms, and the patient made a complete recovery.

A New Diphtheritic Serum.—Dr. A. Wassermann (*Medical Record*, LXII, No. 22) has obtained a bactericidal diphtheritic serum by inoculating rabbits and goats with diphtheria bacilli, which have been treated by a method similar to that first used by Koch in the preparation of tubercle bacilli for the production of tuberculin. The serum thus obtained is not only bactericidal, but possesses specific agglutinating and precipitating properties. On account of the latter it is thought that its chief use is to be found in the differentiation of pseudo and true diphtheria bacilli. It may, however, find a field for clinical use in those cases in which the bacilli persist in the throat for a considerable period after all symptoms have disappeared. Such cases are, as a rule, not under quarantine and are important factors in the spread of the disease. In such patients, after inoculation with a bactericidal serum, bacilli should rapidly disappear.

INFECTIOUS DISEASES.

Treatment of Typhoid Hemorrhage.—Dr. R. G. Curtin (*Medicine*, November, 1902) contributes an interesting and very comprehensive paper on hemorrhage in typhoid fever, carefully discussing its etiology, pathology, diagnosis, prognosis and treatment. His views as regards the treatment are embodied in the following statements: If the hemorrhage is caused by a leakage from the mucous membrane, ergot hypodermically and per os is efficacious. If it be associated with tympanites, turpentine oil is especially good, sprinkled upon a piece of flannel; this is better than the stupe, which, by producing warmth, favors bleeding. Opium is of great value when the bowels are inclined to be loose. In cases in which the stomach will bear it, oil of erigeron in capsules has a seemingly good influence. The vegetable and mineral astringents may do good when there is looseness of the bowels; but they are liable to derange the stomach and take away the appetite, especially after the bleeding has been arrested. Ice applied to the abdomen, or round pieces of ice slipped in the rectum, seem to have efficacy in retarding the flow of blood; but it is essential that the impression made upon the bloodvessels be continuous and not intermittent. In applying the ice externally, an ice-water bag or some receptacle that will keep the patient from getting wet should be employed. During the past two years the author has seen advantage from the use of suprarenal extract. The head of the patient should be kept lower than the feet, by raising the foot of the bed. In extreme cases, ligatures placed around the limbs during the hemorrhage often prove efficacious; they prevent the blood from flowing back to the body, favor the stanching of the blood, and at the same time save that fluid for the future use of the patient; they should not be so tight as to prevent the flow of blood in the arteries, but should be tight enough to stop the return of blood in the veins. Cold baths and cold packs should be avoided when there is a tendency to hemorrhage or when this has already occurred; and during the third week, when the sloughing process is the most active, if used at all, they should be employed with great care, avoiding sudden and marked impressions upon the external circulation; in this way we may avoid making the case a hemorrhagic one.

Katjang Idjo, a Remedy for Beriberi.—A report from the insane asylum of Buitenzorg, Java, (*Janus* VII, October, 1902) states that the berry of the phaseolus radiatus, a common plant, has proved effectual in the treatment of beriberi. It was thoroughly tested on the 250 to 300 inmates of the asylum, and displayed a marked prophylactic action when an average of 150 gm. of the peas were eaten regularly every day. No injurious effects of any kind were noted even after prolonged use. It also proved a good remedy against the infection itself, but had no influence on the sequelæ. The edema rapidly subsided under its influence and likewise the paresis in the acute cases, which is liable to persist for months. Its influence was particularly beneficial in the severer forms of the disease. The asylum has long been affected with beriberi, but not a single case has occurred in the pavilion in which the inmates take regularly 150 gm. of the peas in their daily ration. The natives make great use of these peas both in their own food and for poultry. Burg states that the plant was recommended as a remedy for beriberi in the seventeenth century.

Antiplague Vaccination by the Mouth.—Vincenzo (*Riforma Medica*, XVIII, 1902) administered by the mouth to fasting guinea-pigs 0.6 to 0.3 gm. of the active substance of Haffkine's antiplague vaccine in a single dose. The results indicated that a considerable degree of immunization was realized, but the animals that had received the larger doses died with symptoms of gastro-enteritis. Later experiences with smaller repeated doses of the vaccine by the mouth are proving still more encouraging.

Sulphur in the Treatment of Typhoid Fever.—Dr. J. Woroschilsky, of Odessa, (*Ther. Monatsh.*, XVI, No. 11), has used washed sulphur in a series of cases of typhoid fever, sometimes beginning its employment at the onset of the disease, at others in the end of the first week, and in some cases even during the second and third weeks. To adults he gave 1.25 gm. (19 grs.) every 2 hours, that is, up to 10 gm. (2½ grs.) daily; to children, 0.3 to 0.5 gm. (4½ to 7½ grs.) two-hourly and up to 4 gm. (1 dr.) per day. The remedy was regularly well borne, even daily quantities of 12 gm. (3 dr.) not producing diarrhea; diarrhea, if present, was lessened, and the entire disease became milder in character. Although the effects of the medicament are attributed chiefly to its direct action on the diseased mucous membrane, the author has found the drug of benefit in cases in which with slight local lesions the constitutional manifestations were serious. Of course, all the general and dietetic rules of treatment were carried out.

HYDROTHERAPY.

Hydrotherapy in Chlorosis and Secondary Anemia.—According to the *System of Physiological Therapeutics*, the rules for the treatment of chlorotic and anemic states should be: (1) Avoidance of a reduction of body-temperature below the normal, therefore, absolutely little abstraction of heat. (2) Increase in the irritability of the peripheral nerve termination, by means of preparatory heat-accumulation or heat-supply. (3) Vigorous nerve-stimulation by means of water at the lowest possible temperature. Dr. Frank Billings, in an article on pernicious anemia, states that hydrotherapy applied in the form of high enemata of normal salt solution, repeated 2 or 3 times in the 24 hours, is of service. This treatment is based on the theory that the disease is of probable toxic origin, with the seat primarily in the intestines.

GYNECOLOGY AND OBSTETRICS.

Colpeurynter.—Dr. Lee (*Illinois Medical Journal*, December, 1902) gives the uses of the colpeurynter in obstetrical practice and a historical sketch of the instrument. Its value is noted in induction of premature labor, hastening delivery or preparing for rapid delivery after symphysiotomy or version; in stenosis or rigidity of the cervix or weak pains in cases of dry labor; in shoulder presentation as a substitute for the bag of waters which has ruptured; in prolapse of the cord; in lifting up the pregnant uterus for hyperemesis, or to replace a retroflexed, incarcerated uterus; and especially in placenta previa, particularly in cases in which the os is not fully dilated. He urges a wider employment of the rapid, simple procedure.

Surgical Treatment of Uterine Cancer.—Jonnesco (*Revue de Gynécologie*, October, 1902) advocates removal of the uterus and adnexa in case of cancer, removing also the cellulofatty tissue of the pelvis, iliac fossa and lower lumbar regions, with all the lymphatic vessels and ganglia contained in it. The field of operation is drained through the vagina, the long wicks replaced by a short one in 24 hours. He proclaims that this thorough evacuation is a rational, possible, benign, easy and effective operation for removal of malignant disease, when the lesion is circumscribed, and it is possible to remove everything and leave none of the cellular tissue and lymph ganglia. The free margin of the pelvic colon is sutured to the iliac and vesical peritoneum to shut off the abdominal cavity. He does not undertake this operation unless the patients are still in comparatively good health. He has operated by this method 18 times during the last 2 years. In 10 cases the cancer was circumscribed and the patients recovered rapidly. In 8 the parametrium was already involved, and 3 of the patients have since died. There has been no recurrence in any of the cases reported.

Hysterectomy for Puerperal Infection.—Treub (*Revue de Gynécologie*, October, 1902) has treated 690 patients with puerperal infection who have recovered and 34 who have died. In 6 of the latter number there were no clinical signs of any infection outside of the uterus, but the autopsy disclosed acute septic nephritis, purulent thrombosis or some other serious lesion in all but 2. Consequently, out of the total number there were only 2 that might have been saved by a timely hysterectomy. He has collected 36 cases of ablation of the uterus as a means of treating puerperal infection with no extra-uterine localization or uterine complication such as retention of placenta, fibromata, etc. Fifteen out of the 36 recovered, and they might have recovered without the hysterectomy as he corroborates by certain cases in his experience which came to a spontaneous favorable termination, although apparently doomed. Bacterial examination of the blood is no criterion. Treub has known cases of pyohemia following criminal abortion which recovered spontaneously, and consequently does not endorse Freund's opinion on this subject. Nor does he agree with Cartledge in his assertion that "nonoperative treatment of puerperal infection, if it is going to be successful, will arrest it in 3 days." Puerperal infection does not go by the clock, he remarks. He also refutes Vineberg's assertion that a pulse of 130 indicates a fatal prognosis, as numbers of his patients who afterward spontaneously recovered had a higher pulse than this. In short, there are no absolute indications at present for hysterectomy in puerperal infection. In a few exceptional cases it may succeed after obstetrical treatment has completely failed. This abstract is quoted from the *Journal of the American Medical Association.*

Steinbuchel (*Centralblatt für Gynäkologie*, No. 48, *Jour. Amer. Med. Ass.*, Jan. 10, 1903) portrays the benefits derived from a harmless anesthetic which banishes pain for a few hours without effecting the contraction of the uterus, injuring the child or inducing consecutive atony of the uterus, such as is liable to follow chloroform. He accomplishes this by the scopolamine-morphine method of anesthesia. The narcotic effect of the 2 drugs are superposed, while their other effects are apparently mutually neutralized. He injects first half a syringeful, and after 2 hours a full syringeful. The dose was 0.0003 of scopolamine and .01 gm. of morphine to the syringeful. With the exception of a brief period of excitement in a very nervous primapara, 42 years old, he never witnessed the slightest by-effects from this method of anesthesia in his extensive experience. If necessary, a few whiffs of ether or chloroform may supplement it in case long surgical intervention is required.

PHARMACOLOGY.

Untoward Effects of the Salicylates on the Urinary Tract.—Dr. H. Luthje, of Greifswald, (*La Semaine Médicale*, October 8, 1902) has made a series of experiments on 33 rheumatic patients to determine the effect exerted on the urinary organs by salicylates. Before commencing the treatment the urine was carefully analyzed to make sure of the absence of albumin and other pathological products. Then either sodium salicylate in the daily dose, 45 to 75 grains, taken in 3 portions, an hour apart, or salol in the quantity of 15 grains 3 or 4 times daily, was prescribed. The urine was frequently examined during the treatment. None of the patients remained exempt from urinary trouble; very often albuminuria was noted, as well as the presence of white corpuscles and erythrocytes in the urine; epithelial formations coming from all parts of the urinary apparatus were almost always present and quite constantly granular and hyaline casts; finally, considerable quantities of calcium oxalate crystals were present nearly always in the urine. The larger the dose of the drug and the shorter the intervals between the doses, the more pronounced were the phenomena of renal irritation. One patient developed a renal nephritis, which continued a long time after stopping the medication. The characteristic reaction of salicylic acid (blue coloration with ferric chloride) could hardly be obtained in the urine voided in 2 to 4 days after discontinuing the treatment; whereas the abnormal constituents persisted for a fortnight on the average. In view of these observations, the author is of the opinion that the prolonged use of the salicylates should be condemned, and that these remedies should only be used in acute rheumatic affections; and he advises not to give more than 60 to 75 grains a day, and not to continue the treatment longer than 3 or 4 days.

Hydrogen Peroxide as a Depilatory.—Dr. P. Gallois, (*Nouv. Rem.*, XVIII, No. 22) states that hydrogen peroxide affords a simple, harmless and painless means of removing superfluous hair. A piece of cotton is moistened with the solution and applied to the region to be treated and left in place for several minutes. The procedure is repeated daily until the desired result is obtained. The hair gets lighter and lighter in color and finally disappears. Of course, the hair follicles are not destroyed, so that the hair will grow again, necessitating another course of treatment.

Restoration of Sight in a Nearly Blind Cancerous Eye by Cancroin.—Adamkiewicz (*Medicine*, Jan., 1903) relates the following case: A woman, aged 42 years, underwent 2 operations for carcinoma of the breast. The disease again returned in the region of operation and metastases occurred on the forehead and probably in the hip joint. Sight in the left eye gradually became less acute until the organ was practically worthless; examination revealed a cancerous infiltration of the choroid with partial loosening of the retina. The day following the beginning of the injections of cancroin some improvement was noticed. Later the carcinomatous tissue in the region of the original operation disappeared and vision was restored.

On the Pharmacology of Hedonal.—Baklanoff (*Vratchebnaja Gazeta*, No. 18, 1902), in a preliminary note, presents the following conclusions from a series of experiments on animals: (1) Hedonal undoubtedly belongs to the powerful hypnotics, on condition that it is not used constantly. (2) In warm- and cold-blooded animals hedonal produces a marked depression of the central and peripheral nervous systems. (3) Hedonal does not possess any diuretic properties. (4) In therapeutic doses hedonal does not disturb the respiration. (5) After hypnotic doses the temperature of the body of the animal falls 3-6 degrees.

Dionin in Mania and Sexual Excitement.—M. Maevsky (*Nevrologitchesky Vjestnik*, Vol. X, No. 1. 1902) employed dionin in a considerable number of cases of acute mania and sexual excitement, especially masturbation. The drug was used hypodermically, in doses of 0.04-0.05 gm. The effect of this drug is similar to that of morphine without the poisonous and other objectionable properties of the latter. In the treatment of masturbation it exerted a beneficial influence during the time of administration, the effect subsiding soon after the discontinuance of the treatment. Nevertheless, the author believes that the drug is a valuable remedy in acute masturbation as the result of some psychosis.

Uresin (Citro-urotropin-dilithic Salt) as a Uric Acid Solvent.—Spassky (*Russky Vratch*, Vol. 1, No. 47) elaborated in 1898 three preparations of urotropin, namely, a citro-urotropinic salt, a citro-diurotropin-monolithic salt and a citro-urotropin-dilithic salt, or uresin. The latter has been since tried by the author and other physicians in uric acid diathesis, and the results obtained, compared with those produced by the following preparations: Urotropin, sidonal, Contrexeville water and Salvator water, would seem to prove the superiority of uresin. The latter, according to the author's explanation, acts either as a solvent or by changing the chemical composition of the uric acid. The lithium acts not as a solvent of the uric acid, but by influencing nitrogen metabolism.

Turpentine in Perityphlitis.—In the course of his researches on the use of pyogenic agents, Moritz Mayer (*Semaine Médicale*, XXII, No. 34) discovered the value of turpentine in suppurative conditions. A case of purulent pleurisy having been favorably influenced by turpentine, the author then employed the same remedy on 12 perityphlitic patients. He prescribes essence of turpentine or, preferably, the essential oil of the Austrian pine, in 3-drop doses, 2 to 4 times daily. This may be given in ether or in yolk of egg. The rectal route may be utilized when the stomach rebels. This internal medication may be supplemented by external turpentine applications whenever a certain degree of resistance is noted in the ileocecal region. The remedy should be discontinued on the appearance of trouble. The respiratory apparatus should also be watched. The author saw bloody expectoration follow turpentine-medication in a patient with infiltrated pulmonary apices.

DISEASES OF THE NERVOUS SYSTEM.

Arsenic in Chorea.—In 1890 Dr. F. M. Pope, of Leicester, (*British Medical Journal*, 1902, No. 2181) reported a series of cases of chorea treated with rapidly increasing doses of Fowler's solution. At the recent meeting of the British Medical Association he reported on his 12 years' further experience with the treatment, and presented a summary of effects and the method of administration by which bad results may be reduced to a minimum. Certain cases, he says, are obviously unsuited for this treatment—very acute cases with coma or paralysis; those that have been treated for some time with small doses of arsenic; when there is reason to suppose a rheumatic process is going on in acute form; when there is advanced cardiac disease; when the patients are intolerant of the treatment. In all suitable cases the author gives arsenic in accordance with the following principles of administration: See that the tongue is clear before commencing the treatment; if not, give a small mercurial purge and a stomachic mixture for 48 hours. Put the patient on a bland and easily digested diet. Give the drug in a much diluted form, and in the same dilution throughout. The author usually gives 2½ min. of Fowler's solution in 1 oz. of water as the first dose to a young child; and when increasing the dose gives a larger quantity of the same mixture instead of increasing its strength. For example, a child of 5 years would have 1 oz. 3 times on the first day, 2 oz. as frequently on the second, 4 oz. on the fourth, and so on as long as no unpleasant symptoms manifest themselves. The stomach is much more tolerant of the drug under these conditions. The smaller and earlier doses are usually given after meals; the larger ones during meals. In adults the treatment may be commenced by giving 2 or even 3 oz. of the mixture thrice daily as a dose. This is equivalent for children to an initial dose and daily increase of 1/40 gr. of arsenious acid thrice daily, the dilution being about 1:50,000 or 0.002 per cent. Do not discontinue on the first attack of vomiting. This is often due to accidental causes, and the patient may be able to go on for 2 or 3 days without a recurrence. Increase the dose daily. A daily increase of 2½ min. to each dose is usually well borne. Keep with patient in bed throughout the treatment. If the vomiting persists, discontinue the drug for 24 hours, and then give the same dose as the last. Examine the patient very carefully for any sign of toxic action. According to the author, patients treated in this way usually show much improvement in the course of 3 or 4 days; the movements are more easily controlled, and if they have not entirely disappeared in 7 or 8 days the disease will almost always have been a trifling one, the patient being able to feed himself, take ordinary diet, and he may be allowed to get up and take outdoor exercise. In some cases a return of the movements may take place, when the patient should be put back to bed, and the treatment resumed with 3 or 4 oz. of the mixture. On discontinuing the arsenic, a mixture containing iron is usually given for a few days.

Calcium in Epilepsy.—Audenino and Bonelli (*Giornale della Accad. di Med.*, LXV) have published the result of investigations which demonstrated that the proportion of earthy phosphates eliminated was much below normal in the cases of moral insanity examined. The present communication describes similar researches on 19 epileptics, and an almost constant subnormal proportion of the earthy phosphates was similarly demonstrated in 88 out of 91 examinations of urine and feces. This defective elimination did not parallel the general diminution of the chemical processes observed in epileptics. Nine of the subjects were given calcium in various forms, and in 5 there was slight increase of the earthy phosphates in the urine, and a large increase in the feces after administration of 2 to 8 gm. of calcium bromide, or one to 2 gm. of the carbonate, lactophosphate or glycerophosphate, or lime water. These were all old severe cases. In the other two patients the epilepsy was severe, but of more recent date. The calcium was eliminated principally through the urine and but little was found in the feces. A marked improvement followed the administration of the calcium, and one patient was dismissed as cured, there having been no seizure for 4 months. The particulars of the elimination and the absorption are tabulated in typical cases.

Diet in Asthma.—Jack (*Buffalo Medical Journal*, December, 1902) dwells upon the importance of a properly selected and individualized diet in asthma, as this disease depends on the functions of the blood and lungs, the blood carrying the alimentary substance throughout the system, and itself undergoing very important modifications in the lungs. He thinks that asthma is always on the borderland of severe blood conditions, such as leukemia, pernicious anemia, cerebral hemorrhage and hemorrhagic conditions of the respiratory mucosa. On account of these vicious, progressive tendencies a diet must be given such as will replace the waste of the disease and prevent intestinal fermentation and putrefaction. It must be of such a character that it will not, after absorption, readily undergo chemical metabolic changes in the blood. It must also be of such a character that it can be persisted in for many years. The misery of the disease and malnutrition from impoverished blood cause melancholia, which in turn materially interferes with the digestive function. He reviews the various types of asthmatic lymphocytosis and asthmatic toxic leukocytosis. In the former cases, he thinks, in children it is advisable to substitute the bottle for the breast, completely or partially, especially in cases of breast-fed infants with prominent cyanotic attacks of increasing severity. In toxic leukocytosis he would carefully watch the stools, blood and urine, as well as the general condition of the patient, and give a fairly elaborate diet without much sugar, but largely composed of vegetables, which he enumerates. Animal foods are most apt to cause deleterious changes in the intestines, and if the stools become alkaline they should be diminished, while if they become acid the carbohydrates should be limited. Meat should also be interdicted or diminished if there is a marked leukocytosis exceeding that of normal digestion, but if there is iodophilia of the blood, then carbohydrates should be cut off. His conclusions are: If, on a differential count the blood shows a high percentage of small lymphocytes, milk should be diminished or withheld. An abnormal increase in the polymorphonuclear neutrophilic cells indicates an intestinal toxemia and putrefaction which suggests the withholding of meat foods. A pronounced iodophilia indicates an amyloid or starchy degeneration of the blood and suggests withholding the foods rich in starch. A thin, watery blood with a deficient plasma and a red corpuscle poor in hemoglobin and deficient in biomagnetism, as shown by the lack of rouleaux formations and the scattering of the red bloodcorpuscles about the field, indicates the giving of fresh bloody meat, raw eggs and green vegetables rich in chlorophyl and protoplasm.

DISEASES OF THE EYE.

Hot and Cold Water in Eye Diseases.—The employment of hydrotherapeutic measures in the treatment of diseases of the eye is considered by W. O. Nance (*Medical Standard*), who summarizes as follows: (1) Hot and cold are best applied to the eyes by means of moist pads. They are more efficacious when employed in this manner than by means of the coil or bladder, in that their action is more penetrating, and their effect is more germicidal. (2) The application of heat is indicated in degenerative corneal processes—interstitial and phlyctenular keratitis, corneal ulcers, pannus, infected corneal wounds, suppurative panophthalmitis, in iritis and cyclitis, in muscular spasm, and in contusion and ecchymosis of the lids (black eye) and to hasten the absorption of extravasated blood. (3) The application should be of the highest temperature the patient can endure (110° to 135°) for a period of 15 minutes, and repeated at intervals of 2 or 3 hours for several hours. (4) Cold is indicated in hyperemia and inflammations of the conjunctiva. In purulent conjunctivitis it is the remedy *par excellence*. In traumatisms, especially those of the iris and lens, and in the early treatment of contusion of the lids, its employment is of value. (5) In purulent conjunctivitis iced applications may be continuously used for several hours so long as the cornea remains unimpaired, in which instance they are positively contra-indicated. (6) Hot applications generally assist the absorption of various medicaments employed in ophthalmic practice and, when used for this purpose, should immediately precede the installation of such solutions.

MISCELLANEOUS.

Burns and Scalds.—These points are mentioned by Piquard (*Medical Fortnightly*, December 25, 1902), in discussing injuries from railroad accidents: (1) The frequency of serious complications; (2) the need of thorough sterilization of the parts after removing the first of the temporary dressings. He uses a mild carbolic acid solution here for its antiseptic qualities. Moist dressings of saturated solution of picric acid are very useful in suppurating cases. In bad scalds of the hand it is very essential that the hand be straightened and placed in that position on a flat splint and kept there until well, otherwise the strong flexors will so contract the fingers as to make the hand useless. The same must be remembered in relation to burns or scalds of the popliteal space, the elbows and the wrists, where mechanical appliances must also be used to prevent deformity.

Formulae.

DISEASES OF THE HEART AND BLOODVESSELS.

Caffeine Mixture.—Yeo, in *Manual of Medical Treatment*, advises the following:

Caffeine	16 gr.
Sodii benzoatis	16 gr.
Syrupi floris aurantii	3 dr.
Aquæ	q. s. ad. 4 oz.

M. f. mist. A tablespoonful for a dose.

Aortic Incompetence With Congestion and Edema of Lungs and Bronchial Catarrh.—Balfour recommends the following combination in the treatment of this condition:

Ammonii carbonatis	1 dr.
Tincturæ hyoscyami	4 dr.
Potassii iodidi	1 dr.
Tincturæ digitalis	1 dr.
Infusi calumbæ	q. s. ad. 6 oz.

M. f. mist. A tablespoonful every 4 hours.

In Hypertrophy With Aortic Regurgitation.—Da Costa recommends the following combination to be used in the treatment of this condition:

Tincturæ aconiti	1 *m.*
Tincturæ veratri viridis	3 *m.*
Tincturæ zingiberis	7 *m.*
Aquæ	q. s. ad. 1 oz.

M. f. haustus. To be taken 3 or 4 times a day.

Powders For Cardiac Hypertrophy.—Matlack uses the following combination in cardiac hypertrophy:

Asparagin	10 gr.
Potassii bromidi	2 dr.
Sacchari albi	3 dr.

M. et divide in pulv. 10. One 3 times a day.

Pills For Cardiac Dilatation.—The following is used by Da Costa in the treatment of this condition:

Pulveris digitalis	5 gr.
Extracti belladonnæ	1 gr.
Ferri redacti	40 gr.

M. et divide in pulv. 20. One 3 times daily.

Mixture For Simple Dilatation.—Bartholow gives the following mixture in simple dilatation:

Extracti ergotæ fluidi	3½ oz.
Tincturæ digitalis	½ oz.

M. f. mist. A teaspoonful three times a day in water.

In Cardiac Asthenia and Dilatation.—Schnitzler gives the following formula for use in this condition:

Pulveris digitalis	3 gr.
Quininæ sulphatis	15 gr.
Pulveris rhei	15 gr.
Sodii bicarbonatis	15 gr.

M. et divide in pulv. 10. One twice a day.

Fatty Degeneration.—For this condition Whitla recommends the following:

Spiritus aetheris	1 oz.
Tincturæ belladonnæ	2 dr.
Spiritus ammoniæ aromatici	1 oz.
Tincturæ zingiberis	6 dr.

M. f. mist. A teaspoonful in a wineglassful of water when dyspnea is severe.

Hypodermic Injection of Camphor in Cardiac Disease When Digitalis Fails.—Alexander states that camphor sometimes renewed the effect of digitalis when used in the following combination:

Camphoræ	1 dr.
Olei oilvæ	9 dr.

M. Fifteen drops for a dose.

Drops for Palpitation.—The following drops for palpitation Schnitzler considers good:

Tincturæ digitalis	2 dr.
Tincturæ valerianæ	2 dr.
Ferri acetatis aetheris	3 dr.

M. f. mist. Twenty-five drops in water 3 times a day.

For Cardiac Asthma.—In cardiac asthma Bamberger has found the following to be of service:

Tincturæ digitalis	1½ dr.
Tincturæ lobeliæ	1½ dr.
Aquæ laurocerasi	3 dr.

M. Five drops every hour.

For Cardiac Dyspnea.—For this condition See uses the following combination with good results:

Potassii iodidi	20 gr. ad. 30 gr.
Chloral hydrate	½ dr. ad. 1 dr.
Mucilaginis acaciæ	4 dr.
Syrupi floris aurantii	4 dr.
Aquæ	q. s. ad. 4 oz.

M. f. mist. A tablespoonful every 2 hours.

Pills for Nervous Palpitation.—Withering prescribes the following combination for nervous palpitation:

Pulveris digitalis	75 gr.
Pulveris asafœtidæ	75 gr.
Syrupi, quantum sufficiat	

M. f. pilulæ centum. One to 4 pills daily.

For the Anginal Paroxysm.—Powell recommends the following in the treatment of this condition:

Spiritus ammoniæ aromatici	1 dr.
Sodii bicarbonatis	10 gr.
Tincturæ cardamomi compositæ	1 dr.
Spiritus chloroformi	20 *m.*
Solutionis nitroglycerini (1 per cent.)	1 *m.*
Aquæ	q. s. ad. 1½ oz.

M. f. haust. To be slowly sipped on the commencement of symptoms.

Anginal Attacks.—In anginal attacks Seguin prescribes the following:

Ethyli bromidi	½ dr.
Aquæ destillatæ	12½ oz.

M. Two to 4 tablesponfuls for a dose.

For the Intervals in Angina Pectoris.—Gallois prescribes the following to be given in this condition:

Quininæ sulphatis	½ dr.
Acidi arseniosi	½ gr.
Extracti valerianæ	q. s.

For the Anginal Attack.—Gallois uses this combination in anginal attacks:

Tincturæ digitalis	
Tincturæ belladonnæ	
Tincturæ valerianæ	
Spiritus aetheris compositi	āā 1 dr.

M. f. tinct. Ten to 20 drops during the attack.

Angina Pectoris.—Huchard recommends the following formula to be used in the treatment of this condition:

Sodii iodidi	80 gr. ad. 160 gr.
Sodii arsenatis	¾ gr.
Aquæ destillatæ	q. s. ad. 5 oz.

M. f. mist. Two or 3 teaspoonfuls daily.

Cardiac Tonic.—Bruce recommends the following cardiac tonic:

Tincturæ digitalis	5 *m.*
Tincturæ ferri perchloridi	10 *m.*
Acidi phosphorici diluti	10 *m.*
Aquæ	q. s. ad. 1 oz.

M. f. haust. To be taken 3 times a day immediately after meals.

For the Cough of Aneurysm.—Balfour recommends the following combination to be used in the treatment of the cough of aneurysm:

Morphinæ hydrochloridi	1 gr.
Acidi hydrochlorici diluti	5 *m.*
Acidi hydrocyanici diluti	½ dr.
Syrupi scillæ	1 oz.
Aquæ	1 oz.

M. f. mist. A teaspoonful occasionally.

Pills for Arteriosclerosis With Feeble Heart.—The following formula is given by Huchard as an excellent one in this condition:

Sodii iodidi	1 dr.
Sparteinæ sulphatis	15 gr.
Pulveris glycyrrhizæ,	q. s.

M. f. pil. 40. Four to six daily. (To be kept in a dry place).

Hypodermic Injections of Ergotin in Aneurysm.—Langenbeck recommends the use of the following:

Ergotin (Bonjean)	40 gr.
Spiritus vini rectificati	80 *m.*
Glycerini	80 *m.*

M. f. solut. Inject 3 centigrams under the skin over the tumor.

Combination of Iodine and Bromide in Aneurysm.—Jaccound recommends the use of the following combination in aneurysm:

Potassii iodidi	2 dr.
Sodii bromidi	2 dr.
Syrupi floris auranti	4 dr.
Aquæ	q. s. ad. 6 oz.

M. f. mist. A tablespoonful 3 times a day.

DERMATOLOGY.

Liniment For Fissured Nipples.—Scarff (*La Presse Méd. Belge*, July 20, 1902) recommends:

Balsam of Peru	3½ dr.
Tincture of arnica	3½ dr.
Oil of sweet almond	3 oz.
Lime water	1½ oz.

Treatment of Corns.—Ritter (*Wisconsin Medical Recorder*) states that hard corns may be softened by prolonged soaking in a warm solution of washing soda, when the corn can be removed by scrapping with a sharp knife. The tender surface should be covered with a salicylic acid plaster. This same procedure should be repeated for 2 or 3 days. Another method is to soak the foot in hot water 20 minutes or half an hour before retiring and apply over the corn every evening the following:

Salicylic acid	30 gr.
Ext. cannabis indica	5 gr.
Glacial acetic acid	5 gr.
Oil turpentine	15 *m.*
Cocaine	5 gr.
Collodion	q. s. ad. 4 dr.

Or, if preferred:

Salicylic acid	30 gr.
Ext. cannabis indica	10 gr.
Tinct. iodine	10 *m.*
Collodion	q. s. ad. 4 dr.

The latter should be applied morning and evening for 5 or 6 days, and then removed with the corn by soaking in hot water.

MISCELLANEOUS.

Tympanites.—The following is a widely used and well recommended formula, (*Jour. Amer. Med. Ass.*,):

Magnesii sulph.	2 oz.
Spts. terebinthinæ	1 dr.
Tinct. asafetidæ	1½ oz.
Mucilag. acaciæ	2 oz.
Aquæ destil.	q. s. ad. 1 pt.

M. S.: As an injection by a high rectal tube.

Tonic Pill.—An excellent tonic pill is made up as follows:

Iron sulphate, dried,	
Potassium permanganate	
Quinine sulphate, of each,	1 gr.
Mercury bichloride	1/40 gr.

The Water of Pagliari is a preparation much employed in France (says *New York Medical Journal*) as a hemostatic in hemorrhages accessible from without, as in the skin, the mucous membrane, nose, mouth, etc. Professor Gilbert (*Journal de médecine interne*, August 1) gives the formula as follows:

Crystallized alum	150 gr.
Gum benzoin	75 gr.
Distilled water	3 oz.

Treatment of Acute Albuminuria After Scarlet Fever.—The following is recommended by Otto Maier (*Post Graduate*):

Pilocarpinæ hydrochlor.	1 gr.
Infusi digitalis	3 oz.

M. S.: One teaspoonful every 3 hours.

He also recommends that a hot bath be given daily and a diet consisting of milk and ice cream. To promote elimination by the bowels give the following:

Hydrarg. chloridi mitis	2½ gr.
Pulv. jalapæ	4½ gr.

M. ft. chart No. 1.

S.: One such to be taken twice a week.

For Muscular Rheumatism.—

Acid salicyl.	
Tinct. benzoin.	
Ol. terebinthæ	āā 5.0
Lanolini	15.0
Ol. olivæ	25.0

M : Ft. linimentum.

S.: Apply externally.

—*Practitcheski Vratch.*

La Grippe.—The pulmonary forms of la grippe sometimes become very stubborn to treatment. The following is recommended by *La Médecine Moderne*:

Pulv. terpin.	4 gr.
Sodii benzoatis	
Benzonaphthol	āā 3 gr.
Sparteinæ sulph.	½ gr.
Quininæ hydrochlor.	2½ gr.

M. ft. cachet No. 1.

S.: One such cachet to be taken 4 times daily, or:

Pulv. terpin.	4 gr.
Sodii benzoatis	3 gr.
Potassii iodidi	1½ gr.
Benzonaphthol	3 gr.
Quin. hydrochlor.	2½ gr.
Pulv. nucis vom.	¼ gr.
Sparteinæ sulph.	½ gr.
Ergotin	5 drops

M. ft. cachet No. 1.

S.: One such 4 times daily.

The following is recommended to control the cough:

Pot. bromidi	3 gr.
Codeinæ	1/6 gr.
Antipyrini	4½ gr.
Morph. hydrochlor.	1/8 gr.

M. ft. capsula No. 1.

S.: One such to be taken 2 or 3 times a day.

To ameliorate the catarrhal symptoms the following combination is also recommended:

Pulv. ext. belladonnæ	4 gr.
Codeinæ	4 gr.
Pulv. capsici	4 gr.
Euquininæ	1 dr.
Acetanilidi	1 dr.

M. ft. chart No. 20.

S.: One powder every 3 or 4 hours, or:

Quininæ salicylatis	36 gr.
Acetanilidi	24 gr.
Pulv. camphoræ	4 gr.
Pulv. capsici	2 gr.
Pulv. ext. belladonnæ	2 gr.

M. ft. capsulæ No. 12.

S.: One every 3 hours if necessary.

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See Advertising Page 8

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Some Radical Legislation.—Our readers are mainly physicians, who as citizens and medical men have a twofold interest in maintaining a high-service standard of care in the state hospitals for the insane, and in other hospitals. If it were worth the while to create these hospitals—a work which physicians were primarily and mainly interested in successfully bringing about—it is still their duty to safeguard them from any unwise measures of legislation under whatever guise they may be presented, or from what may appear to be in the nature of a "grab." Attention is called to Senate Bill No. 78, now pending in the Legislature of Pennsylvania, entitled "An Act to Establish a Board of Commissioners of Charities and Correction," and to define the powers and duties thereof, etc.

Section 1, authorizes the Governor "to appoint a commission to consist of three reputable citizens of the Commonwealth who shall constitute a commission to be called a Board of Commissioners of Charities and Corrections, fixing the term of service at six years, at a salary of five thousand dollars annually, and an allowance in addition of one thousand dollars for expenses."

Section 16, provides that "Boards of Trustees, Inspectors or Managers of the various institutions that are subject to the provisions of this Act shall remain as heretofore constituted by law, and shall exercise all the powers and be subject to all the duties now possessed or imposed upon them, *except as the same may be altered by this Act.*"

Section 17, provides that the "Board shall have full and exclusive control over the appointment, discharge and compensation of superintendents, wardens, physicians, stewards and all other employes in all of the State Hospitals for the Insane, in the Eastern and Western Penitentiaries, in the State Reformatory located at Huntingdon, in the State Hospital for Feeble-Minded located at Polk, and in all of the Hospitals owned and maintained by the State in the anthracite and bituminous coal districts, and in all similar institutions now in process of construction, or hereafter established" . . . They may "prescribe such tests for the fitness of applicants for appointment as they may deem wise, and may apply such tests to all applicants, or to certain classes only, in their discretion." . . . The Board may also "delegate such power to the local Boards of Trustees, Inspectors, or Managers." . . .

Section 18, provides they "shall have power to regulate and control the purchase of all supplies required for the use of any of the Institutions named in Section 17 of this Act." This Section also contains regulations as to the manner of preparing the requisitions for supplies for a period of three months ensuing, and also provides for methods of advertising the requisitions, and for awarding the contracts.

Section 22, provides that "no county, municipality, borough or township which has not heretofore taken advantage of the Act entitled 'An Act providing for the maintenance, care and treatment of the indigent insane in local and county institutions," approved May 25, 1897, by the erection and equipment of a building for the maintenance, care and treatment of its indigent insane, shall hereafter be entitled to avail itself of the provision of said Act."

From this phraseology we might infer that the present policy of making provision for the insane in and by counties is to be halted and reversed.

Section 28, provides that "this Bill, if enacted and shall become a law, shall take effect July, 1903, and from and after which date the State Board of Charities and Committee on Lunacy shall cease to exist, and from and after that date all the powers and duties now possessed by, and imposed upon, either of them shall be possessed and imposed upon the Board of Commissioners of Charities and Corrections."

This bill, as we understand, comes from a committee appointed by the last Legislature, to inquire into the condition of the insane in the State Hospitals and other institutions subject to visitation and inspection by the State Board of Charities and the Committee on Lunacy. The bill was accompanied by a report which we assume contains reasons for recommending the various changes which are noted in the sections of the bill presented.

From what we can infer from the sections, the changes that are contemplated in this bill are of a most radical character. They are not an evolution, but amount to a revolution. The present Board of State Charities is abolished, and the Boards of Trustees and Inspectors of the several hospitals and institutions named are virtually stripped of their powers, as but little will be found to be left of their present duties for them to perform, and that little is not clearly seen in the bill. It is to be regarded as unfortunate that the hospitals for the insane are grouped with the penitentiaries and reformatories.

There is nothing in common between them except the supply of stores. The qualification for service on a Board to govern these various institutions might have been more clearly defined. "Three reputable citizens" certainly will give the Governor a wide latitude in making a selection, but we shall trust and believe, if the bill is not amended in this respect, that he will consider professional attainments, familiarity with mental disease, penology, legal qualifications and business experience as having a higher claim to his consideration than simply reputable citizenship with all that might be implied and covered under that term.

It is estimated that the expenditures of the Commission, or more properly, to be authorized by this new bureau of our State government, will be rather over than under $3,000,000, and the appointments to office to be made under its authority might exceed 1,500, the whole of which expenditure and office patronage would under certain circumstances come within the purview of this triumvirate. The possibilities are amazing for good or otherwise!

A Transverse Lesion of the Spinal Cord in a Newborn Infant.—The case reported by Dr. Davisson and Dr. McCarthy in this issue of the **Journal,** has special interest both to obstetricians and to neurologists. It appears to us to have been indubitably an instance of a very rare form of birth-palsy—so rare, indeed, that our impression is that very little is recorded in the literature of the subject. That infants in the process of being born may suffer grave injury to the nervous system is, of course, a well-known fact—and the wonder is that such injuries are not more frequent; but that an infant can thus suffer what amounts to a total transverse lesion of the spinal cord, without injury to the spinal column, is a very remarkable demonstration. Some one has well said that it may be as painful to be born as to die. However that may be, the act of being born is in some instances an exceedingly hazardous process.

In the case of Dr. Davisson and Dr. McCarthy we should judge that the primary lesion had been vascular, and that the result was a hematomyelia which eventually caused disintegration of the delicate structure of the almost embryonal cord. Those persons who have dissected the central nervous system of an embryo or of a newborn child know how delicate, almost diffluent, this tissue is. The wonder is that it can withstand the strain sometimes put upon it by the obstetrician in those grave crises in which the life both of the mother and the child is the issue.

From the neurological standpoint this case is of rare interest as an instance in which an accidental and tragic experiment was unwittingly performed on the spinal cord of a newborn infant. Dr. Davisson has so fully discussed this aspect of the case that there is little to add. It unfolds the whole subject of the abolition of the deep reflexes in transverse lesions of the cord—a subject of very considerable physiological as well as pathological interest. This case presents this problem in what we may call its very rudiments, for surely it is not often that such a case occurs, and when it occurs, that a competent man is at hand to record it. In brief, Dr. Davisson's case exhibits an instance of *flaccid* paralysis of the lower limbs with complete abolition of the reflexes, and Dr. McCarthy's examination shows that this was due to a total transverse lesion. Nothing could be more exact. The case should take rank with the recent experimental studies of Turner on the monkey. But it is a unique case, in that it occurred in a human subject *neonato,* and in that it throws a rare light upon the state of the reflexes and their abolition in very exceptional circumstances.

Intravascular Antisepsis.—Fortescue-Brickdale has contributed an interesting paper upon this subject in the *Lancet* of January 10, 1903. He deals with the results of a series of experiments conducted on animals with mercury perchloride, mercury oxycyanide, formic aldehyde, chinosol, a mixture of formic aldehyde and chinosol, protargol, and sodium taurocholate. His first series of experiments was made with the object of determining whether it would be possible to establish some tolerance for these drugs. He found that mercury perchloride, mercury oxycyanide, and protargol cannot be injected intravenously into rabbits in sufficient strength to produce an antiseptic effect lasting over several days. The mixture of chinosol and formic aldehyde was found to be too toxic even in minute doses to be of use for practical purposes. Chinosol, or formic aldehyde, can, however, be injected intravenously so as to produce a solution which would have an inhibitory action *in vitro.* Sodium taurocholate can be injected in small doses, but toxic effects are manifested after several days. In the second series of experiments the same substances were used for injection in infected animals, and the conclusions which are drawn from these latter experiments are of especial interest. Brickdale found that rabbits injected daily with nontoxic doses of mercury oxycyanide, formic aldehyde, chinosol, protargol, or sodium taurocholate, are not thereby protected from the usual effects of virulent anthrax. Chinosol and formic aldehyde in large doses so depress rabbits infected with the pneumococcus that they die sooner than an untreated animal. He concludes that there is no experimental evidence warranting the assumption that the course of a septicemia in animals can be influenced favorably by the intravenous injection of antiseptic substances, and that the only result to be obtained by pressing such a treatment beyond the maximum nontoxic dose is to hasten the death of the animal. The publication of Brickdale's paper at this particular time is especially important in the fact that it discourages on sound grounds such illogical methods as the formalin treatment of septicemia.

The Therapeutics of Uterine Subinvolution.—The treatment of subinvolution must include efforts in two distinct lines. The removal of the cause is most important. It is curious to note how an apparently trifling matter will result in a serious retardation in the process of involution. A small vaginal or perineal tear will do this, and to the superficial observer the relationship between this lesion and the uterine subinvolution will not be apparent. It is not to be wondered at, therefore, that the smaller as well as the larger cervical lacerations will exert an equal or a greater evil effect upon the uterine tissues. The old method of prolonged dorsal decubitus after parturition was fruitful to the extreme in the production of uterine displacements with consequent congestion and subinvolution. The repair of these lacerations in the lower birth-canal is most effective in hastening the involution of the uterus. In the graver forms of cervical laceration, associated with cervical endometritis and extensive erosion, local treatment of the catarrhal condition not infrequently fails. In these cases amputation of the cervix is most beneficial. The discovery of Jouin a few years ago wrought a remarkable change in the therapeutics of subinvolution. He noted that the administration of thyroid extract resulted in a rapid fatty metamorphosis of tissue, and that it favored the dissipation of fatty deposits throughout the body. He accordingly advised its employment in the treatment of obesity. Some of the patients so treated, who were known to be suffering from uterine subinvolution, were shortly found to be vastly improved in their uterine condition. The drug was therefore deliberately given to patients with subinvoluted uteri and with marked results in many cases. A feature which further recommended the use of the extract in the early cases of subinvolution, discovered during lactation, was that the mammary secretion increased during the course of treatment. It would seem, therefore, that, if the thyroid extract associated with general tonics and local antiphlogistic measures be the course of treatment adopted in the early stage of subinvolution, a most beneficial and rapid result may be anticipated in many cases.

"Medically Insane."—It takes a lawyer to define insanity. The whole subject of psychiatry should be handed over to the law-courts, with a humble petition to the judges to do what they think best with it. Last week Judge Herrick, of New York, in the trial of Brigham Young's grandson for murder, pronounced the self-confessed criminal to be "medically insane." As he was not "legally insane," he could not be acquitted; but as he was "medically insane," he ought not to be electrocuted; and so the matter was compromised, and Young was sent to prison.

According to this definition there are two kinds of insanity—"medical" insanity and "legal" insanity. This distinction is based upon a characteristic legal quibble. In English law it has always been easier to prove a man *non compos* when property was concerned than to prove him insane when criminality was the issue. In other words, the English law has always been much more jealous of the rights of property than of human life. We are apparently coming to the same kind of hair-splitting definitions in this country, and Judge Herrick's pronouncement from the bench will probably impress the public and the lay press as being something wonderfully precise and sapient.

Of course, it will impress scientists in just the other way. There are no two kinds of insanity, such as the learned judge thinks he has descried. A "medical" insanity that is sufficiently well marked to absolve a man from the full consequence of his criminal acts is a "legal" insanity—and all the lucubrations and verbal gymnastics of the learned bench cannot make it otherwise.

It is quite another thing to say that there are various *degrees* of insanity, and that these imply various degrees of moral responsibility. The medical profession has long been insisting upon this fact. But the law-courts would not acknowledge a devisable responsibility any more than the theologians will acknowledge a "dividual essence" of sin. In fact, the legal and theological minds have much in common in their unscientific obstinacy on this point. But now, it seems, we have a new light, and, according to the New York judge, the question hereafter will be: Does the criminal present a case of "legal" or of "medical" insanity?

Some Opinions By President Eliot.—The President of Harvard is always interesting and nearly always instructive. In his recent annual report to the Overseers of Harvard University he expresses opinions about various things in his usual forceful way.

President Eliot finds from statistics that the highly educated people of America do not increase the population, but even fail to reproduce their own number. This may in part be due to the late postponement of marriage on the part of young men who enter the professions. They cannot afford both to be educated and to marry. We imagine some people will look upon this as a very alarming state of things, but we are not sure that it presages the end of the race. There is a constant differentiation going on in society, just as in nature generally. Some individuals are set apart for one thing, and some for another. Some men must do the intellectual work while other men raise families. This is a fair arrangement. So long as we have a hardy commonalty from whose ranks we can recruit the scholars and literati of the next generation, the country will be safe. There is no hereditary literary or professional caste with us—nor has there ever been in any wholesome civilization anywhere since the world began.

President Eliot's views about the A. B. degree are decidedly more interesting and opportune. He declares that Harvard will support the requirement of a bachelor's degree or its equivalent for admission to the professional schools. He tells us that the requirement is now in force in the departments of theology, law, and medicine at Harvard. He even advocates a higher standard than has hitherto been set for the A. B. degree. Nevertheless, they encourage a three years' college course for the A. B. degree at Harvard, so we hardly see how its standard will be raised, unless more studies are to be crowded into the three years—a thing, indeed, which Dr. Eliot seems to favor.

It is a great satisfaction to have President Eliot's voice thus raised in favor of the old college course for professional men. We wish sincerely that this course could be made obligatory everywhere for a medical education, but we fear that is expecting too much as yet. Last week we printed as our leading editorial a statement of the urgent needs of the State of Pennsylvania for the elevation of the standard of education to be required of every student about to enter a medical college. Let us have better education and more of it, even if it takes more time, and even if our professional men do not distinguish themselves as breeders of the race!

Academic Football.—In this same report, to which we have just referred, President Eliot discusses football. All this suggests what an all-round man a university president must be nowadays—from the birth-rate to football. The figures given by President Eliot are not very favorable to football as a promoter of health. "A quarter part of all who take part in this sport are injured enough to lay them up for ten days on the average, and a much larger proportion of those who play the game for the season are thus injured."

It seems that nothing will eliminate danger from football. It is almost as dangerous as the automobile—although President Eliot does not say so. He thinks the game under existing rules tends to become slower and less interesting, in which statement we agree with him; and also that the changes in the rules have tended to increase the number of injuries, about which we are not certain. But the ethics of the game are the ethics of war, and they cultivate a martial spirit. With all its faults, therefore, President Eliot evidently still loves football, and thinks it tends to do more good than harm. He knows that of 3,500 students in Cambridge, 2,000 take active part in one or more of the thirteen sports played at the University.

In this connection it is interesting to note the opinion of another prominent educator, Dr. McPherson, of the Lawrenceville School. "I believe with all my heart in football, although broken heads may result. I'd rather see a boy killed once in a while than have the students rot in college." But still a medium course might be found, in which a student would neither rot nor be killed.

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Race Suicide.—In connection with the subject of increase of the birth-rate, we may say that we are indebted to one of our bachelor friends for the following communication: "President Roosevelt, in his admirable letter to the author of 'The Woman Who Toils,' touches upon one of the greatest national problems of the day. The remarkable decrease in the birth-rate of the native-born citizens has recently been noted in these columns, both editorially and in an excellent statistical paper by Professor Engelmann, of Boston. As to what the precise cause of this decline is, we are not ready to speak dogmatically. A combination of causes, some of them the direct outcome of our present civilization, is doubtless active. We have recently called attention to the ravages produced by venereal disease, and the direct effect resulting therefrom upon the fecundity of the race. The President now severely scores those most unpatriotic citizens who, through fear of suffering or the necessary inconvenience associated with gestation, or because of an inherent dislike for offspring, refrain from or suppress the natural instinct of procreation. Such, he claims, 'are in effect criminals against the race and should be objects of contemptuous abhorrence by all healthy people.' The letter is one characteristic of the robust manhood of the Nation's chief, and will, we trust, awake some of the selfish dreamers to the individual and national peril that must inevitably result from such a course."

Dr. John Homans.—In reading the interesting sketch of the life of the late Dr. John Homans, published in the *Boston Medical and Surgical Journal*, we have been especially impressed by the melancholy fact that another of the Civil War veterans of the medical profession has passed away. For those who are old enough to remember, even if they did not participate in, that great conflict, how the names of those old battlefields reverberate through the memory! "Fort Darling," "Malvern Hill," "Winchester" and "Cedar Creek" were probably but a few of the actions in which our lamented colleague took a part, but the names recall with a thrill, not only the memorable scenes of a great drama, but the honorable part which it was the enviable lot of so many of our profession to take in them. As these veterans pass one by one from the stage, their memories claim a special tribute not only from their profession but from the country at large. It is indeed no insignificant part that the army surgeon plays in times of war.

Dr. John Homans will long be remembered for the distinguished contributions he made to abdominal surgery. In civil life he achieved his greatest success, but his military experience had probably its enduring influence to mold his character both as a man and a surgeon. Of honorable lineage and of most attractive personality, he has left behind him a brilliant record and the mournful regrets of a host of friends.

Roman Doctors in the Time of Juvenal.—When Juvenal, the Latin poet and satirist, wished to express how difficult it was to enumerate the many diseases that attend old age, he said that he could sooner tell "how many patients Themison has killed off in a single autumn" (*quot Themison aegros autumno occiderat uno*). As Themison was the foremost physician of Rome, it appears from this quotation that Juvenal did not entertain a high opinion of the profession.

Nevertheless, the writings of the great Roman satirist throw a curious side-light upon the state of medical practice in Rome in the first century of the Christian era. Juvenal, next to Horace, was the most graphic delineator of the manners and customs of the Romans. He held up to merciless scorn the follies and vices of the degenerating masters of the ancient world, and it was inevitable that the physicians of the day should come in for their share of the opprobrium. For it is mostly opprobrium that the doctors received from Juvenal; and when we consider the state of medical knowledge and practice at that day, we must confess that probably they got what they deserved.

Dr. Eugene F. Cordell has selected the Medicine and Doctors of Juvenal as the theme of a medico-historical paper, which appears in the first number of the *Medical Library and Historical Journal*. As a piece of writing it is excellently done, and as a contribution to medical history it should be of interest to medical men in general. Dr. Cordell shows that there is quite a mine of what we may call both medical tragedy and comedy in the great Roman poet. The profession had its vulnerable side then as now to the witticisms and sarcasms of the nimble spirits of the day, but there is consolation in the thought that even at that early date some of the stock jokes were being used up, as, for instance, the unkind allusion to Dr. Themison.

A Joke on Medical Editors.—It is rather amusing to note that Dr. H. Plympton, of Brooklyn, New York (whoever he is), has stirred up something of a hubbub by his little paper on the curette. Dr. Plympton distributed his manuscript so liberally that about twenty-five medical journals of this country have published his paper. As it was a rather commonplace literary performance, the world will probably wonder upon what principles some of our contemporaries govern their selection of original articles. We are strongly disposed to suspect that Dr. Plympton has been perpetrating a practical joke on medical editors. If so, he has succeeded admirably. He has shown that there is entirely too little care taken in editorial sanctums in this country about the scrutiny and reception of original material. We had the pleasure ourselves of returning Dr. Plympton's paper to him. We save ourselves from mortification in such matters in two ways. In the first place, we carefully scrutinize papers that are sent to us; in the second place, when we accept said papers, we add in our note of acceptance to our contributors a little paragraph stating that the understanding is that this journal has the first right of publication, unless otherwise especially agreed upon. No honest man can ignore that notice.

Current Comment.

TUBERCULAR OR TUBERCULOUS?

A good deal of diversity exists among writers of medical works as to the use of these words. The better-known form of the adjective was, until recently, "tubercular," and there seems little reason why it should have been altered. The objection was, however, raised that the word "tubercular" was also applied to certain conditions, as leprosy, in the sense of "nodular," and the form "tuberculous" was accordingly adopted to meet this difficulty. The objection would have been better met by using the word "nodular" in this connotation, and keeping the adjective "tubercular" for things and processes "connected with tuberculosis." The Latin termination "-osus," from which words ending in "-ous" are derived, signifies "full of;" and as we now have two forms in common use, it might be well to keep the word "tuberculous" for organs or tissues which are infected with tubercle (e. g., a tuberculous joint) and apply the more euphonious form to the majority of cases in which we need a word meaning "connected with tuberculosis," as in the phrase "tubercular meningitis" and "tubercular diathesis."

—*The Practitioner.*

Reviews.

Transactions of the Association of American Physicians. Seventeenth Session, Washington, D. C., Vol. XVII.

It has been said by good authority that membership in the Association of American Physicians is the blue ribbon of the medical profession in America. There can be no doubt that this Association is one of the most distinguished bodies of medical men in the world, and that the papers presented and the discussions made at the annual meetings take rank in scientific importance with those of any other medical organization. It is fitting that the Transactions should be properly presented, and the seventeenth volume is a worthy continuation. It contains 667 pages, numerous admirable illustrations and the majority of the papers presented at the meeting. Of course, many of these papers have already been printed elsewhere, but that does not in any way impair the value of the published report. It is not possible to mention all of the important contents. The personal predilection of the reviewer for a certain class of articles would necessarily prejudice him more or less in the selection of those which he considers most important. The articles of Drs. Abbott and Gildersleeve on the Acid Resisting Group of Bacteria is an important contribution to this subject. The article on Anguillula Aceti in the Urine, by Drs. Billings and Miller, describes 2 very unusual cases. Edwards's paper upon Simulated Aneurysm is a frank warning to physical diagnosticians, and is probably one of the earliest, if not the earliest, notices of a physical sign not hitherto associated with the form of disease (general atheroma) found at autopsy. There is a series of excellent articles upon Osteitis Deformans by Prince, Fitz and Fussell. Osler's article upon Splenic Anemia is a strong plea for the separate existence of this condition. Wharthin continues his studies upon the Hemolymph Glands, which are exceedingly valuable for reference in that still unsatisfactory subject of pernicious anemia.

It is a pleasure to handle a book so well bound and printed as this volume is. [J. S.]

A Text-Book of the Science and Art of Obstetrics. By Henry J. Garrigues, A. M., M. D., Consulting Obstetric Surgeon to the New York Maternity Hospital; Gynecologist to St. Mark's Hospital; etc., etc. With 504 illustrations. Philadelphia and London. J. B. Lippincott & Co. 1902.

Dr. Garrigues has given a text-book of obstetrics which is almost encyclopedic in nature. He is eminently consistent in his statements, and in his method of making gynecology a branch secondary to obstetrics. He regards obstetrics as a key to gynecology, and for this reason in the present volume he constantly refers to pages in his former elaborate work on diseases of women. He claims that during the last 25 years there have been but 4 truly great improvements in obstetrics; namely, antisepsis with its offspring, asepsis; the axis-traction forceps, the improved Cesarean section, and the revival of symphysiotomy. We would limit this small list to but 3, for we regard symphysiotomy not as a great improvement, but as a decided step backward. The space given by Dr. Garrigues to the study of symphysiotomy is, we think, vastly in excess of the value of the subject. Twenty-two and a half pages are consumed in this manner when 4 or 5 would be amply sufficient. We do not agree with his statement that there is no danger for the life of the patient in the operation itself, if this be held within proper limits and properly performed. In the hands of the best obstetricians symphysiotomy gives a mortality of 10% at least. Cesarean section in the hands of the best men gives a mortality of but 4% or 5%. We also differ with the distinguished author when he remarks that the operation should be performed much oftener than it is in America. After this statement as to the innocuousness of the operation, the sentence at the close of his article that "in some cases serious hemorrhage has to be checked, in others severe injuries of delicate and important organs demand immediate repair, and in most the child has to be artificially revived from its asphyxia," does not seem to be altogether consistent. In considering medullary cocainization, we heartily agree with Dr. Garrigues in his statement that he does not think there is any call for this innovation. The method is rapidly dropping out of use. The hepatic theory of the origin of puerperal eclampsia is, we think, not given the consideration it deserves. It is dismissed with the statement that "some think the liver is the organ at fault." The high standing of the men in France and in this country who have studied the liver and its relation to eclampsia deserves better consideration than this. With the exception of these few points, with which we feel compelled to express variance, we most heartily commend the magnificent work of Dr. Garrigues, and sincerely congratulate him upon the book he has produced. It is a valuable addition to obstetrical bibliography. [W. A. N. D.]

The Practical Medicine Series of Year Books. Vol. III. The Eye, Ear, Nose and Throat. Edited by Casey A. Wood, C. M., M. D., Albert H. Andrews, M. D., and T. Melville Hardie, A. M., M. D. The Year Book Publishers. Chicago. One volume, $1.50. Series, $7.50.

This is the third of a series of ten volumes, issued monthly, designed to cover the entire field of medicine and surgery. In 321 pages are reviewed under appropriate headings all important papers on the eye, ear, nose and throat that have appeared in the journals during the past year. By means of an index of subjects and an index of authors one can readily find any paper he may wish to recall, and in footnotes learn when and in what periodical it appeared. It is a book that will prove of value to the specialist and to the general practitioner. The former will have his attention called to any paper he may have overlooked, and have epitomized all the new thought on any subject in which he is interested. The book can be recommended to any physician who wishes to keep in touch with medical progress. The volume is illustrated. [W. G. B. H.]

A Manual of Medical Treatment, or Clinical Therapeutics. By I. Burney Yeo, M. D., F. R. C. P., Emeritus Professor of Medicine in King's College, London; Consulting Physician to King's College; Hon. Fellow of King's College; formerly Professor of the Principles and Practices of Medicine and of Clinical Therapeutics in King's College; and Examiner in Medicine at the Royal College of Physicians. Author of "Food in Health and Disease," etc., etc. Tenth edition; fifteenth thousand. In two volumes. Chicago: W. T. Keener & Company. 1902.

A work which has gone through ten editions since 1893 is too familiar to need extended comment at our hands. These two volumes are old friends in a new dress. The revision, however, has been thorough, the blue pencil has been used with commendable judgment, and very much new material has been added in which is included the treatment of hay fever, paralysis agitans, cerebral tumors, erysipelas, cerebrospinal fever, rickets, scurvy and pupura. We know of no work in which the subject of treatment in all its details is discussed with more admirable fulness or better medical judgment. We have found it to be a work of the greatest practical use for both the student and the practitioner; the hundreds of formulæ which are included represent tried combinations of recognized authorities, and, so far as we have been able to observe, they are free from either typographical error or the even greater sin of incompatability. Professor Yeo is to be congratulated upon the admirable manner in which he has accomplished his task, the rare editorial discrimination he has exercised, and most highly upon the success which has crowned his efforts. [T. L. C.]

American News and Notes.

PHILADELPHIA AND PENNSYLVANIA.

The Health of Philadelphia.—During the week ending February 14, 287 cases of typhoid fever, with 21 deaths, were reported, as compared with 329 cases and 23 deaths, the week before. The 36th. ward had the greatest number of cases, 23; the 34th. ward had 20, the 22nd. 18, the 27th. and 33rd. 17 each, the 24th. 13 and the first, third, 28th. and 29th. 12 cases each. But 3 wards, the 6th., 14th. and 41st., had no new cases reported during the week. There were 30 cases of smallpox reported with 5 deaths, as compared with 33 cases with 2 deaths during the week preceding. There was rather a marked increase in the cases of diphtheria, from 42, in the previous week, up to 59, with 9 deaths each week. Scarlet fever showed a slight increase, too. Darby, just outside of the city limits, has had a great number of smallpox cases reported during the last week, 9 new cases having been found in 2 days. A number of school children, both colored and white, have been affected. The authorities of Philadelphia have announced that, in the future, all patients with smallpox will be sent to the Municipal Hospital, unless there should be exceptional facilities for treating the patient at home.

Columbia Hospital, Columbia.—The sum of $5,000 has been given to the new Columbia Hospital, for endowing a room, to be called the Houston Memorial Room, by the widow and children of the late H. H. Houston, of Philadelphia.

To Fight Tuberculosis.—At the meeting of the board of directors of the Pennsylvania Society of the Prevention of Tuberculosis, held February 11, the president announced that a bill to ask for the appropriation of $500,000 for the prevention of tuberculosis and the care of cases of incipient consumption in Pennsylvania is being prepared by a committee consisting of Drs. Guy Hinsdale, M. P. Ravenel, Benjamin Lee and H. S. Anders. Should this bill pass, it is proposed to establish sanatoria for poor consumptives in different parts of the State. It was also announced that the Phipps Institute for Consumptives, recently opened, was treating, on an average, 30 patients a day. It is expected that the wards in the Institute will soon be ready to be opened. These will be used for patients in the advanced stages of the disease. Pamphlets are being distributed to all patients, explaining the necessary hygiene, food and prophylaxis to be observed by them.

Medico-Chirurgical Hospital.—Early in the morning of February 12 the hot-water tanks in the basement of the hospital exploded, tearing down walls and a porch, causing plaster to fall from the rooms and the wards, and severely frightening some of the patients, but not doing any serious harm. In spite of the panic which ensued, but one man was injured, being slightly scratched by a piece of glass. The damage done amounted to between $100 and $200. Donations for repairing the hospital have already been received, and work has been begun.

Pennsylvania Boards of Health Convention.—The prevalence of smallpox was discussed, February 12, at the meeting of health officials of Western Pennsylvania. Dr. Benjamin Lee, secretary of the State Board of Health, said that the spread of smallpox was due first, to the medical profession, for having discontinued infant vaccination; second, because mothers wanted to save their children unnecessary pain; third, because of the anti-vaccinationists; fourth, because many school directors have neglected to enforce compulsory vaccination; fifth, because of the immense majority of the school boards, in country districts, having neglected to accept the responsibility, placed upon them by the Legislature, of organizing as boards of health, and sixth, because medical colleges have failed to instruct students to recognize the disease. It is to be hoped that the Arensburg bill, now before the State Legislature, appropriating $50,000 for checking the spread of epidemics, may be speedily passed.

Society Meetings Next Week.—The following societies meet next week at the College of Physicians, Philadelphia, at 8.15 p. m.: Tuesday evening, February 24, Neurological Society; Wednesday evening, February 25, Philadelphia County Medical Society, and Thursday evening, February 26, Pathological Society.

Second Regiment, N. G. P.—Dr. G. M. Coates, of Philadelphia, has just been appointed surgeon to the Second Regiment, with the rank of major, and Dr. R. H. Skillern, also of Philadelphia, assistant surgeon, with the rank of first lieutenant.

University Day.—Not only was an oration delivered by Dr. S. Weir Mitchell at the University Day exercises, held February 21, but the honorary degree of LL. D. was awarded to a physician, General Leonard Wood, formerly Governor of Cuba, by the University of Pennsylvania on that occasion.

NEW YORK AND NEW JERSEY.

Typhoid Fever in Ithaca.—Up to February 16, 17 deaths occurred from typhoid fever in the city of Ithaca, with 15,000 inhabitants, 2,800 of whom are students at Cornell University. Of more than 300 patients now ill with the disease, 88 are Cornell University students, and 6 of the 17 patients who died were Cornell students. The president of the University will now demand that the city's water-supply be filtered and will offer to furnish money for this purpose. The present epidemic has existed a month already. There are also a few cases of scarlet fever in Ithaca. It is believed that the worst of the epidemic has already passed. From now on, all drinking water will be boiled.

St. Mary's Hospital, New York City.—Five new wards in St. Mary's Free Hospital for Children were opened February 11. The opening of the new wards will enable the hospital, which is under the charge of the Protestant Sisters of St. Mary, to treat 100 patients without crowding.

Erie Railroad Hospital Car.—The Erie Railroad Company recently converted a combination baggage car into a hospital, which is to be hurried to wrecks where anyone is injured. It contains 6 cots in the large compartment, and the baggage room has been fitted up with an operating table and everything necessary for immediate operation. The car is also equipped with mechanical tools to assist workers at the scene of accident. The railroad company's physicians have been notified to be in readiness to board this emergency car at short notice.

WESTERN STATES.

Against the Plague in San Francisco.—Surgeon-General Wyman, U. S. P. H. and M.-H. S., has again issued a statement upon the bubonic plague in San Francisco. Resolutions have been adopted by a committee, consisting of a representative of the State Board of Health of New York, the San Francisco Chamber of Commerce, the Merchants' Association, the Merchants' Exchange of San Francisco, the Manufacturers' and Producers' Association of California and the California Promotion Committee, urging the city and State officials to take steps to secure the co-operation of State and city boards of health, under the supervision of the U. S. P. H. and M.-H. Service, in order that all danger from bubonic plague may be eradicated; that all fears of infection may be removed, and that the confidence of the boards of health of other States may be restored, that no injury may result to foreign or interstate commerce. The Governor of California, the Mayor of San Francisco, the Health Officer of San Francisco, Surgeon Glennan, U. S. P. H. and M.-H. S., and Dr. Gardner, of the State Board of Health, have signed an official statement, dated February 2, declaring that the last case of bubonic plague in Chinatown, San Francisco, was reported December 11, 1902. This statement is made as an assurance that there is no present or future danger from bubonic plague, inasmuch as complete and harmonious action by all the health authorities concerned is thereby assured and will be maintained. Seven new inspectors have been appointed in Chinatown, under the supervision of the U. S. P. H. and M.-H. Service.

A New Hospital, Muncie, Ind.—A committee has recently been formed to urge the erection of a modern and well-equipped hospital in Muncie. A visit has been made by the committee to the new Crawfordsville Hospital, which will most probably be copied, although on a somewhat larger scale. It is believed that a well-equipped hospital will probably soon be erected with accommodations for 25 patients, at a cost of from $18,000 to $20,000.

CANADA.

(From our Special Correspondent.)

Smallpox in Ontario.—New areas of smallpox are constantly appearing in Ontario, 10 cases with 2 deaths having occurred recently on the Island of Manitoulin, but the epidemic is said to be over there. Other cases have recently appeared in Toronto, Galt, St. Thomas and Sault Sainte Marie, and in several sections of the townships of eastern Ontario.

Ontario's Birth-Rate.—Last year there was again a decline in the birth-rate of Ontario as compared with the preceding year. Only one city in Ontario showed a satisfactory increase in the birth-rate, proportional to the increase of population, and that was Ottawa. There were fewer deaths than in the preceding year, and also a decrease in the number of deaths from tuberculosis.

Canadian Indians.—The total number of Indians on reserves in the Dominion of Canada is 108,112. Smallpox, which occurred last year in many of the reserves, was kept under control. There was a high mortality among the children last year, due mainly to measles, which was epidemic in Manitoba and the Northwest territory. The Battleford Agency suffered the most. The most prevalent disease, after smallpox and measles, was tuberculosis. During last year 2500 births and 2349 deaths occurred, a net gain of 151, as compared with 230 for the preceding year. During the year 7518 were added to the population beyond the Treaty limits.

The Health of St. John, N. B.—The total number of deaths reported in 1902 was 706, 555 of which were native Canadians. Of this number 139 were infants under one year of age, 95 were people between 70 and 80 years of age, 86 between 60 and 70 years of age and 78 over 80 years of age. Seventy-five cases of diphtheria occurred with 12 deaths, 108 cases of scarlet fever with one death, 21 cases of typhoid fever with 20 deaths, 9 cases of measles and 6 cases of smallpox without any deaths.

MISCELLANY.

Bubonic Plague at Majorca.—The Italian bark *Iris*, from Pensacola, Florida, November 18, reached Palmas, on the Island of Majorca, February 17, with several cases of what is supposed to be bubonic plague on board. Two of the crew died during the voyage. The bark is on her way to Marseilles.

Dengue in Hawaii.—After an absence of over 20 years, dengue has reappeared in Honolulu. Its symptoms much resemble those of influenza, but are accompanied with an eruption which lasts a week or longer, as a rule: There have been a great number of cases, especially among the teachers and pupils of the public schools. It is believed that the disease is spread by mosquitoes.

Bubonic Plague in Tokio.—The first case of suspected plague in Tokio occurred December 24 last, on the premises of the Tokio gas cotton spinning factory. But it was not until December 27 that the case was discovered to be bubonic plague. Investigation shows that the microbe of the plague has probably been imported through Yokohama, where cotton is imported from Egypt and America. It is believed that the germs first came from the rats which infested the vessel bringing the cotton, this cotton having been transferred directly from the vessel to lighters at Yokohama, whence it was at once brought to Tokio. The first person to be taken ill was taken ill December 17, and cases occurred almost daily after that, among the employés at the factory. The first step taken was an attempt to exterminate the rats. An iron fence was built around the inclosure and new dormitories were constructed for the employés, more than 2000 in number. The old dormitories were first torn down in the search for dead rats and were then burned. The cotton in the factories was disinfected by steam and the machinery was taken apart and cleansed. The employés were isolated, subject to strict police surveillance and medical inspection. One hundred and fifty physicians were engaged in this work, and fever or swellings were noted as soon as they occurred. Nearly 1000 employés live outside the company's premises, and they are all being closely watched. A premium of 5 sen (2½ cents) has been offered for each dead rat, and a thorough disinfection of the city has been ordered by the police. Other cotton factories in Tokio are under inspection and all precautions are being taken to prevent the spread of the plague.

Leprosy in Cuba.—Acting-Assistant Surgeon John Frick, U. S. P. H. and M.-H. S., at Matanzas, Cuba, reports the occurrence of a death, January 2 last, from leprosy. The premises occupied by the patient were thoroughly disinfected.

Bubonic Plague in Mexico.—One death occurred from bubonic plague at Mazatlan, February 12, and 2 new cases were reported the day before. Under date of February 14, there are said to have been 45 patients in the hospital and 5 were discharged. The next day 5 deaths occurred and 3 new cases were reported. It is reported that the plague has also appeared at Oso, in the State of Sinaloa, about 300 miles north of Mazatlan. Two women and a little girl who had fled from Mazatlan, were affected there, one woman and the little girl having died already. It is said that the Mazatlan authorities are spending $2000 a day battling with the plague. Satisfactory results are being obtained from the use of the Yersin antiplague serum.

Death of Dr. Kumagawa.—Dr. Soyetsu Kumagawa, one of the best-known physicians in Japan, vice-president of the Society for the Advancement of Medical Science in Japan, died recently, aged 64 years. He studied medicine because his mother had died of some unknown disease when he was 14 years old. While studying medicine in Tokio, he also learned Dutch and English. In 1862 he was appointed medical attendant to Governor Yegawa, and later was appointed surgeon on board a man of war. In 1867 he became director of the Naval Hospital. That year he moved to Yokohama, where he studied therapeutics with an American physician. In 1869 he moved to Tokio, where he has practised medicine since. He established a dispensary which, 10 years later, became the Tokio Charity Hospital. In 1874 he opened an Ophthalmic Hospital in Tokio. He was a member of the prominent medical, sanitary, hygienic and philanthropic societies of Japan.

Obituary.—Dr. Augusta B. Engstedt, at Omaha, Neb., January 26, aged 29 years.—Dr. James G. Leffingwell, at Wilkinsburg, Pa., January 29, aged 57 years.—Dr. Henry Tomboeken, at Terre Haute, Ind., February 9, aged 65 years.—Dr. George Harris, at Bridgeton, N. J., February 9, aged 59 years.—Dr. Charles B. Leavitt, at Trenton, N. J., February 9.—Dr. David A. Kappes, at Philadelphia, Pa., February 16.—Dr. E. M. Chapin, at Washington, D. C., February 8, aged 82 years.—Dr. J. I. Tharp, at Washington, Ga., February 13.—Dr. Edward Nelson, at Frederick, Md., February 7.—Dr. John J. Conway, at Brooklyn, N. Y., February 13, aged 44 years.—Dr. H. H. Warburton, at Santa Clara, Cal., February 9, aged 84 years.—Dr. David M. Anderson, at Venetia, Pa., February 16, aged 65 years.—Dr. Cochran McClelland, at Philadelphia, Pa., February 16, aged 58 years.

GREAT BRITAIN, ETC.

A New Principal at the University of Edinburgh.—Sir William Turner, a graduate of St. Bartholomew's Hospital, London, member of the Royal College of Surgeons of England, and M. B. of London University, has recently been appointed principal of the University of Edinburgh. Born in 1832, he went to Edinburgh in 1864 as demonstrator of anatomy. In 1867 he became professor of anatomy, which position he has held 36 years. In 1873 he was elected to represent the University of Edinburgh on the General Medical Council, of which body he later became president. He is the author of several works on anatomy and was one of the founders of the *Journal of Anatomy and Physiology*, of which he is still an editor. He holds honorary degrees from the Universities of Glasgow, St. Andrew's, Montreal, Oxford, Durham, Toronto, Dublin and Cambridge. He is a Fellow of the Royal Society of London, of the Royal Society of Edinburgh, of the Royal College of Surgeons of Edinburgh, and of the Royal College of Surgeons of England. He resigned his professorship of anatomy upon being elected principal.

Lettsomian Lectures, Medical Society of London.—These will be delivered by Dr. H. R. Crocker, February 16, March 2 and 16, on the conditions which modify the characters of inflammations of the skin and their influence on treatment.

Timmis Cancer Research Work.—Dr. A. S. F. Grünbaum has been appointed director of the cancer research work, for which Mr. T. Sutton Timmis, of Liverpool, recently gave $50,000.

Lectures of the Royal College of Surgeons, England.—The Hunterian Lecture was delivered February 14, by the president of the Royal College of Surgeons, Sir Henry G. Howse. February 16, 18 and 20 Dr. C. B. Ball, of Dublin, delivered the Erasmus Wilson lectures on adenoma and adenocarcinoma of the rectum. The Arris and Gale lectures will be delivered February 23, 25 and 27, by Mr. J. H. Parsons, upon the ocular circulation. Dr. Arthur Keith will give an account of researches showing how the abdominal viscera are kept in position, with view to elucidating Glénard's disease, March 2, 4 and 6. Mr. W. M. Eccles will lecture on the anatomy and pathology of the appendix, March 9, 11 and 13.

Mr. Phipps' Gift.—The sum of $100,000, recently given the Viceroy of India by Mr. Henry Phipps, of New York, to be devoted to some practical object or in some scientific research for the benefit of India, is to be employed in establishing an agricultural laboratory in Cashmere and a Pasteur institute in Southern India. The sites for both institutions will be given by the Government, which will assist in maintaining the first and will wholly maintain the second institution.

Schunck Laboratory, Manchester.—By the will of the late Dr. Schunck, who died last month, aged 83 years, his private laboratory, together with an endowment fund of $100,000, has been left to Owens College, Manchester. The laboratory contains a collection of specimens upon the history of the chemistry of organic coloring matters and has a splendid library. Dr. Schunck, who studied in Manchester, Berlin and Giessen, took charge of a calico printing works for some time, and later devoted himself entirely to scientific research, especially with reference to dyes and coloring matter. In 1898 he was awarded the Dalton medal of the Manchester Literary and Philosphical Society, of which he had been president; the gold medal of the Society of Chemical Industry in 1900, of which he had also been president; and the Davy gold medal of the Royal Society in 1899, of which he was elected a fellow in 1850.

New Treatment for Chronic Alcoholism.—A well-known sanatorium in England has recently made arrangements for an 8 weeks' cruise in the Mediterranean, especially devised for the treatment of patients with chronic alcoholism. An entire steamer has been chartered, upon which no alcohol will be allowed, and there will be a resident physician on board. It is expected that the constant change of environment, together with the complete isolation from alcohol, may afford lasting benefit to the patients. It is, at any rate, an interesting experiment.

Royal College of Physicians, London.—The Milroy Lectures on the causes, prevalence and control of tuberculosis will be delivered by Dr. H. T. Bulstrode, March 5, 10 and 12; the Goulstonian Lectures on the theories of immunity and their clinical application, by Dr. A. S. F. Grünbaum, March 17, 19 and 24, and the Lumleian Lectures on infective endocarditis, by Dr. T. R. Glynn, March 26, 31 and April 2.

King's College Hospital, London.—By the will of the late Mr. R. R. Storks, the sum of $100,000 has been left to King's College Hospital, to found, endow or provide for the maintenance of a ward in memory of his father. Including other provisions of the will, it is probable that the hospital will receive altogether about $300,000.

CONTINENTAL EUROPE.

An Insect Which Destroys the Anopheles Mosquito.—Dr. Dempwolff, who succeeded Professor Koch as director of the German Expedition to New Guinea, for the eradication of malaria there, has announced that he has discovered an aquatic insect which destroys the anopheles mosquito.

Biochemisches Centralblatt.—The great strides made in medical chemistry and in those fields of medicine verging on chemistry has necessitated the publication of a central organ, now published in Berlin by Carl Oppenheimer, under the direction of Ehrlich, Fischer, Kossel, Liebreich, Müller, Proskauer, Salkowski and Zuntz, and they have appointed Heinrich Stern, of New York, editor for the United States and Canada. The object of the publication will be to report such experiments and observations of physical and employed chemistry as are of importance to the physician; reports on the physiology of plants; physiological chemistry in the narrower sense (constituents of the body and their derivatives); chemistry of the tissues and organs under normal and pathological conditions; chemistry of digestion, secretions and excretions, metabolism and blood; ferments and fermentations, toxins of nonbacterial nature; chemistry of the pathogenic micro-organisms (toxins, antitoxins), phenomena of immunity; toxicology and pharmacology; and hygienic chemistry, disinfection, examination of water. As this is the only international organ devoted to these scientific fields, American observers and investigators will find it to their interest to prepare abstracts of their papers, which have appeared since January 1st, and will appear hereafter, and send them to Heinrich Stern, 56 East 76th street, New York City.

Aronson's Antistreptococcic Serum in Scarlet Fever.—Dr. Adolf Baginsky, director of the Kaiser und Kaiserin Friedrich Hospital for Children, has been using this serum for 12 years, having treated in all 701 patients with scarlet fever. The percentage of deaths has gradually fallen to 8%. Together with his assistant, Dr. Sommerfeld, he has found streptococci in the majority of those cases which died, and from this streptococcus Dr. Aronson has prepared the new serum. It is not yet known whether this serum is the same as that in use by Moser in Vienna and Charlton in Montreal.

Serum Treatment in Cerebrospinal Meningitis.—Dr. Le Pierre, of Lisbon, Portugal, announced last week the discovery of a new serum, by the use of which he is said to have cured a number of cases of cerebrospinal meningitis.

Italian Yellow Fever Commission.—An announcement from Rome states that the Italian Commission, which had been making a study of yellow fever in Brazil, has recently made its report. The Commission rejects the theory that yellow fever is transmitted by mosquitoes. The representative of the Liverpool School of Tropical Medicine, Dr. Meyers, who went to Para 2 years ago, contracted yellow fever and died of the disease. The special medical board, composed of Drs. Reed, Carroll and Agramonte, who studied the etiology of yellow fever in 1891, adopted the mosquito theory of the transmission of the disease. The results of the latest investigations upon the subject of yellow fever, undertaken last fall by Dr. Parker, of the U. S. P. H. and M.-H. Service, at Vera Cruz, Mexico, have not yet been announced.

University Notes.—**Berlin:** Dr. Otto Huebner, professor of pediatrics and director of the clinic and polyclinic for the diseases of children, celebrated his sixtieth birthday, January 25.—Dr. Ernst von Bergmann, professor of surgery in the University of Berlin has been elected president of the Berlin Medical Society, succeeding the late Dr. Rudolf Virchow.—**Bonn:** Dr. August Bier, professor of surgery and director of the surgical clinic and polyclinic at Greifswald, has been offered similar positions at Bonn, to take the place of the late Dr. Max Schede.—**Budapest:** Dr. Alexander Koranyi, professor of experimental and practical neuropathology, has been appointed professor of medical diagnosis and neuropathology.—**Göttingen:** The house in which the well-known Kiel surgeon, Dr. von Esmarch, lived as a student had a memorial tablet placed upon its walls January 9 last. It is said that von Esmarch's first operation was performed in Göttingen.—**Greifswald:** Dr. Moritz, professor of medicine, has declined the position of professor of medicine at Graz, in the place of Dr. Kraus, who was recently called to Berlin.—**Leipsic:** Dr. F. B. Hofmann has been appointed professor of pathology, and Dr. Georg Perthes, professor of surgery.—**Prague:** Dr. Otto von Franqué, professor of obstetrics and gynecology at Würzburg, has been appointed to a similar position in the German University at Prague, replacing the late Dr. Sänger.—**Vienna:** Dr. Karl Stellwag von Carion, the well-known professor of ophthalmology, celebrated his eightieth birthday, January 28.

Obituary.—Dr. A. Gessner, professor of obstetrics and gynecology in the Erlangen Medical School, died January 24, aged 38 years.—Dr. Apelles Dei, professor of comparative anatomy in the Medical School of Siena, Italy, was burned to death in bed, recently.—The death of Dr. Dante Cervesato, lecturer on children's diseases in the University of Bologna, has also been announced.

The Latest Literature.

BRITISH MEDICAL JOURNAL.

January 31, 1903. (No. 2196.)

1. The Etiology of Acute Rheumatism and Allied Conditions. R. M. BEATON and E. W. A. WALKER.
2. Notes on Disease in Advanced Life. G. H. KEYWORTH.
3. Preliminary Note on the Parasites of Smallpox and Chicken-pox. R. S. THOMSON and J. BROWNLEE.
4. An Improved Method of Testing for Lead in Urine. F. H. JACOB and S. R. TROTMAN.
5. The Influence of Some Modern Drugs on Metabolism in Gout. W. BAIN.
6. On a Case Illustrating the Value of Physiological Rest. W. M. WILLIS.
7. Case of Puerperal Hyperpyrexia of Malarial Origin. T. W. CLAY.
8. Researches on Hibbertia Volubilis. J. REID.
9. Human and Bovine Tuberculosis. N. RAW.
10. Soil Pollution and Diseases in Camps. R. CALDWELL.
11. The Supply of Pure Water to Troops in the Field. J. F. LEES.

1.—Beaton and Walker have isolated an organism from 8 cases of acute rheumatism, 3 cases of chorea and 4 cases of acute endocarditis in rheumatic subjects, which they believed to be identical with that obtained by Triboulet, Wassermann, Paine and Poynton, Meyer and others. The organism was recovered from the heart's blood at autopsy, from the fluid from the knee joint, from the blood obtained by venesection and from the urine; the last in a case of chorea. They call attention to the observation of Marmorek that, if a fluid medium in which streptococci of human origin have been grown is filtered, bacteria will grow in it, but human streptococci will not. On testing the organism isolated from 2 cases of the series above noted according to this method, the authors conclude that the **micrococcus of rheumatism**, which resembles a streptococcus, is specifically different from the ordinary pyogenic streptococci of human origin. They tested the action of the organism on 17 rabbits by intravenous inoculation. The animals showed fever, wasting, monarthritis, polyarthritis, paresis, pericarditis, endocarditis, septicemia and finally died. In large doses the organism produced death within 48 hours; in moderately large doses death followed in from 3 days to 3 weeks; in small doses the organism produced an arthritis which was often multiple and which passed from joint to joint in a characteristic manner. The joints involved were the wrists, the ankles and the knees. The authors agree with those observers who claim that, **etiologically, rheumatism is a disease due to particular microorganism.** [J. M. S.]

2.—Keyworth says that it is certain that many of the ailments of old age are due to more food being taken than the eliminating organs can get rid of. On a diet of well-made bread in variety, vegetables and fruits with a fair quantity of eggs and milk, very little animal food, and without alcoholic stimulants, many disorders of old age may be avoided and life prolonged. If a man past 50 years of age does not reduce his intake he will inevitably poison and undermine his general health and have an accumulation of effete matter which is likely to produce gout, uremia or apoplexy. He referred to the diarrheas seen in elderly persons, which he believes are due to the establishment of a channel of excretion, accessory to imperfectly acting kidneys. He also refers to those common diseases of old age, apoplexy, pneumonia, empyema, carcinoma, tuberculosis, emphysema, bronchitis and prostatic enlargement. [J. M. S.]

3.—Thomson and Brownlee have studied **the parasites of smallpox and of chicken-pox** for 5 years. They have found small spherical bodies, highly refractive and, in general appearance, resembling small globules of fat, in the blood of persons suffering from hemorrhagic smallpox. Similar bodies were found in sections of the skin containing hemorrhages, among the extravasated bloodcorpuscles; in the lymphspaces and in some of the smallest bloodvessels of the skin; in the lymphspaces of the skin immediately adjacent to the basement membrane; in sections of the skin in cases in which the eruption is moderately advanced; in smears from the vesicles; and in smears from the later stages of the pocks. In hemorrhagic cases the pyogenic micro-organisms were absent both from smears and from sections, as well as in the earlier stages of those eruptions that subsequently became pustular. [J. M. S.]

4.—Jacob and Trotman describe an **electrolytic method for detecting lead in the urine.** The test is claimed to have great delicacy and to be quite simple. [J. M. S.]

5.—As the result of a study of **the influence of some modern drugs on metabolism in gout,** Bain concludes: (1) That there is an increase of albumin coincident with the development of a subacute attack of gout. (2) That there is a preponderance of serum globulin over serum albumin. (3) That the peculiar leukocytes described by Chalmers Watson are present in the blood. (4) That lithium benzoate and urotropin are ineffective in relation to uric acid excretion. (5) That piperidin tartrate, piperidin, lysidin and sidonal, in the order named, show an increasingly augmenting effect on uric acid excretion. (6) That the excretion of uric acid is diminished during the administration of colchi-sal and the conjugated sulphates are increased. (7) That the solvent action of tetra-ethyl ammonium hydrate or sodium biurate probably depends upon its alkalinity. [J. M. S.]

6.—Willis reports the case of a man, aged 72 years, who complained of pain in the rectum and the passage of large quantities of pus and blood. Examination showed a large ulcerating surface on the posterior wall of the rectum, extending around the greater part of the circumference of the bowel and reaching within 2 inches of the anus. After the performance of an inguinal colotomy in 2 steps the condition completely healed. The author thinks the disease was healed solely by the application of **physiological rest.** [J. M. S.]

7.—Clay reports a case of **puerperal hyperpyrexia,** in which the temperature reached 107.8° F. The administration of full doses of quinine had a decided effect in reducing the temperature, and the history of the case showed that the patient had been the subject of malarial fever for some time. [W. A. N. D.]

8.—Reid found that **hibbertia volubilis,** a plant found in New South Wales, contained an alkaloid **dillenine.** When administered internally to man it acts violently on the liver, causing black stools of a watery character with some griping and nausea. There is no astringent effect on the mouth. The solutions of alkaline salt or of dillenic acid keep readily and hence have antiseptic properties worthy of investigation. [J. M. S.]

9.—Raw believes that there are 2 distinct varieties of tuberculosis affecting the human body, one produced by human tubercli bacilli, the other by bovine bacilli. The two varieties are distinct. Bovine tuberculosis, entering the alimentary canal in milk, may cause tabes mesenterica, particularly in children. Bovine tuberculosis is probably the cause of enlarged lymphglands, tuberculous joints and lupus. True human tuberculosis or phthisis pulmonalis is always conveyed from one person to another by infection, and generally from an advanced case of phthisis. Every effort should be made to stamp out tuberculosis in cattle, and milk should be boiled before use by children. [J. M. S.]

10.—Caldwell refers to the constant occurrence of **typhoid**

fever in South Africa under circumstances that justify the absolute elimination of water, and that, point to excessive **coli pollution,** as a possible cause. [J. M. S.]

11.—Lees describes a wagon by which **pure water** may **be supplied to troops in the field.** [J. M. S.]

LANCET.

January 31, 1903.

1. An Address on the Treatment of Abdominal Emergencies. J. RUTHERFORD MORISON.
2. Further Investigation Regarding the Infective Nature and Etiology of Pernicious Anemia (25 Cases), Etc. WILLIAM HUNTER.
3. The Meaning of Urid Acid and the Urates. WOODS-HUTCHINSON.
4. The Surgical Treatment of Gastric and Duodenal Ulcers. B. G. A. MOYNIHAN.
5. Suppression of Urine in a Case of Ovarian Tumor and Pregnancy; Removal of Tumor and Uterus; Recovery. BERNARD PITTS.
6. The Cosmetic Value of Paraffin Injections after Enucleation of the Eyeball. A. MAITLAND RAMSAY.
7. Sunstroke. J. GRAY DUNCANSON.

1.—Morison publishes an address on the **treatment of abdominal emergencies,** *i. e.,* **perforative peritonitis, intraperitoneal hemorrhage and acute strangulations.** Morphine not only temporarily relieves pain but also acts favorably by decreasing shock; it should only be given, however, after a definite conclusion concerning the urgency of the case has been reached. Early operation is insisted upon. That recovery from operation from a general suppurative peritonitis may occur is undoubted. When distension occurs, the case is too late for operation. If operation is decided against, the treatment should consist in the application of poultices, the administration of morphine, rectal feeding and gastric lavage. Every acute case of appendicitis should be operated upon, if, after a single dose of morphine and at the end of 8 hours, every sign of danger has not disappeared. Attention is called to the abdominal symptoms of pneumonia and interstitial nephritis. [F. T. S.]

2.—Hunter contributes **further investigations regarding the infectious nature and etiology of pernicious anemia.** He reviews the literature of pernicious anemia and sums up his conclusions regarding the etiology. He contends that pernicious anemia is of a definite infective nature, in which both clinical observations and necropsy reveal definite infective and hemolytic lesions invariably associated with the disease, and in which a very definite number of points can be got out of the history, throwing light both on the mode of origin of the disease and the sources of infection. (To be continued.) [F. J. K.]

3.—Woods-Hutchinson in an interesting article points out the meaning of uric acid and urates. The following conclusions are drawn: (1) There is no connection whatever between the production of urea and of uric acid, hence interdiction and marked limitation of animal and nitrogenous foods, as such, in gout is irrational. (2) The uric acid produced in health comes exclusively from 2 sources, the larger moiety, or exogenous uric acid of Chittenden, from the nucleins and purin bases of the food, the smaller or endogenous moiety, from the destructive metabolism of the nucleins of the body tissues. (3) It is the **endogenous moiety alone** which is increased in gout and lithemia. (4) Gout and lithemia are mere symptom names for a miscellaneous group of chronic toxemic processes of widely varied origin, characterized by the production of uric acid and urates. (5) By "gouty diathesis" we mean the possession of a sufficient degree of resisting power on the part of the protective cells of the body to oppose the entrance of any poison, whatever its character or source, with consequent destructive metabolism and production of uric acid, but not adequate to neutralize or successfully to prevent its absorption. (6) The uric acid of gout, like the phosphoric acid which invariable accompanies it, is merely a result and measure of the destructive metabolism of the nucleins of the body cells, chiefly probably of the leukocytes, in response to the invasions of poisons or toxins, either organic or inorganic (lead, phosphorus, alcohol, acetone). (7) Hence the use of lithium or other "solvent" agents is irrational, and any benefits resulting are to be explained on other grounds. (8) As most of the toxins setting up this destructive metabolism and consequent uric acid production are of intestinal origin or entry, **diet in gout should be regulated solely with regard to the diminution of intestinal fermentation and putrefaction.** (9) As animal foods from their much more appetizing and attractive flavors are more apt to be indulged in in excess of the oxidative powers of the body, their limitation may be found to be more necessary than that of vegetable foods, but sugars and starches are also very often at fault. (10) As uric acid and the alloxur group are not toxic, or at best feebly so, and are not the cause of gout, the prohibition of even foods rich in nucleins and purin bases, such as red meats, roe and sweatbreads, has no rational basis and is clinically of doubtful utility except by diminishing the attractiveness of the dietary. (11) The rôle of the liver in gout is a negative one, being inability to perform its chief normal function as a "poison filter," and to absorb or to transform into harmless excretory substances the excess of toxins brought to it by the portal vein. (12) The drugs found of value in gout owe their efficacy chiefly to their power of checking intestinal putrefaction or of preventing the absorption or promoting the elimination of its products. [F. J. K.]

4.—In operating on a perforated **gastric ulcer** Moynihan does not excise the ulcer but closes the perforation by a continuous suture of catgut which is reinforced by a continuous suture of Pagenstecher thread. If the peritoneum is much soiled, it is flushed with salt solution; if little soiled, it is wiped with gauze which has been dipped in saline solution. The characteristics of hemorrhage from an acute ulcer are spontaneity, abruptness of onset, rapid loss of a large quantity of blood, the marked tendency to spontaneous cessation and the infrequency of a repetition of hemorrhage in anything but insignificant quantity; in these cases, as a rule, the blood oozes from a large area rather than from any definite point. For this reason it cannot be satisfactorily treated by the surgeon. If operation becomes imperative, gastro-enterostomy is the best operation. The characteristics of hemorrhage from chronic ulcer, omitting the inconspicuous and immediately fatal cases, are the onset after a long history of digestive disturbances culminating in acute discomfort for a few days, the tendency to recurrence with brief intermissions for a few hours or a day or two, the moderate quantity of blood ejected in each outbreak, and the condition of profound anemia produced by the repeated loss of blood. In these cases operation should be advised early. The ulcer may be excised, but a gastro-enterostomy will be sufficient to arrest the bleeding and heal the ulcer, chronic gastric ulcer is rarely solitary but is usually accompanied with others, either in the stomach or duodenum. Stenosis of the pylorus, dilatation of the stomach or inveterate dyspepsia depending on chronic gastric ulcer is best treated by gastro-enterostomy. Moynihan uses the simple suture and performs the posterior operation after the method of von Hacker. The paper is based on the following cases: Perforated gastric or duodenal ulcers, 10 operations and 4 recoveries; gastro-enterostomy for chronic ulcer 5 cases and one death; and pyloroplasty 3 cases with no deaths. Eight were operated upon for hemorrhage. In one the ulcer was excised with a fatal result. In one the ulcer on the posterior surface was excised and a gastro-enterostomy performed with recovery. In 6 cases gastro-enterostomy alone was performed; all the patients recovering. [F. T. S.]

5.—Pitts remarks that **anuria from pressure from a non-malignant tumor** is exceedingly rare, and that the cases recorded have resulted from pressure of pelvic tumors on the ureter. He now records a case in which the suppression of urine resulted from a combined ovarian tumor and pregnancy. An operation was performed and both the tumor and the uterus removed, the patient making a good recovery. [W. A. N. D.]

6.—Ramsey describes his method of using paraffin after enucleation of the eyeball. The conjunctiva is divided close to the corneal margin, each rectus muscle is caught with a hook and sutured to the overlying conjunctiva with a strand of catgut, the tendons of the recti are cut at their insertion into the sclerotic, and the eyeball is removed in the ordinary manner. The capsule of Tenon is packed with gauze while a silk purse suture is passed around the conjunctival margin, and then, the packing being removed, the paraffin is injected and the purse suture is tightened.

The catgut sutures are now tied, the superior rectus being approximated to the inferior and the internal to the external rectus. There have been 4 failures in 24 cases. [F. T. S.]

MEDICAL RECORD.

February 14, 1903.

1. A Résumé of Some Recent Researches Relating to Cytolysis and Immunity. T. MITCHELL PRUDDEN.
2. The Problem of Epilepsy; Some Suggestions for Its Solution. L. PIERCE CLARK and THOMAS P. PROUT.
3. The Radical Cure of Inguinal Hernia with Local Anesthesia. J. A. BODINE.

1.—Prudden presents a résumé of some recent researches relating to **cytolysis and immunity.** He discusses seriatim, the **"side-chain" hypothesis of Ehrlich, cytolysis, phagocytosis, agglutinative substances, precipitating substances** and **Welch's recent hypothesis.** [T. L. C.]

2.—Clark and Prout, discussing the **problem of epilepsy,** consider the following questions: (1) What is the nature of the organic anomaly, the material basis of the predisposition? (2) What is the immediate excitant operating upon the predisposition? (3) What is the seat and the nature of the lesion? In considering the development of the disease, they believe the **excitant is a toxic or autotoxic agent** for the following reasons: (1) The lesion is a general one affecting the entire cortex; (2) it involves most extensively the cells of the second, or so-called pyramidal layer, type, the cells which present a relatively larger surface exposure to the circulating poison in proportion to their volume than the larger pyramids; (3) the presence of a marked neuroglia proliferation; (4) the changes in the cell are quite analogous to those definitely known to be caused by toxic agents, as furfurol, alcohol and the tetanus bacillus and its toxins. Regarding the nature of the lesion they have examined the cortex in 21 cases from the Craig colony The same lesions were uniformly found present in all. The evidences of **cortical degenerations** were general. The expression of **acute and chronic exhaustion** was shown in a diffuse chromatolysis and other characteristic protoplasmic changes. The **manifestation of a vital intoxication of the cell** was presented in a swollen nucleus, a destruction of the nuclear membrane and intranuclear network, and, finally, an abstraction of the nucleolus was rendered easily possible by the knife, it behaving as a loose body in the nucleus. Contributory evidence of the ultimate disappearance of the cell from the cortex was manifest in an infiltration of the cortex with leukocytes and a progressive gliosis. From the nature of the lesion they infer that **epilepsy is a highly sensory motor reflex phenomenon.** [T. L. C.]

3.—Bodine reports **48 cases of radical operation for inguinal hernia without general anesthesia.** In all the cases cocaine muriate was used as a local anesthetic and in no instance was one-half of one grain of the drug exceeded. As to the cocaine solution employed, ¾% solution was used for the skin and nerve trunks, while for all subdermic infiltrations 1-10 of 1 per cent. was found to be sufficiently strong. When intramural anesthesia cannot be obtained, infiltration must be used. It is essential to employ a weak solution. A ¼% solution, when properly infiltrated, will completely anesthetize the skin for one hour and a half. [T. L. C.]

MEDICAL NEWS.

February 14, 1903. (Vol. 82, No. 7.)

1. A Study of a Bacillus Resembling the Bacillus of Shiga from a Case of Fatal Diarrhea in a Child; with Remarks on the Recognition of Dysentery, Typhoid and Allied Bacilli. PHILIP HANSON HISS and F. F. RUSSELL.
2. Postdiphtheritic Ocular Paralysis. P. N. K. SCHWENK.
3. Postdiphtheritic Paralysis Affecting the General Nervous System. LUTHER C. PETER.
4. Postdiphtheritic Paralysis Affecting the Ear and Throat. CARL LEE FELT.
5. Laboratory Aids in the Diagnosis of Typhoid Fever. E. E. SMITH.
6. The Influence of Sodium Chloride Upon Gastric Secretion. LYMAN BRUMBAUGH STOOKEY.

1.—Hiss and Russell say that the **organism** in their fatal case of diarrhea agglutinated in high dilutions with the serum from dysentery patients and animals immunized with Shiga bacilli. Formerly this bacillus Y could not have been differentiated by valid culture tests from the bacillus of Shiga, and, the mannite test being unknown, might easily have been confounded with Shiga's organism unless its agglutinating reactions had been carefully studied in such a serum as that from typhoid immune animals or from the normal beef, in neither of which the true Shiga bacillus, according to their tests, agglutinates in appreciable dilutions. The bacillus described is closely related to **bacillus typhosus,** both in agglutinating reactions and in the usually observed cultural characters, but can be separated from it by the absence of motility and by its reactions in the maltose and dextrine media employed. This bacillus also apparently differs from all hitherto described dysentery-like or pseudo-dysentery bacilli in its agglutination in high dilutions of dysentery serum, an agglutination in some instances more marked than that shown by the true Shiga bacillus. [T. M. T.]

3.—Schwenk states that the paralysis first appears in the fauces, affecting deglutition and then successively involving the muscles of accommodation and those of the extremities. An important point to be depended upon is the fact that in diphtheritic paralysis only a comparatively small number of muscles is usually affected at the same time. Another point is that the sphincter muscles are seldom or almost never involved in the paresis. The ciliary muscles are more frequently involved as a sequence of diphtheria than any other portion of the muscular system with the exception of the velum palati. The paralysis is generally bilateral, and the paralysis of accommodation manifests itself in from 2 to 6 weeks after an attack of the disease and generally passes off in about the same time. Recovery is more rapid in the young than in those more advanced in years. [T. M. T.]

3.—Peter believes that the term **diphtheritic palsy** should be applied to those palsies only which are due to direct action of the diphtheria toxin. He states that the frequency of paralysis is in direct proportion to the severity of the general infection, although a severe palsy may follow a mild type of diphtheritic intoxication. The location of the membrane is of considerable importance as an etiological factor, diphtheria of the posterior nares especially predisposing to both local and widespread palsy. The proportion of cases followed by paralysis is variously estimated at from 10 to 30%. [T. M. T.]

4.—Felt, in his paper on **postdiphtheritic paralysis affecting the ear and throat,** says under certain conditions each case will fall under one of three heads: (1) Muscular degeneration; (2) localized neuritis and degeneration; (3) central nerve destruction or degeneration. The most frequent site of the paralysis is the pharynx. Myers states that 40% of the postdiphtheritic palsies are confined to the palate and that in 12% the palate and eye muscles are affected. The pharynx may be the only part involved, or it may be in conjunction with other parts, near or distant. The muscles of mastication are very rarely involved. [T. M. T.]

5.—Smith gives 3 **laboratory tests** useful in making a positive diagnosis in **typhoid fever:** (1) The detection of characteristic morbid products of the disease; (2) the isolation and identification of the infecting organisms; (3) the detection of certain cell products, the agglutinations, or one of the constituents, the presence of which is induced by the infecting organism. The author quotes Krause in that the examination of rose spots may be of value, but as a routine procedure has been found open to the following objections: (1) The eruption does not appear in all cases or does not appear early enough to yield the information desired; (2) that it is not possible to isolate the organism from every spot; (3) that it is not always possible to distinguish the spots from eruptions not due to the illness in question. The author also emphasizes that in the majority of instances the laboratory aids the clinician, leaving for the final diagnosis the judgment that takes into consideration both the clinical picture and the laboratory findings. [T. M. T.]

6.—Stookey concludes his article with the following facts:

(1) Excessive quantities of NaCl apparently exert an inhibitory influence on HCl secretion and thereby may impede gastric digestion; (2) the ingested NaCl is apparently not directly converted into HCl in the stomach to the extent—if at all—which one might theoretically expect, assuming the theories of Köppe and Brasch to be tenable. [T. M. T.]

NEW YORK MEDICAL JOURNAL.

February 14, 1903.

1. Rudolph Virchow. An Appreciation. CHARLES L. REID.
2. Residual Urine. HENRY EWING HALE.
3. The Etiological Significance of Heberden's Nodes. EDWARD M. MERRINS.
4. On the Local Effects of Aurantia and Its Treatment. W. MOSER.
5. The Influence of the Mind Upon the Body. JOHN B. HUBER.

1.—Reid contributes a very interesting paper describing the life of **Rudolf Virchow.** He speaks of the early life, the political life and the scientific life of this illustrious man. The paper is too extensive for a complete abstract, but it will repay one for its reading. [P. B. B.]

2.—Hale, in considering the subject of **residual urine,** confines his talk to a brief account of prophylactic treatment, by which the condition of cystitis and catheterization could be avoided. If due to the enlarged prostate, to which class of cases this method is applicable, he directs the patient to void urine twice a day while in the knee-elbow posture. He has had excellent results from this simple procedure. However, if an atonic condition of the bladder is present, the method will obviously be of no avail. [P. B. B.]

3.—In considering the **etiology** of **Heberden's nodes,** Merrins says that there is a great diversity of opinion as to the pathological significance of these nodes. The conditions in which these nodes appear are gout, cancer and auto-intoxication and senility, or in all joint conditions known as rheumatoid. In rheumatoid arthritis there is unquestionably a very close connection between these nodes and this disease. Among the predisposing causes he first mentions "wear and tear." The disease also is seen more frequently in women than in men. This, he says, is due to the fact that the occupations of women require the habitual use of the smaller joints. Among other conditions that cause the development of these nodes he mentions Raynaud's disease and Hutchinson's "last-joint arthritis," both of which he claims are due to vasomotor disturbance. Concluding, he says that Heberden's nodes are simply evidences of structural degeneration, dependent upon one or more of the factors above mentioned. They should not be classed from their pathological importance as a separate form of rheumatoid disease. [P. B. B.]

4.—Moser, in speaking of the **effects of aurantia** and their treatment, says that this substance when in the powdered form may be handled with impunity, but when in solution it some times produces disagreeable results. He cites a case in which the symptoms induced were almost similar to rhus toxicodendron poisoning. The symptoms, however, were decidedly more severe. He calls attention to the absence of pain despite the severity of the other symptoms and signs. The treatment consisted in moist applications of a solution of creolin and grindelia robusta. This he found to ameliorate all symptoms. He tried menthol for the intense pruritus that existed, but it was not effective in this instance. [P. B. B.]

5.—Huber contributes a very interesting paper on **the influence of the mind upon the body.** He says this subject has been nearly as old a theme for speculation as the nature of mind itself. However, at the present time there is a trend in the opposite direction. The important influence is held to be that of the body upon the mind, the body itself acted upon by its environment. Until we have discovered the nature of mind and what matter really is, we cannot positively adopt either position to the exclusion of the other. He thinks that we should differentiate between mind and the mechanism in the body through which mind asserts itself. The psychical machinery he divides broadly into 2 systems, the cerebrospinal and the sympathetic. The first is concerned chiefly with conscious life, while the second has to do mainly with unconscious life. This distinction between these 2 symptoms is a very broad one, and they are by no means absolutely separated from one another. The condition resulting from shock, he says, exhibits well the phenomena under consideration. Furthermore, to consider how our mental states are mirrored in the flesh, we may divide the mind into the intellect, will and emotions. This thought is then spoken of in detail. In conclusion, he says that through faith many functional diseases are cured, and this has led to the establishment of the affliction of the socalled faith-curers, Christian Scientists, mind-healers, magnetic healers, etc. Parents who subject their children to the care of these individuals are not doing a religious but a sacreligious act, and in the last degree detestable. [P. B. B.]

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

February 12, 1903. (Vol. CXLVIII, No. 7.)

1. Irrigation in Acute Urethritis. ARTHUR L. CHUTE.
2. A Report of a Case of Multiple Neuritis of Questionable Origin. ARTHUR W. MARSH. Remarks by GEORGE C. SMITH.
3. Subdural Cervical Carcinoma, Secondary to Carcinoma of the Breast. E. W. TAYLOR and G. A. WATERMAN.

1.—Chute sums up his article as follows: (1) That, while irrigation is at times and in occasional instances disappointing, it gives in acute urethritis the best individual results and the best general results; (2) that it offers the patient the greatest immediate comfort and the greatest immediate safety; (3) that as prompt, if not more prompt, recovery takes place than by any other means; (4) that there is a more certain recovery with less probability of later complication. [T. M. T.]

3.—Taylor and Waterman report a case of this condition with the following important points: (1) A growth of long standing in the immediate neighborhood, but with slight involvement of the cord; (2) limitation of the new growth essentially to the subdural space; (3) extensive motor and sensory paralysis from involvement of nerve roots alone; (4) absence of pain attributable to invasion of sensory roots. [T. M. T.]

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

February 14, 1903.

1. Gunshot Wounds of the Thorax and Abdomen. From the Viewpoint of a Civil Surgeon. W. L. RODMAN.
2. Sanitation and Politics. WALTER WYMAN.
3. The Drainage Canal of the Valley of Mexico. HENRY O. MARCY.
4. Sporadic Cretinism in Children. With Report of a Case from the United Hebrew Charities Dispensary. ROSA ENGELMANN.
5. Report of Two Cases of Dermoids in Children: One of the Testicle and one of the Ovary; With Note on the Infrequency of the First; the Origin of Both. SAMUEL W. KELLEY.
6. A Study of the Contents of the Vesicles and Pustules of Smallpox. A Preliminary Report. JAY F. SCHAMBERG.
7. Post Mortem Examinations. W. D. HAINES.
8. The Diagnosis of Carcinoma of the Larynx. OTTO T. FREER.
9. Vacation Notes. G. FRANK LYDSTON.

1.—See **Philadelphia Medical Journal,** June 21, 1902, page 1101.

2.—See **Philadelphia Medical Journal,** June 21, 1902, page 1113.

3.—See **Philadelphia Medical Journal,** June 21, 1902, page 1114.

4.—See **Philadelphia Medical Journal,** June 21, 1902, page 1113.

5.—See **Philadelphia Medical Journal,** June 21, 1902, page 1113.

6.—Schamberg presents a preliminary report on a study of the contents of the vesicles and pustules of smallpox. Sixty-four out of 82 lesions cultured gave absolutely negative results, while 18 showed a growth. Of the inoculations made before the seventh day of the eruption 33 out of 34 were sterile. Of the tubes which showed cultures, 10 were instances of the streptococcus pyogenes, 2 cultures were associated with a small bacillus resembling the diphtheria organism, in 3 cases a small bacillus resembling the diphtheria bacillus was found, in 2 the staphylococcus pyogenes aureus alone, in another instance it was associated with the streptococcus, and on several occasions a growth was obtained on one medium only, while inoculations taken from the same lesion at the same time made on other media remained sterile. Schamberg, as a result of his investigations, concludes that the pustulation in smallpox is not due to secondary infection with any of the ordinary pyogenic germs, but is the result, in all probability, of the action of the micro-organism which produces the disease. Streptococci and other bacteria may be present in the late pustules, but are found only exceptionally in the early lesions. He thinks it probable that the streptococcus plays an important part in the development of impetigo, boils, abscesses, erysipelas and gangrene which so commonly complicate smallpox. [F. J. K.]

7.—Haines contributes an article on **post mortem examinations**, in which he discusses the responsibilities of the medicolegal examinations, and at some length considers such important conditions as post mortem staining, post mortem rigidity, latent meningitis, also the effects of carbolic acid poisoning, death by inhibition and the part played by kidney lesions in producing sudden death. [F. J. K.]

8.—In this extensive paper Freer discusses at length the **diagnosis of carcinoma of the larynx.** Early diagnosis of this condition is frequently not made, because, at first, of the slight regard usually paid by the patient to the persistent hoarseness that may precede the graver manifestations for years as the only symptom, and, secondly, the widespread indifference to the acquirement of even moderate skill in laryngoscopy shown by a great number of the profession. The great importance of careful inspection of the larynx is shown, and a strong plea made for an early diagnosis. At present the cases usually come to the operator very late. Chronic hoarseness in a man past 40 should make a laryngoscopical examination an imparative duty to all practitioners. None of the symptoms of carcinoma is of much value in proving its presence, but they are of great use in arousing suspicion of its existence. Positive diagnosis rests upon the use of the laryngoscope and microscopical sections of the growth. The author's article is numerously illustrated with cuts representing carcinoma in various stages. The differential diagnosis between tubercular and syphilitic tumors and ulcers and carcinoma is carefully detailed. Freer urges and defends the removal of portions of suspected growths for microscopical examinations. The piece removed must be taken from the center of the growth and the instrument crowded in deeply. The author prefers Schiemann's forceps for this purpose. Although strongly urging the use of the microscope as one of the means of making a diagnosis, it is stated that it would be a mistake to follow its results blindly and without a corroboration from clinical appearances. [J. H. G.]

AMERICAN MEDICINE.

February 14, 1903.

1. Differential Diagnosis of Certain Diseases of the Liver. CHARLES G. STOCKTON.
2. The Significance of the Presence of Streptococci in Market Milk. RAYMOND CLINTON REED and ARCHIBALD ROBINSON WARD.
3. Tuberculosis of Bronchial Glands; Tuberculin; Chest Pain. G. W. McCASKEY.
4. The Nervous Cardiac Symptoms Due to High Altitudes. F. SAVARY PEARCE.
5. Report of 250 Additional Cases in Which Nitrous Oxide Was Used Alone or as a Preliminary to Ether or Chloroform Anesthesia. DAVID H. GALLOWAY.
6. Care of the Eyes of School Children. LINN EMERSON.

1.—Stockton's paper deals with the **differential diagnosis of certain diseases of the liver.** (1) Between cirrhosis of the liver and so-called syphilitic cirrhosis of the liver; (2) between cholelithiasis and cancer of the liver; (3) between sclerosis of the liver following chronic biliary obstruction and the so-called Hanot's cirrhosis of the liver. [T. L. C.]

2.—Reed and Ward consider the significance of the presence of **streptococci in market milk.** The common prevalence of **mammitis in the cow** constitutes an important source of streptococci in market milk. The insidious onset of the disease is responsible to some degree for the marketing of infected milk by dealers with innocent intentions. The results of the common method of milk handling in the stables deserves mention. The milk, directly after drawing, is usually strained into a 40-quart can, or into an even larger receptacle. The existence of udder inflammation is frequently first brought to notice by cord-like masses lodged on the strainer after the infected milk has been mixed with the wholesome milk. The ignorance or greed of the milker, or both, may prevent the rejection of the infected lot. From the reference available to us it is evident that the medical profession regards the presence of streptococci in market milk as dangerous to public health. The writers believe that recent investigations indicate that streptococci are found in the healthy udder more frequently than was formerly believed to be the case. [T. L. C.]

3.—McCaskey speaks favorably of his experience in the use of **tuberculin for diagnostic purposes,** as well as the treatment of certain types of tuberculosis during the initial stage. [T. L. C.]

DEUTSCHE MEDICINISCHE WOCHENSCHRIFT.

January 1, 1903.

1. On Cardiac Hypertrophy in Diseases of the Kidneys. H. SENATOR.
2. Syphilitic Affections of the Heart. J. W. RUNEBERG.
3. Bloodserum-Therapy in Dysentery. KRUSE.
4. Contribution to the Surgery of the Ureter. J. ISRAEL.
5. On an Instance of Judgment Against a Physician Because of Neglect to Sew up the Perineum. ZWEIFEL.
6. On the Pathology and Therapy and Scleroderma in Childhood. EBSTEIN.
7. The Biological Overwork of the Organism in the Artificial Nourishment of Sucklings, as Compared with Nourishment with Mother's Milk. WASSERMANN.
8. Does the Oral Cavity of Sucklings Nourished on Mother's Milk Contain Streptococci? J. HERZBERG.

1.—Senator reviews the theories that have, at various times, been put forth to explain the **cardiac hypertrophy in disease of the kidneys.** He refers to the work of Strauss, who has demonstrated that in chronic parenchymatous nephritis the molecular concentration of the blood is normal, or, at least, not increased, while in contracted kidney it is increased. The albumin and the specific gravity are decreased in chronic parenchymatous nephritis, and usually normal in contracted kidney. The nonalbuminous nitrogen is not increased in chronic parenchymatous nephritis, while it is increased in contracted kidney. The toxicity of the urine is increased in contracted kidney, but not in parenchymatous nephritis. The author believes that this indicates that **in chronic parenchymatous nephritis or in acute nephritis there is a retention of substances that damage the vessels severely and cause dropsy,** while in chronic interstitial nephritis the retention is much less marked and much slower in its effects, hence the alterations occur slowly. This retention gradually leads to the production of cardiac hypertrophy and of thickening of the arterial walls. [D. L. E.]

2.—Will be abstracted when concluded.

3.—Will be abstracted when concluded.

4.—Israel first reports an interesting case in which a urinary fistula was operated upon, and it was found impossible to unite the ends of the ureter. He, therefore, **introduced a drainage-tube into the pelvis of the kidney,** coming out through the anterior abdominal wall. A drainage-tube **was also introduced into the bladder. These tubes were connected by a silver tube, in the middle of which** was placed a ball-valve to prevent the back flow of urine. The patient wore the apparatus with perfect comfort and carried out his usual duties; the urine being passed in the normal way. The author also discusses the extraperitoneal union of the ureter with the bladder. [D. L. E.]

5.—Zweifel discusses at length the recent legal decision making a physician liable because of neglect to sew up the torn perineum. He decides that physicians are properly required to examine the perineum after labor and to sew up any tear in it that may be present. He also discusses the methods of repairing the perineum. [D. L. E.]

6.—Will be abstracted when concluded.

7.—Wassermann contributes an extremely interesting discussion of the relation between the recent work on immunity and on the biological differences between different forms of albumins, to the question of the use of mother's milk and of artificial foods in infants. He especially refers to the fact that Heubner has demonstrated that the artificially nourished child uses many more calories to keep up a nutritive equilibrium than does a naturally nourished child, **showing that more work is required of the artificially nourished infant.** In the author's opinion this is evidently **due to the fact that the artificially nourished child must transform heterologous albumins into homologous albumins.** In order to demonstrate this he has performed the following experiment: Guinea-pigs were injected intraperitoneally with serum from goats or with the tissue of goats. They were afterward injected with typhoid bacilli intraperitoneally, and the typhoid bacilli were rapidly killed off. When, however, guinea-pig serum or guinea-pig tissue was used, instead of the serum, etc. from goats, to inject into the guinea-pigs, the typhoid bacilli that were afterward injected into these animals were not killed and the animals soon died. Wassermann believes this to be clear evidence that under these circumstances the **injection of heterologous serum or tissue caused the animal to provide an unusual mass of complements,** with the result that it was abnormally well prepared to meet the infections. The injection of homologous material caused no such reaction. The author also refers to the fact that Moro has demonstrated that the bloodserum of infants nourished at the breast has greater germicidal action than the bloodserum of artificially nourished infants. He believes that this means that in the artificially nourished children the complements are used up in assimilating heterologous food-stuffs. [D. L. E.]

8.—Herzberg has made a study of the oral cavities of children fed by wet-nurses. **In each of the 10 subjects examined he found streptococci present in the mouth.** In cultures made from the tonsils he found streptococci only 5 times. In 4 instances he killed mice with the streptococci obtained by culture, but he was never able to recover these organisms from the animals. The streptococci varied greatly in the length of the chains; and, particularly after one or 2 cultures, their character became entirely altered. [D. L. E]

MUENCHENER MEDICINISCHE WOCHENSCHRIFT.

December 23, 1902. (No. 51.)

1. The Extirpation of the Puerperal Septic Uterus. R. GRADENWITZ.
3. A Case of Cerebral Infantile Paralysis. R. GOLDMANN.
3. Septum Perforation of Workers in Chromium. J. BAMBERGER.
4. Agurin: A New Diuretic. A. NUSCH.
5. Cancroin "Adamkiewicz." J. DECKER.
6. The Treatment of Gonorrhea with Protargol-Gelatine. BENARIO.
7. Practical Results with the Röntgen Instrumentaria "System of Dessauer" Aschaffenburg. Von GOSEN.
8. Nicolocin: An Alleged Cure for Chronic Morphinism. B. FISCHER.
9. Parenchymatous Nephritis in Syphilis. M. WAGNER.

1.—Gradenwitz has collected 50 cases of **extirpation of the septic uterus,** with 25 cures and 25 deaths. These statistics are about the same as those obtained by Zipperlen. In 113 cases of puerperal fever that he had observed in the course of 4 years, 7 required hysterectomy and 5 of them recovered. He gives the histories of 2 these cases. (The paper is still unfinished.) [J. S.]

2.—A boy of 12 years had, at the age of one year, suddenly developed general convulsions and the next day hemiplegia. From this time he frequently had convulsions on the left side. When admitted to the hospital there was atrophy and shortening of the left arm. There were no contractions of the muscles, passive movements was unimpeded, there was some hypotonia in the fingers, and there was loss of power, although the movements were fairly good. The superficial senses of touch and pain and temperature were normal. The localization sense was also undisturbed; the stereognostic sense was absolutely lost, and there appeared to be complete loss of the sense of position in the fingers. The arm reflexes were increased. Some of the involuntary movements resembled athetosis. The left leg seemed to be fairly normal. The reflexes were slightly increased, Babinski's phenomenon was positive. The skin reflexes were greatly exaggerated. It was interesting to note that Babinski's sign could be procured by severe irritation of any part of the body, or by severe intellectual efforts. The chief interest in the case is in the alterations in the skin reflexes, which have been insufficiently studied in the **cerebral paralyses of children.** [J. S.]

3.—Bamberger believes that the cause of the septum perforation that occurs in the workers in chromium salts is due to the fact that the dust containing chromium, when inspired, is lodged first on the septum. He calls attention to the experiments of Kaiser with magnesia which seemed to prove this point. Moreover, he has observed that the workers who use snuff are less susceptible to this lesion, and that young persons are more susceptible, indicating that it is a local process. [J. S.]

4.—**Agurin** is a combination of sodium theobromine with sodium acetate. It does not irritate the intestine and has no toxic qualities. It contains more theobromine than diuretin and, therefore, smaller doses are required. Nusch reports 4 patients treated with this drug, in all of whom the quantity of urine excreted was very considerably increased. In one of these there was extensive edema, that was improved; in another a pleural effusion that disappeared. The dose is from 0.5 to one gm., (8 to 15 gr.) 3 times a day. The drug appears to be preferable to diuretin. [J. S.]

5.—Decker has employed **cancroin** in 3 patients; the first, a man of 63 years, had a cancer of the esophagus with obstruction. Twenty-four hypodermic injections each of one gram of cancroin were made in the course of 5 weeks. There were no bad local results and no improvement in the condition of the patient, who died at the end of 3 months. The second patient, a woman of 66 years, also had a cancer of the esophagus, the injections were given and caused considerable pain, and on one occasion led to symptoms of collapse. No effect was observed upon the stricture of the esophagus, and hence it was necessary to perform gastrostomy. The third patient, a woman of 53 years, had symptoms of carcinoma of the stomach. Eighteen injections were made without the least benefit. The fourth patient, a man of 61 years, had symptoms of a carcinoma of the colon; 16 injections, each of one gram, were made, and there was at first a slight improvement in the symptoms. However, the patient soon grew worse, and in the course of 3 months he died. Decker criticises sharply the pretensions of Adamkiewicz and the firm of G. & R. Fritz, the manufacturers of cancroin, that the latter is a specific for cancer. [J. S.]

6.—Benario describes the **method of treating gonorrhea with gelatine impregnated with protargol.** The strength of the solution is usually 5%. This suffices experimentally to kill a 48-hour culture in from 3 to 5 minutes. The method is particularly convenient and appears to give very good results. [J. S.]

7.—Von Gosen has employed Dessauer's apparatus for producing Röntgen rays, and finds that it possesses the following advantages. It is easily managed, and when a direct current and a large induction apparatus are employed the pictures are particularly clear and satisfactory. [J. S.]

8.—Having proved that antimorphinine contains large quantities of morphine, Fischer and Wagner have undertaken to study **nicolocin.** This costs 12 marks for 100 cc. It contains a large number of vegetable drugs, a variety of wines and a little water. It is a yellowish-brown, clear liquid of very bitter taste. In 100 cc. there were 3 gm. of a base which appeared as transparent brilliant needles of prismatic form; melted at 225°, was colored red with nitric acid, reduced iodic acid, was soluble in alkali, gave a blue color with potassium ferrichloride solution and gave other reactions which proved conclusively that it was pure morphine. Therefore, the essential and active constituent of nicolocin is morphine, of which it contains 3%. The drug is placed on the market as a substiute for morphine for patients suffering from the opium habit. [J. S.]

9.—Wagner reports 7 additional cases of **parenchymatous nephritis occurring in the course of syphilis.** The condition usually occurred shortly after the primary infection. He then reports 4 additional cases occurring in persons suffering from **hereditary syphilis.** The symptoms of these cases of nephritis are not essentially different from those of other cases of nephritis. The prognosis, however, is very grave, because in the 14 cases there were 5 deaths. The best method of treatment appears to be still uncertain. The statistics indicate apparently that the antisyphilitic treatment is most efficient, that is to say, in 4 of the 14 cases it was not employed, and 3 died. In 10 cases it was employed and only 2 died. [J. S.]

BERLINER KLINISCHE WOCHENSCHRIFT.

January 12, 1903. (40 Jahrgang, No. 2.)

1. The Active Substance in Cobra Poison. PRESTON KYES and HANS SACHS.
2. The Influence of Oxygen on the Osmotic Tension of the Blood. A. LOEWY.
3. The Entrance of Tuberculosis into the Pharynx. SUKEHITO ITO.
4. The Kobrak Milk Pasteurizing Apparatus. LEO NATANSON.

1.—Will be abstracted when concluded.

2.—Loewy reports a number of experiments upon animals to show **the effect of oxygen on the osmotic tension of the blood.** He found post mortem that nitrogen and hydrogen were as soluble in the blood as oxygen, the gas forming a purely physical solution in the blood. Carbonic acid gas did just the same thing. In healthy individuals the inhalation of oxygen has no effect; in pathological subjects, when too much carbonic acid gas exists in the circulation, the blood needs oxygen and takes up as much as in healthy individuals. The freezing-point of the blood is low when it contains little oxygen, high when it contains little carbonic acid gas. Oxygen changes the freezing-point of blood more rapidly than hydrogen or nitrogen, because it assists in the removal of the carbonic acid gas. Thus inhalations of oxygen are of value in increasing the ventilation of the lungs. [M. O.]

3.—Ito has dissected 104 cadavers of children dead from some disease of the respiratory tract, to find the **points of entrance of pharyngeal tuberculosis.** He found but 9 cases showing points of entrance of secondary tuberculosis, in 6 patients, the tonsils being affected in 5, the pharyngeal tonsils twice, the valleculæ epiglottidæ and the mucous glands at the base of the tongue, one each. Full details are given. [M. O.]

4.—Natanson describes **the Kobrak apparatus for pasteurizing milk** and relates numerous experiments made with it. Thirteen out of 22 such attempts were unsuccessful. The temperature obtained was not what had been expected, nor were the bacteria killed at that temperature. He concludes that the Kobrak apparatus for the pasteurization of milk is neither exact nor rational. [M. O.]

WIENER KLINISCHE WOCHENSCHRIFT.

January 15, 1903. (XVI. Jahrgang, No. 3.)

1. Osseous Changes in Gonorrheal Arthritis, Especially Acute Atrophy of Bone. ROBERT KIENBOECK.
2. The Value of Leukocyte Count in Diseases of the Female Genitalia. ARTHUR WEISS.
3. Heterotopia in the Histological Structure of a Fibrous Uterine Polyp. EMIL POLLAK.
4. Two Cases of Congenital Partial Defect of the Clavicles. KARL PRELEITNER.

1.—Will be abstracted when concluded.

2.—After reporting in detail the case-histories of 23 women with various affections of the genitalia, Weiss concludes that the **leukocyte count is of great value in the diagnosis of disease of the female genitalia,** since a constant leukocytosis of over 16,000 denotes a suppurative process. If the purulent collection has existed some time, this amount gradually decreases, yet remains high until operative interference evacuates the pus. In cases of very long-standing suppuration, the leukocyte count may be normal. Besides, a low leukocyte count, when the condition has existed but a very short time, completely excludes the possibility of a suppurative process being present. [M. O.]

3.—Pollak reports an interesting case of **polyp of the uterus,** occurring in a woman of 37, with gonorrheal metritis, perimetritis and bilateral inflammatory swelling of the adnexa. The polyp, after removal, appeared to be formed of fibrous and muscular tissues, containing a **great quantity of fatty tissue.** Pollak believes that, when her uterus was curetted, 3 years previous, perforation occurred, and part of the omentum protruded through the perforation. This was probably the origin of the fatty tissue of the polyp. He does not see how it could have been congenital, but believes that it arose from the omental fat. No such cases could be found in the literature. [M. O.]

4.—Preleitner reports, with photographs and diagrams, 2 cases of **partial defect of the clavicles** in children. In both cases both shoulders could be brought together under the chin. The acromial ends of the clavicles were separated, shorter than was normal, and placed lower down. Such congenital defects of both shoulders are rare. Braces were applied to keep the shoulders back. [M. O.]

MEDIZINSKOIE OBOZRENIE.

Vol. LVIII, No. 17, 1902.

1. Twenty-one Cases of Operations for Extra-uterine Pregnancy. A. EBERLIN.
2. A Case of Extreme Enlargement of the Breast During Pregnancy. A. P. KOCHANOFF.
3. Primary Phlegmon of the Larynx Treated with Antistreptococcic Serum. A. IVANOFF.
4. On the Casuistics of Diseases Caused Reflexly by Affections of the Upper Air-Passages. PH. STEFANOVSKY.
5. Affections of the Upper Air-Passages of Malarial Origin. L. SVERZSHEVSKY.
6. On Refraction of the Blood. P. S. USOFF.

1.—Eberlin reports 21 cases of operation for the relief of **extra-uterine pregnancy.** Hematocele was present in 4 of the patients operated upon, abdominal pregnancy in one, interstitial pregnancy in one and tubular pregnancy in 15. The youngest patient was 22 years old, and the oldest 40. Only 2 were primiparæ. Laparotomy was performed on 15, (in one abdominal section was preceded by colpotomy), posterior colpotomy on 2, and incision of the posterior vault on 4. All of the patients recovered. One woman on whom a laparotomy was performed became subsequently pregnant. The diagnosis and etiology are discussed, and the histories of some of the cases are given. [A. R.]

2.—Kochanoff reports the case of a woman, 23 years old, who developed, during her third pregnancy, extreme **hypertrophy of both breasts.** The latter extended below the umbilicus, measuring from 48 to 50 cm. from the anterior base across the nipple to the posterior base, and about 54 to 47 cm. in circumference. On pressure some colostrum was obtained. The extreme weight of the appendages occasioned great inconvenience, incapacitating the woman for work. The patient aborted during the sixth month, and after that the breasts commenced to diminish in size until they became almost normal 4 months later. [A. R.]

3.—Ivanoff reports a case of **phlegmon of the larynx,** occurring in a man, 40 years old, in good health. Injections of polyvalent **antistreptococcic serum** proved curative. [A. R.]

4.—Stefanovsky reports 3 cases of persistent cough and nervous disturbances, caused reflexly by affection of the nasal mucous membrane. [A. R.]

5.—Sverzshevsky observed among 148 cases of **malaria** 3 in which attacks of dry spasmodic cough, dyspnea, pain in the chest, coryza and pleuritic manifestations occurred as the direct result of malarial infection. The symptoms rapidly disappeared after the administration of quinine. [A. R.]

6.—Usoff endeavored to establish a coefficient of **refraction of blood** by means of a refractometer in the hope of discovering some constant principles which could be utilized for clinical purposes. He found, however, that the index of refraction is inconstant and **bears no permanent relation to pathological conditions of the blood.** Further experiments showed that the refraction of the blood **depends on the albuminous constituents** and varies with the quantity and nature of the latter. This opened up a new field for investigation, the purpose of which is to establish by means of refractometry of the blood the changes of its albuminous constituents in various diseases. Investigations of exudates and transudates by means of refractometry enable the author to present the following definition of these substances. An exudate is bloodserum (or bloodplasma) from which some part of the salts have been abstracted. A transudate is bloodserum deprived of a considerable part of the albumin. [A. R.]

DEUTSCHE ZEITSCHRIFT FUER CHIRURGIE.

November, 1902. (Volume 66, Nos. 1 and 2.)

1. The Surgical Relations of Influenza. G. PEREZ.
2. The Etiology of Coxa Vara. M. HAEDKE.
3. The Balloon Symptom in Intestinal Occlusion. J. BLUMBERG.
4. The Cancer Question. W. MERKENS.
5. The Lymphvessels of the Mucous Membrane of the Cheek. A. E. POLYA and D. von NAVRATIL.
6. Traumatic Rupture of the Heart. HEINRICH EBBINGHAUS.
7. The Reposition of an Old Pathological Dislocation of the Hip. J. SHOEMAKER.
8. A Peculiar Pocket Formation of the Peritoneum. O. FUNKENSTEIN.
9. The Chemistry of Oxygen Chloroform Anesthesia. L. MICHAELIS.

1.—Perez finally concludes his very long article on the various **surgical complications of influenza.** Its toxic action is noted in the central and peripheral nervous system and the general condition. Its inflammatory effects are found upon all mucous membranes. Influenza bacilli enter the organism by all routes, reach the blood and then become widespread. The varied localizations of the complications throughout the body with a large bibliography are given. [M. O.]

2.—Haedke reports a case of **coxa vara** in a boy of 17. As extension proved unavailing, the hip was resected by the Langenbeck method. Recovery followed. Though his gait has but little improved, all pain has disappeared. The resected epiphysis showed, not separation, but a change in position, a wandering, probably of gradual occurrence. This condition occurred during puberty, and as a late manifestation of rachitis. [M. O.]

3.—Blumberg's experiments upon cadavers confirm the investigations made in **intestinal occlusion.** He finds the **balloon symptom constantly present.** This is a metallic clang noted with pleximeter percussion over the strangulated, meteoric intestine. This is always plainly audible. [M. O.]

4.—Merkens finds that the **fibro-adenoma of Schimmelbusch** is a **benign tumor,** excision of the mass being followed by recovery. **All other epithelial tumors of the breast are indicative of cancer,** even though without clinical symptoms. For these he advises amputation of the breast. From the results of investigations up to the present time, Merkens believes cancer not to be contagious. [M. O.]

5.—Pólya and von Navratil have studied minutely the **anatomy of the lymphvessels of the mucous membrane of the cheek,** in 48 preparations, illustrating their findings with excellent drawings. A full description of the condition found, considered surgically, is given with several case-histories. [M. O.]

6.—Ebbinghaus gives the case-history of a girl of 12, with **subacute traumatic rupture of the heart,** death following in 9 days. She had fallen from a fifth-story window and was severely injured. Such cases are rare. The condition was not diagnosed until after death. Oddly enough, there was also a traumatic affection of the pulmonary valve noted post mortem. The literature is fully reviewed. [M. O.]

7.—Shoemaker describes his **bloodless method of replacing an ancient pathological dislocation of the hip,** in a girl of 23, in whom the condition had existed for 13 years. [M. O.]

8.—Funkenstein describes a **peculiar pocket of peritoneum** found at autopsy in the body of a man of 62. This **was due to a Meckel's diverticulum which had its own mesenteriolum attached.** The condition was probably embryonal. It is well shown in 2 diagrams. [M. O.]

9.—Michaelis' investigations show that the **oxygen chloroform apparatus** made by Dräger and Roth is dangerous, since it causes dissolution of the chloroform, with the formation of other dangerous substances. [M. O.]

ARCHIV FUER KLINISCHE CHIRURGIE.

1902. (Vol. 68, No. 4.)

38. The Surgical Treatment of Injuries of the Spleen. ERICH BERGER.
39. Castration in Tuberculosis of the Testicle. LUDWIG BERGER.
40. The Operative Treatment of Lymphoma of the Neck. RUDOLPH TRZOBICKY.
41. The Treatment of Hypertrophy of the Prostate. THORKILD ROVSING.
42. Osseous Cysts in the Long Bones. GEORG KOCH.
43. Intestinal Invagination in the Rectum Following Cancer of the Sigmoid. HERBING.
44. The Otitic Symptoms of Fracture of the Base of the Skull. STENGER.
45. The Relations of the Circulation to Local Tuberculosis. GEORG FRIEDLAENDER.
46. Actinomycosis in Human Beings from Personal Observation. ROMAN VON BARACZ.

38.—After reviewing the literature and history of **operation in the treatment of splenic injuries,** Berger has collected 127 such cases. **Splenectomy** was performed in 80 cases, **splenorrhaphy** in 14 and **tamponade** in 10. In all, laparotomy was performed for 90 ruptures of the spleen, with 39 deaths; 18 gunshot wounds with 11 deaths; and 19 stabwounds with 2 deaths. Thus 74, or 59% of cases, recovered, while 52, or 41%, died, very good results compared with those previously reported. The table of cases, with an additional 6 cases found later, is given. [M. O.]

39.—Berger found 50 cases of **tuberculosis of the testicle** in 25 years, 35 treated with unilateral castration, 9 with bilateral castration and 3 with partial excochleation, while 3 would not permit operation. Forty of the patients were between 20 and 40 years of age. The youngest was 18, the oldest 71 years old. The case-histories are reported. Of the 35, upon whom unilateral castration was performed, it is known that 20 are now well, while 10 have died; of the 9 with bilateral castration, 6 are well and 3 have died. The 3 patients with partial excholeation all recovered. Berger concludes that, while statistics do not speak especially in favor of **castration,** they do not contra-indicate this treatment of testicular tuberculosis. [M. O.]

40.—In 11 years Trzobicky has removed **lymphoma of the neck** 860 times from 822 patients, the result being known in 175 of the patients only, 101 of whom are well, while 40 died of phthisis, 19 have tuberculosis and 15 are well, yet have had recurrence of the tumors. This shows 57% of permanent recoveries. The **operative removal of all enlarged lymphglands is indicated,** because both the general condition of the organism and the local process are greatly benefited. The only case in which operation should not be done is when advanced phthisis exists also. The technique is given. [M. O.]

41.—After discussing the **etiology and treatment of hypertrophy of the prostate** with catheterization, bilateral castration, bilateral resection of the vas deferens, and the Bottini operation, Rovsing concludes that in a patient with partial retention or the first attack of total retention, he first attempts **regular catheterization.** If the bladder is dilated and there is much residual urine, **vasectomy and, later, prostatectomy** are advised. In patients with total retention, cystitis and troubles on passing the catheter, **cystotomy and vasectomy** are best. When vasectomy, castration, the Bottini operation and prostatectomy all fail, cystotomy or regular catheterization must be tried, preferably the former when the latter causes disturbances. Prostatectomy is much worse in its effect on the patient than vasectomy, and should not be performed without having first attempted vasectomy. [M. O.]

42.—**Cysts** are rarely found **in the long bones.** The case of a boy of 15, with a cyst of the upper end of the femur, following the softening of an enchondroma, is given. Koch found but 20 similar cases in the literature. The cause of such a condition may be tumor formation in the marrow, syphilis, tuberculosis, an abnormal tendency to spontaneous fracture, or echinococcus in the bone. The technique of the operation in his case and the histological findings are described. The case-histories from the literature follow. [M. O.]

43.—Herbing reports 2 cases of **intestinal invagination in the rectum following cancer of the sigmoid flexure,** in women of 52 and 22 years of age. In the first case the invagination disappeared during laparotomy; sacral operation was then performed for removing the cancer and forming an artificial anus; and later another laparotomy was done, the artificial anus being allowed to close after the intestine had again been connected. In the second case death from perforative peritonitis occurred early. [M. O.]

44.—Stenger reports 12 cases of **fracture of the base of the skull,** from which he concluded that the following **otitic symptoms** occurred commonly; hemorrhage and loss of cerebrospinal fluid from the external ear, disturbances in hearing from injuries to the middle ear, labyrinth, etc., vertigo and paralyses of the cranial nerves. [M. O.]

45.—After describing his experiments upon **the relation of the circulation to local tuberculosis** in rabbits, Friedländer concludes that those tissues, which naturally show a predisposition to local tuberculosis, become infected by emboli following the injection of feebly virulent material in the region supplied by the crural artery. Physiologically the bloodvessels affected by local tuberculosis are characterized by an especially slow bloodstream, almost causing stasis in the capillaries, and by very thin bloodvessel walls. [M. O.]

46.—Von Baracz reports 52 cases of **actinomycosis** of the head and neck; one case affecting the lip; 3 cases affecting the tongue; 3 cases affecting the lungs and thorax, and one case affecting the abdomen. The 60 case-histories are given. He concludes that actinomycosis results from the disposition of the fungus on the mucous membrane of the digestive or respiratory tracts, as a rule, rarely following from the skin. It gains entrance on dry foreign bodies, cereals, straws, in the air, etc. Tumor formation follows the degeneration caused by the growth of the fungus in the tissues. Its peculiar ray formation permits exact diagnosis. In the face and neck the condition may recover spontaneously. The operative treatment is incision, excochleation and antiseptic tamponade. Tincture of iodine should be applied locally. In pulmonary actinomycosis he advises the unguentum Credé. [M. O.]

ZEITSCHRIFT FUER ORTHOPÆDISCHE CHIRURGIE.

1903. (Volume XI, No. 1.)

1. Opening Address Delivered at the Meeting of the German Society for Orthopedic Surgery, 1902. HOEFTMAN.
2. Neurogenic Scoliosis. A. HOFFA.
3. The Principles of the Scoliosis Question. PETER BADE.
4. Scoliosis With Cervical Ribs. GARRE.
5. The Treatment of Scoliosis With the Weir Mitchell Cure. HOEFTMAN.
6. Variations of Form in Scoliosis, from 1137 Observations. WILLIAM SCHULTHESS.
7. Congenital High Position of the Scapula. FROEHLICH.
8. The Laws Regulating Static Weight Deformity. A. SCHANZ.
9. Improvement of Function in Defective Hip-Joint. ADOLF LORENZ.
10. Permanent Results From Forcible Redressement in Spondylitic Kyphosis. OSCAR VULPIUS.
11. Experimental Deformities. H. MAASS.
12. Forcible Redressement in Genu Valgum. A. CODIVILLA.
13. The Treatment of Genu Valgum. HOEFTMAN.
14. Two Cases of Ischemic Contracture of the Flexor Muscles of the Hand. HENLE.
15. Apparatus for Maintaining Reposition in Congenital Dislocation of the Hip. M. SCHEDE.
16. The Clinical Etiology of Flatfoot. J. RIEDSINGER.
17. The Etiology of Congenital Clubfoot. OSCAR VULPIUS.
18. The Structure of the Negro's Foot. MAX HERZ.
19. Hysterical Talipes Equinus. OSCAR VULPIUS.
20. Traumatic Pes Calcaneus. ARNOLD WITTEK.
21. Some New Orthopedic Apparatus. HEUSNER.
22. Circumference Osteotomy. MAX REINER.
23. Spondylitis Gummosa. JOACHIMSTHAL.
24. The Permanent Results of Treatment in Congenital Dislocation of the Hip. GUSTAV DREHMANN.
25. Early Massage in the Treatment of Some Joint Fractures. GUSTAV DREHMANN.
26. Congenital Defect of the Femur. GUSTAV DREHMANN.
27. A New Operative Procedure for Treating Severe Cases of Genu Valgum. H. KRUKENBERG.

2.—Hoffa discusses **scoliosis due to the various forms of nervous disease,** anterior poliomyelitis, cerebral paralysis, progressive muscular atrophy, polyneuritis, Friedreich's ataxia, tabes, syringomyelia, hysteria and pure neuromuscular scoliosis, reporting several cases of each, with photographs. The scoliosis, in position and severity, shows distinct relations to the disease which causes it. [M. O.]

3.—Bade uses the plaster jacket first in **scoliosis.** If this does no good, some other kind of apparatus is tried. A support which models or moulds the scoliosis is to be employed, with massage, etc. If this fails, even when combined with a jacket at times, forcible redressement may be successful. Bade describes the technique of this operation. [M. O.]

4.—Garrè describes 2 cases of **scoliosis** of the lower cervical and first dorsal vertebræ, in patients **with a cervical rib** on the convex side of the scoliosis. This was a primary scoliosis due to the unilateral cervical rib. The other symptoms of the condition are described. [M. O.]

5.—Hoeftman reports excellent results in the **treatment of scoliosis** in 6 cases of young, weak, nervous individuals, following the **Weir Mitchell rest cure.** The treatment is especially applicable when the scoliosis is just beginning. [M. O.]

7.—Froehlich reports a case of **congenital high position of the scapula** in a boy of 16, with a full description of the condition. [M. O.]

8.—Schanz again describes his experiments to show the correctness of his views on **the laws regulating statistical weight deformity.** Numerous illustrations explain his ideas, as usual. Deformity is due to the action of mechanical forces and to the reactions of the living body to such forces. The laws governing both classes are very simple. [M. O.]

9.—Lorenz describes his **treatment of chronic disease of the hip,** coxitis, luxation, arthritis deformans and fracture of the neck of the femur. Some cases are easily curable, others will need operation, while, between these, is a class of cases which Lorenz treats **by overextended abduction.** Thus **he performs not reposition, but transposition** of the upper end of the femur forward, with excessive abduction, kept up a long time. Thus far his cases have only been irreducible congenital dislocation and fracture dislocation of the neck of the femur. [M. O.]

10.—Vulpius reports in detail 2 cases of marked **spondylitic kyphosis** cured permanently by Calot's forcible redressement, in boys of 5 and 8 years, who, now at 13 and 14, show no signs of their previous deformity. [M. O.]

11.—Maass's experiments show that **increased pressure locally prevents the extension of growing bone** in the direction of the pressure, but bone production continues unchanged, and compensatory growth results, in a purely physiological direction, depending on the size and position of the hindrance to normal growth. [M. O.]

12.—Codivilla describes his method of **forcible redressement in genu valgum,** with photographs, a review of the literature and a report of 1863 operated cases. Full details are given. [M. O.]

13.—Hoeftman describes his **osteotomy** in treating genu **valgum,** in patients of over 16 years of age He saws through the femur. The case-history of a man of 21 is given in full. [M. O.]

14.—Henle showed 2 cases of **ischemic contracture of the flexor muscles of the hands,** with recovery after shortening the bones of the forearm. The patients were boys of 8 and 14 years. The results were good. [M. O.]

15.—Schede describes an exceedingly **complex apparatus for keeping the head of the femur in place after reposition of congenital dislocation of the hip.** Several diagrams explain the apparatus and its application. [M. O.]

16.—There are 3 cardinal symptoms of **flatfoot,** reflexion, rotation and inflexion. These are explained diagrammatically. Thus flatfoot is found in people who stand much, climb stairs or carry heavy loads. Fatigue or obesity may also be the cause of flatfoot. [M. O.]

17.—Vulpius reports 4 cases of **congenital club-foot** which show that one cause of the condition is **intra-uterine paralysis.** His treatment was tendon transplantation, which had excellent results. [M. O.]

18.—Herz, who minutely describes the **feet of negroes,** finds them perfectly normal, and even better shaped than those of ordinary white men. [M. O.]

19.—Vulpius describes 2 cases of **hysterical talipes calcaneus** in young girls, very different in their symptoms. In the first case 4 operations were necessary. The treatment is complicated and difficult, varying with each case. [M. O.]

20.—Wittek found that, clinically and experimentally, **pes calcaneus traumaticus** was due to 2 movements, the posterior portion (calcaneus and heel) moving in dorsal flexion, the rest of the foot moving in plantar flexion. Three cases are reported, with the treatment. [M. O.]

21.—Heusner describes several **new orthopedic appliances,** an operating table, osteoclast and some new splints. [M. O.]

22.—Reiner describes his method of **osteotomy for genu valgum,** which he calls **circumference osteotomy,** with photographs of his osteotome. His technique is given in full. The operation takes but a few moments. [M. O.]

23.—Joachimsthal describes a rare case of **gummatous spondylitis,** in a man of 54. Complete recovery followed antisyphilitic treatment, combined with mechanical treatment, as the photographs show. [M. O.]

24.—Drehmann reports 50 cases of **congenital dislocation of the hip,** 26 of which came to operation by the bloody method, with 16 excellent results. The bloodless operation was performed in 131 cases, 55 of the patients recovering perfectly. He advises the bloodless operation in children under 7 with unilateral dislocation, and in children under 4 with bilateral dislocation. [M O.]

25.—Drehmann reports good results in **treating fractures affecting the joints** with early massage. The joint is immobilized in a splint, and the callus is modeled by massage. Radiographs show the results. [M. O.]

26.—Drehmann describes 3 cases of **partial congenital defect of the femur,** with especial reference to treatment. The condition may come under any one of 5 heads, as his radiographs show. Osteotomy with an apparatus with an artificial foot completely hides the deformity. [M. O.]

27.—Krukenberg has devised a **simple method of treating severe genu valgum,** the technique of which is well and clearly described. This is demonstrated by an excellent diagram, besides. The patient was a boy of 16, whose severe knock-knee was the result of early rachitis. The result of this arthrodesis or resection of the knee-joint was good. [M. O.]

ANNALS OF SURGERY.

December, 1902.

1. The Pathogenesis and Pathological Anatomy of the Enlarged Prostate. L. R. CRANDON.
2. Removal of an Upholsterer's Tack from the Right Bronchus. A. von LIEW BROWKAW.
3. Landmarks in the Ureter. BYRON ROBINSON.
4. Subcutaneous Rupture of the Kidney. GEORGE E. DODGE.
5. Traumatic Rupture of the Spleen. D. N. EISENDRATH.
6. The Transduodenal Route (Duodenocholedochotomy) in Cases of Impaction of Gall-Stones in the Lower Portion of the Common Duct. C. O. THIENHAUS.
7. Strangulation of the Vermiform Appendix in the Right Femoral Ring. H. B. RAKE.
8. Contribution to the Study of Intra-abdominal Omental Torsion. J. F. BALDWIN.
9. Primary Tuberculosis of the Parotid Gland. JACOB FRANK.
10. A Simple Device for Holding Ligatures. MAURICE RUBEL.

1.—Crandon concludes that **senile vesical insufficiency,** which may be called clinically "prostatism," is not a single entity but a complex condition. It is not due to fatty degeneration or infiltration of the bladder-muscle or to arteriosclerosis of the bladder vessels. Its causes are: (1) Atrophy of bladder-muscle and new growth of connective tissue, finally infiltrating the muscles. (2) Mechanical obstruction at the beginning of the urethra. This may be simply a posterior lip at the orifice in front of a retroprostatic pouch; it may be a true middle lobe of the prostate acting as a valve; it may be a nodule of enlargement of one or both lateral lobes protruding into the urethra. (3) Chronic cystitis intensifies these 2 causes, namely: Muscle atrophy and obstruction at the exit, by means of the structural changes due to inflammation. (4) Stone in the bladder increases the symptoms, but is probably rarely a primary cause of insufficiency. Although changes in the bladder wall may alone be sufficient to cause prostatism, the most important factor is probably obstruction. The tendency to all these changes increases with age and the most marked cases are those in which atrophy of the bladder-muscle, connective tissue infiltration, enlarged prostate and chronic inflammation are all present. Concerning the **histogenesis of enlarged prostate** the author concludes that the so-called enlargement, as well as certain forms of prostatic atrophy, are related and have a common cause. The 2 processes do not differ qualitatively, but only in the distribution, intensity and localization of otherwise analogous changes. The common starting-point of enlargement and of certain forms of atrophy is to be sought in the productive connective tissue processes which occur in the stroma, and according to the state of their development can show different stages of repair, but are always in isolated masses, and principally arise directly under gland epithelium. If the stroma changes are located in the central prostate near the principal exits, the lumina are closed, secretion collects and peripheral dilatation results. The dilatation is the more rapid and reaches a higher degree, the more numerous and the nearer to the exits of the principal tubules the obstruction occurs, and also the higher the degree of the simultaneous intraglandular pathological processes. These consist mostly in active proliferation, followed by desquamation called catarrhal, and may end in a purulent process by the accession of leukocytes. The enlargement of the prostate is almost exclusively due to dilatation of glands. The new-formed connective tissue is relatively unimportant, and the active participation of muscle tissue in enlarged prostates in the way of true myoma (the great majority of cases) is unproved and doubtful. If the stroma changes take place principally in the periphery and near the blind ends of the tubules, there is atrophy of the tubules, shrinking of the connective tissue in the stroma and atrophy of the entire prostate. This is quicker and more intense if there is no endoglandular pathological process. According to the balance of these 2 processes, the prostate may be of normal weight, increased or diminished in size. Atrophy and enlargement are histogenetically and probably etiologically similar. The following are the conclusions as to the **cause of enlarged prostate:** The underlying cause of the usual form of prostatic enlargement and of certain forms of prostatic atrophy is a slow formation of new connective tissue due to infection or to infection aggravating a senile degenerative process. The gonococcus is probably most often the specific infection because of its great frequency, because other inflammatory causes are not common in the parts in question, and because a great similarity exists between the histology of gonorrheal processes and those seen in these senile prostates. Neoplasms, fibromyomata and adenomata occur, but may be called rare. [F. T. S.]

2.—Brokwaw reports a case in which an **upholsterer's tack lodged in the right bronchus.** Six days after an unsuccessful tracheotomy for the relief of the patient, a large endoscopic tube was introduced into the right bronchus and the tack felt and extracted with forceps. The foreign body had been previously located with the X-rays. [F. T. S.]

3.—Robinson draws the following conclusions from a study of over 100 **ureters** of man, ape, monkey, dog, cat, rabbit, horse, cow, pig, sheep, leopard and fish: The ureter is not a uniform-calibered tube. It consists in general of 3 isthmuses or sphincters located at points in the ureter at which projecting adjacent structures compromise its lumen. The ureteral lumen is compromised by the distal renal pole (neck of the ureter), by the iliac vessels (middle isthmus) and by the muscular wall of the bladder. There is a ureteral reservoir proximal to each isthmus. These reservoirs are more pronounced in woman than in man, on account of the proximal and distal **arteria ureterica** having an excessive or periodic hyperemia during reproductive life. Consequently, in senescence, when its proximal and distal **arteria ureterica** becomes affected with sclerosis, lack of nourishment will induce pathological dilatations of the lumbar and pelvic reservoirs. Calculi lodge at the constrictions. Torsion of the ureter may easily compromise the ureteral neck or proximal ureteral isthmus. Surgical interventions should be practised at the dilatations on account of the ample lumen. Pathological conditions of the ureter lie mainly in defects of the ureteral wall, producing deficient peristalsis, or in mechanical obstruction to the ureteral stream. So long as the ureteral peristalsis is not interfered with, and especially if the ureteral stream is not obstructed, the ureters perform their function. As soon as any obstruction arises, the nondrainage induces residual deposits with resulting accumulations of bacteria, whence the vicious circle occurs similar to vicious circles arising from obstructions in the pylorus or biliary ducts. The ureter is an independent organ conducting the urine from the kidney to the bladder by rhythmical waves, regardless of altitude or force of gravity. It is also a reservoir. The ureter, being located in a universally loose areolar bed, and being longer than the distance between its proximal and distal ends, is capable of an extensive range of motion in pathological conditions and for surgical intervention. The irregular caliber of the ureter is an hereditary heritage from the Wolffian body enhanced by environments.

[F. T. S.]

4.—Dodge reports the following cases of **renal injury:** (1) Simple rupture of the kidney, conservative treatment, recovery; (2) simple rupture of the kidney, conservative treatment, recovery; (3) rupture of the kidney complicated with pleuritis, conservative treatment, recovery; (4) rupture of the kidney with extensive extracapsular hemorrhage, nephrectomy, recovery; (5) rupture of the kidney complicated with rupture of the spleen, splenectomy, recovery; (6) rupture of the kidney complicated with rupture of the spleen, splenectomy, death from primary hemorrhage and shock; (7) rupture of the kidney with rupture of mesenteric vessels, death from primary hemorrhage; (8) rupture of the pelvis of the kidney, formation of a large retroperitoneal cyst (pseudohydronephrosis), nephrectomy, recovery; (9) rupture of a hydronephrotic kidney, nephrectomy, recovery. Operation is undertaken to control hemorrage or to prevent or combat sepsis. Immediate operation is demanded in profuse extracapsular bleeding or in cases in which other intra-abdominal structures are injured. The conditions which call for exploration after 48 hours are continued hemorrhage, persistent anuria, septic symptoms and a well-defined mass independent of symptoms of hemorrhage or sepsis. In the latter instance, if nothing be found but extravasated blood and urine, incision anticipates sepsis.

[F. T. S.]

5.—Eisendrath reports a case of **traumatc rupture of the spleen** in which splenectomy was followed by death on the third day from suppurative peritonitis. The treatment is always operative, either suture, tampon or splenectomy. It is pratically impossible to suture an extensive laceration. Tamponage is indicated if the tear is located on the convex surface or one of the borders and does not extend deeply into the organ. All other cases are best treated by splenectomy. [F. T. S.]

6.—Thienhaus concludes his paper on the **transduodenal route for choledocholithiasis** as follows: It has a well-defined place in the surgery of obstruction of the common duct produced by gall-stones. Lithotomia transduodenalis, first advocated and practised by McBurney in 1891, either after his methods, that is with incision of the papilla, or Collins's method, dilatation of the papilla, is the method *par excellence* for all cases of gall-stones impacted at or near the opening of the papilla, as soon as experiments of manipulation, to press the stone into the duodenum, have proved unsuccessful. Choledochotomia transduodenalis is indicated for stones impacted in the retroduodenal portion of the common duct, or before the diverticulum of Vater, as soon as efforts to dislodge the stone up into the supraduodenal portion have proved futile. In all cases in which choledochotomia transduodenalis has been performed, it is advisable to suture the common duct to the duodenum to avoid infection (choledochoduodenostomia interna). Choledochotomia transduodenalis seems to be more advisable than choledochotomia retroduodenalis because it can be more easily performed, and the integrity of the pancreas is not interfered with. It has not been proved by statistics that transduodenal choledochotomy has a greater percentage of fatalities produced by septic infection than supraduodenal choledochotomy. Further contributions in this direction are desirable for the purpose of procuring definite conclusions. Most of the cases, in which sepsis was the cause of death after operation on the common duct, were cases of infection of the bile-passages before operation, and the method was not responsible for the result.

[F. T. S.]

7.—Rake reports a case of **strangulation of the appendix vermiformis in the right femoral ring.** The patient, an old lady, presented a fluctuating edematous mass in the region of the right saphenous opening. This was incised, evacuating fetid pus and currant seeds. Later a slough was cut away which proved on examination to be the appendix. A fecal fistula persisted for several weeks. [F. T. S.]

8.—Baldwin reports a case of **intra-abdominal torsion of the omentum.** The patient presented the usual signs of acute appendicitis. On opening the abdomen a mass of rolled-up omentum was discovered. The omental mass had a small pedicle which was twisted upon itself 8 times. The pedicle was ligated and the mass removed. [F. T. S.]

9.—Frank reports a case of **primary tuberculosis of the parotid gland,** cured by partial excision. Eight cases have thus far been recorded. Because of the rarity of the disease in this location the diagnosis is clinically difficult. In all the cases the diagnosis before operation was either syphilis, interstitial parotitis or malignant disease. The prognosis is good; partial excision constitutes the treatment. In many of the cases operation was followed by a transient facial paralysis. [F. T. S.]

10.—Rubel describes a device consisting of a steel bar on which a tempered steel wire bent to form a number of V-shaped grooves about ½ inch apart has been soldered. The instrument is pinned to the dressings during the closure of an abdominal wound and is designed to hold both ends of each ligature together separately from the other sutures. [F. T. S.]

AMERICAN JOURNAL OF OBSTETRICS.

December, 1902.

1. Perforating Ulcers of the Duodenum.
   JOHN B. MURPHY and J. M. NEFF.
2. Craniotomy. JAMES D. VOORHEES.
3. Interpretation of the Histology of the Villi from Early Intra- and Extra-uterine Specimens.
   FRANK A. STAHL.
4. Rupture of the Umbilical Cord.
   HERBERT MARION STOWE.
5. Puberty in the Girl. GEORGE WYTHE COOK.
6. Leukemia in Childhood. J. R. BROMWELL.
7. Diastasis of the Abdominal (Recti) Muscles.
   R. P. McREYNOLDS.
8. Carcinoma of the Cervix Uteri, Etc. L. H. DUNNING.
9. Causes of Recurrence of Biliary Symptoms After Cholecystotomy. CHARLES S. HAMILTON.
10. Management of Breech Presentation.
    WILLIAM D. PORTER.
11. Pregnancy After the Removal of Both Ovaries.
    J. F. BALDWIN.
12. Condition of the Bladder After Hysteropexy.
    G. KOLISCHER.

1.—Murphy and Neff review briefly the salient points in the etiology, pathology and diagnosis of **duodenal ulcers,** and consider especially the surgical treatment of perforations. The relative frequency of duodenal ulcer as a cause of death is given by Weir from collected statistics as 0.2%. The ratio of gastric duodenal ulcers, given by Burwinkel, is 12 to 1. Duodenal ulcerations occur at all ages. In children they are due, probably, to thrombosis of the umbilical vein, with embolism of the vessels of the small intestines. Thrombosis of the mesenteric veins from this source is possible, as a branch of the umbilical vein communicates with the portal; the thrombus may extend into and occlude the latter, thus producing necrosis of the intestinal wall by venous stasis. The great majority of duodenal ulcers is found in males. That duodenal ulcerations are frequently associated with extensive burns, is well known. Holmes says that the ulcers appear in from 7 to 14 days after the burns. Probably the correct explanation in these cases is that a septic infarct has been produced by the lodgment of an embolus which entered the circulation at the site of the burn. Kidney disease, especially the various forms of chronic nephritis, is very frequently associated with ulcerations in the duodenum. In some of the cases associated with advanced pulmonary tuberculosis, the lesion was probably originally a cheesy degeneration of a solitary follicle, with secondary digestion of the caseous material by the gastric juice. Trichinosis and duodenal ulcer have been reported by Ebstein and Klob. The ulcers may be circular or elliptical in shape. They are often cone-shaped with the apex of the cone toward the peritoneum. Perforation may take place into the general peritoneal cavity or into the retroperitoneal tissue. That duodenal ulcers heal spontaneously is proved by the findings post mortem. The symptomatology of duodenal ulceration is uncertain and inconstant. The 3 cardinal symptoms in the order of their importance, are: (1) Pain (2) melena or hematemesis; (3) vomtiing.Icterus is rare. The cases in which perforation has taken place should be submitted to operation at the earliest possible moment. It is not best to attempt to excise the ulcer, as the danger is greatly increased by this procedure. The perforation should be closed with a double or triple row of interrupted silk sutures of the Lembert type, taking care to bring large areas of serous surface in apposition without tension. [W. A. N. D.]

2.—Voorhees states that the operation of **craniotomy** is clearly indicated in 3 conditions. (1) In a nonviable child when the mother's life is in the balance; (2) in dealing with a monstrosity; (3) when the fetus is larger than the parturient canal and is dead when the physician first sees the patient. In craniotomy the combined reports of such men as Leopold, Zweifel, Fehling, Potocki and others, show a maternal mortality of 8.1%. In the hands of the general practitioner the mortality would probably reach 35% through lack of cleanliness. The mortality in operations in skilful hands and selected cases ought to be *nil.* In statistics reported by Barnes, symphysiotomy gives a maternal mortality of 10.8% and a fetal mortality of 14.5%. For Cesarean section Leopold, Olshausen and others show less than 10% of deaths. Voorhees believes that the operation of craniotomy will shortly never be performed on the living child. [W. A. N. D.]

3.—Stahl gives an interesting review of the **histology of the villi** from early **intra- and extra-uterine specimens** with a special study of the *syncytium.* He decides that the syncytium in its cells is fetal in origin. That it is the peripheral, muciparous stroma of the chorion, or the villus as modified and added to by the ameboid activites of the nuclei upon their surrounding environmental tissues. He believes that syncytioma is the most correct term descriptive of the neoplasm popularly known as deciduoma malignum. [W. A. N. D.]

4.—Stowe describes 2 cases of **traumatic partial rupture of the umbilical cord** in pregnancy. He states that protracted gestation theoretically would predispose to rupture of the cord on account of the increased effort of the uterus necessary to expel the overmature head through the birth-canal. The overmature cord is weakened by fatty or calareous change and its resistance correspondingly lessened. In the great majority of cases rupture occurs when the fetus is nearly out of the uterus. Another factor of rupture of the cord is found in the velamentous insertion into the placenta. Again, the cord may be ruptured in performing version or in the subsequent extraction. The bleeding is usually very slight. [W. A. N. D.]

5.—Cook gives a short description of **puberty** in the girl. [W. A. N. D.]

6.—Bromwell remarks that **leukemia** is not infrequent in early life. He reports a case occurring in a boy, aged 14 years, resulting fatally. It occurred subsequent to an attack of malaria and grip. The absence of myelocytes indicated that the bonemarrow was not involved. [W. A. N. D.]

7.—McReynolds states that but little has been written upon the subject of **diastasis of the abdominal muscles.** It is due in a large majority of cases to pregnancy, frequent and rapid child-bearing, improper support and protection of the abdominal wall during pregnancy and the puerperium. It occurs usually among the working class, and in its advanced stages produces what is known as ventral hernia of the pregnant woman. The separation of the muscles occurs generally suddenly, is very extensive, and after delivery the muscles remain so far apart that in the standing position there is a complete hernia of all the small intestines. This condition is accompanied with marked nervous manifestations. The treatment consists in the application and constant wearing of a well-fitting abdominal binder. [W. A. N. D.]

8.—Dunning reports all the cases of **cancer of the cervix uteri** operated by him up to date. There were in all 62 cases, and of these 18 are known to be alive. There were 5 deaths resulting from the operation, one patient died at the end of 10 months and another at the end of 3 months. In 3 cases one ureter was severed; in 2 of them the corresponding kidney was extirpated. In all 5 patients that have survived 5 years and longer the disease was in its incipiency. Vaginal hysterectomy was the method of operation in all 5 cases. The pelvic glands were removed in 2 cases only. Vaginal hysterectomy for cancer of the neck of the uterus yielded Dunning 16 2/3% of cures, taking the five-year time test as the standard of computation. [W. A. N. D.]

9.—Hamilton calls attention to the fact that **recurrences of biliary symptoms after cholecystotomy** may take the following form: (1) Attacks of typical gall-stone colic, presumptively due to the passage of calculi or their temporary lodgement in the cystic duct. (2) Less painful paroxysms, apparently due to the presence of acute or subacute cholecystitis or cholangitis. (3) Recurrence of distended gall-bladder with more or less pain after the thorough evacuation of stones from that viscus. (4) Gastric or intestinal disturbance due to adhesions involving the gall-bladder and other viscera. A series of causes may be regarded as responsible for such recurrences. Thus, a stone may be overlooked in some part of the biliary tubes. A gall-stone may occasionally reform in the biliary tract. Stricture of the cystic, and possibly of the common, duct may produce return of symptoms after a temporarily successful operation. In some instances a greatly thickened gall-bladder from subacute and chronic cholecystitis, it would seem as though drainage for any reasonable period would not cure. Possibly bacteria remain imbedded in the walls of the gall-bladder, becoming active and producing recurrent attacks of inflammation. Adhesions which distort the biliary passages are a frequent source of pain, both before and after operative procedures. Unrecognized pancreatitis with secondary biliary disturbances is an occasional cause of recurrence. [W. A. N. D.]

10.—Porter states that **breech-presentation** is encountered once in about 50 cases of labor. The mortality is variously estimated at from 10 to 35%. Breech cases always require careful supervision. They are usually tedious, and serious delay is likely to be at one of 3 points: (1) With the breech at the brim; (2) with the breech at the pelvis; (3) with the delivery at the head. Porter describes his method of treating this complication under the 3 circumstances. [W. A. N. D.]

11.—Baldwin places on record 2 cases of **pregnancy after the removal of both ovaries.** He agrees with Doran that it is the presence of some detached ovarian tissue which offers the only explanation of the few cases which are on record in which pregnancy has followed double ovariotomy. [W. A. N. D.]

12.—Kolischer calls attention to the **condition of the bladder after hysteropexy.** He states that this operation seems to have a decided influence on the circulation and function of the bladder. The operative step which obviously is most apt to interfere with the integrity of the bladder is the act of stripping off that viscus from the uterus. If care is not observed in this process a traumatic desquamative catarrh may result. The dislocation of the bladder itself does not interfere with its function if no special complications arise. [W. A. N. D.]

AMERICAN JOURNAL OF ANATOMY.

November 29, 1902. (Vol. II. No. 1.)

1. The Development of the Reticulated Basement Membranes in the Submaxillary Gland. JOSEPH MARSHALL FLINT.
2. The Development of the Paraphysis in the Common Fowl. FRANKLIN DEXTER.
3. Contributions to the Encephalic Anatomy of the Races. EDWARD ANTHONY SPITZKA.
4. On the Structure of the Corpora Cavernosa of the Domestic Cat. C. M. JACKSON.
5. The Neuroglia of the Spinal Cord of the Elephant With Some Preliminary Observations upon the Development of Neuroglia Fibers. IRVING HARDESTY.
6. The Cardiac Glands of Mammals. R. R. BENSLEY.

1.—Flint accepts Mall's theory that the connective tissues are derived from a syncytium, and he then describes the development of the **reticulated basement membranes in the submaxillary gland** from the viewpoint of this theory. He believes that in the early condition it is probable that the basement membranes are formed partly by a primary deposition of exoplasm from the syncytium, and that they are later augmented by fibrils from the general syncytial exoplasm. He finds that these membranes are laid down almost simultaneously with the column of cells which springs from the buccal cavity as the *anlage* of the submaxillary gland. As the epithelial cell-columns branch, the amount of syncytium between the branches diminishes and becomes more fibrillar until the membranes surrounding 2 adjacent acini meet and fuse to form a single, inseparable membrane. The work was done on pig embryos. [J. M.S.]

3.—Spitzka presents a description of the convolutions and fissures of **the brains of 3 Eskimos,** 2 adults and a 12-year-old girl. These brains determined the existence of prevailing typical differences which distinguish the brain of the Eskimo from the brain of the white race. There is a marked tendency to transverse fissuration, numerous anastomoses in a transverse direction, with frequent interruption of some of the longitudinal fissures. The observer believes that it is something more than skull shape that has determined these and other characteristics. In the 3 brains that form the basis of this study, the relative topography and boundaries of the cuneus, the exposition of the insula and the preponderating development of certain features on the left and of others on the right side are some of the other characteristics. The hitherto popular notion that the typical Eskimo skull exhibits a low order of intelligence and is characterized by a small brain-capacity has been generally refuted, and the fallacy of this idea becomes more apparent with the demonstration of so highly developed a brain as these specimens have shown the Eskimos to possess. [J. M. S.]

5.—Hardesty has studied the **neuroglia of the spinal cord of an elephant.** He obtained the best results from staining with Huber's method of applying the stain devised by Beneda. The neuroglia fibers stain a deep, bright blue against a slightly pink, but almost transparent, background with this method. This differentiates them from white fibrous tisue, pia and the walls of bloodvessels. By this method he finds: (1) Neuroglia cells with large amounts of cytoplasm, which is largely present in the form of extensive, branched processes; (2) neuroglia cells with large vesicular nuclei, surrounded by compact cytoplasm; but having a granular cytoplasm in their outer zones; (3) neurolgia cells with a much smaller amount of cytoplasm about their nuclei; and (4) neurolgia cells with a very small amount of granular cytoplasm forming a halo about their nuclei. The majority of the neuroglia nuclei, however, appear free from cytoplasm. Occasionally nuclei are found, which appear to be in the process of disintegration. Hardesty believes that in the development of the neuroglia the spongioblasts fuse to form a syncytium, which grows faster than the nuclei divide, and as the nerve fibers grow into the meshes of this syncytium, they press upon it and thin it out. This produces a portion that surrounds the nuclei (endoplasm) and the bands or processes that lie between the nerve fibers (exoplasm). The exoplasm becomes more homogenous, while the endoplasm remains granular. The endoplasm disappears progressively by conversion into exoplasm so that, finally, only free nuclei with neuroglia fibers passing over and about them in all directions are found forming the felt work among the nerve fibers. [J. M. S.]

6.—Bensley has studied **the cardiac glands of mammals.** He considers them to be mucous glands. Their chief cells are fundamentally different from the chief cells of the bodies of the fundus glands; but, on the other hand, they are closely related to the mucous cells of the necks of the fundus glands and to the pyloric gland cells. The grouping and branching of these glands, described by Edelmann, is of no important significance. Bensley believes that these cardiac glands are decadent or retrogressive structures devoid from the fundus glands by the disappearance of their more highly specialized cellular constituents, the zymogenic chief cells and the parietal cells. [J. M. S.]

THE JOURNAL OF NERVOUS AND MENTAL DISEASE.

December, 1902. (Vol. 20, No. 12.)

1. Remarks on Acute Myelitis, and Report of a Case of Tuberculous Meningomyelitis. JOSEPH COLLINS.
2. Report of a Transverse Lesion of the Midthoracic Segments, Leaving Intact the Posterior Columns, and Causing Syringomyelic Dissociation. ADOLF MEYER.
3. A Case of Combined Sclerosis of the Spinal Cord. FREDERICK T. SIMPSON.

1.—Collins says the question whether **acute myelitis** is or is not very rare depends entirely upon what is included under such a designation. If we include acute transverse myelitis in acute anterior poliomyelitis it would be the commonest disease of the central nervous system. If we consider it to be an inflammatory state of the spinal cord due to infection or intoxication, the morbid process being caused either directly by the action of the microbes and their toxins acting upon the medullary parenchyma, or indirectly through the circulatory system, then the disease is really very rare. The author reports a case in a young married woman, pregnant, who was taken ill with symptoms of acute inflammatory rheumatism. After 3 weeks' duration the symptoms subsided, followed by indications of acute myelitis, such as motor paralysis of the lower extremities, spasmodic twitching and contractions of the legs and enormous bedsores and other associated trophic disturbances. At autopsy there was found the bacillus of tuberculosis imbedded in a mass of caseous necrotic tissue. An interesting point is the relationship of the rheumatic attack, if rheumatism it really was, to the occurrence of the tuberculous myelitis. Furthermore, it would be interesting to know whether the changes in the cells of remote portions of the cord, constituting chromatolysis, were secondary to the tuberculous infection and the septicemia which immediately conditioned the patient's death, or whether they were the result of nutritional changes due to disease of the bloodvessels, and impairment of nutrition secondary to the extensive productive inflammation of the meninges. Collins thinks that the patient did not have acute inflammatory rheumatism, but that the pains in the extremities and swelling of the joints were the result of tuberculous infection of the cord which implicated in the beginning that part of the cord in which is situated the central representation of the sympathetic nervous system. The later symptoms were typical of acute myelitis, such as the tuberculous variety almost always presents. [T M. T.]

2.—In Meyer's patient there was a destruction of practically the entire cross-section of the fourth to the sixth thoracic segment, leaving intact only the dorsal two-thirds of the posterior columns and a few pyramidal fibers. The patient presented for 2 years before death the following phenomena: (1) Normal tactile sensibility, pressure sense, tickle sense and sense of position; (2) analgesia and thermanesthesia below the sixth rib on the right and the fifth rib on the left; (3) a zone of slight thermohyperesthesia over the fourth rib; (4) girdle pains around the level of the umbilicus; (5) paralysis below the thorax; (6) occasional involuntary pulling up of the thigh, at times accompanied with shooting pain. The author believes that all these cases are in favor of van Gehuchten's view, that the conduction of temperature and pain sensations depends on a path in the lateral columns, though probably only in the region of that of Gowers. He also believes that the views of Edinger, of the existence of a decussating sensory path in the cord, require modification and at least restriction to pain and temperature sense. [T. M. T.]

January, 1903. (Vol. 30, No. 1.)

1. On Amaurotic Family Idiocy. A Disease Chiefly of the Gray Matter of the Central Nervous System. B. SACHS.
2. The Posterolateral Scleroses. CHARLES W. BURR and D. J. McCARTHY.
3. Paralysis of All Four Limbs and of One Side of the Face, with Dissociation of Sensation, Developing in a Few Hours and Resulting from Meningomyeloencephalitis. CHARLES K. MILLS and WILLIAM G. SPILLER.

1.—Sachs says that the chief inference to be drawn from a study of sections taken from every part of the central nervous system in this and in other cases of **amaurotic family idiocy** is that the morbid process in this disease affects primarily, or at least to a great extent, the entire gray matter of the brain and spinal cord. The degeneration of the white fibers of the anterior and lateral pyramidal tracts is in all probability secondary, but not nearly so great or so marked as one would expect with such advanced disease of the ganglionic tissue. It is already probable that the relative involvement of the gray and white matter may vary in different patients with this disease. [T. M. T.]

2.—Burr and McCarthy report 8 cases of **sclerosis of the posterior and lateral columns** which illustrate how difficult it is to arrange a classification of the diseases of the white matter in which the posterior and lateral columns are affected alone or associated with minor changes in the other tracts, which, with our present knowledge of the anatomy and physiology of the cord, can be of no diagnostic value. They arrange such cases for clinical and laboratory purposes as follows: (1) Friedreich's ataxia; (2) tabes with associated diffuse sclerosis extending into the lateral columns; to this group may be added those cases of tabes associated with paretic dementia with secondary lesions in the crossed pyramidal tracts; (3) tabes with degeneration in the crossed pyramidal and also in the direct cerebellar tract, with or without degeneration in Clark's column; (4) posterior sclerosis with sclerosis of the lateral columns and disease of the anterior horns; (5) primary lateral sclerosis with minor changes in the posterior columns; (6) subacute diffuse degeneration of the spinal cord due to anemia, cachexia, sepsis, etc., with sclerosis in the posterior and lateral tract predominating both in clinical manifestations and under the microscope; (7) diffuse interstitial sclerosis, seen occasionally in chronic alcoholism with multiple neuritis, in which parenchymatous degeneration is secondary to the overgrowth of glial and connective tissue elements; to this same group may be added the syphilitic posterolateral sclerosis secondary to meningeal lesion; (8) a combined system disease of unknown origin affecting the posterior and lateral columns and distinctly confined to the direct and crossed pyramidal tracts and the posterior columns; the direct cerebellar tract may also be involved. [T. M. T.]

3.—Mills and Spiller, in the study of the cases reported, found that the paralytic sensory, and reflex symptoms of a grave sensory, reflex and visceral phenomena came on with the symptoms of meningeal irritation were prominent. Eighteen days elapsed before indisputable symptoms of involvement of the cord were exhibited, and 20 days before the paralysis was complete. The extensive meningeal inflammation was shown by the rigidity of the back and also probably by the hyperesthesia of the extremities. Paralyses of all 4 limbs were complete in 5 hours, and the grave sensory, reflex and visceral phenomena came on with almost equal rapidity. With the exception of pain, meningeal symptoms were absent. Basal symptoms were present and developed in the tubercular case late in the disease, while the facial paralysis was a prominent feature in the paralytic syndrome which came to the surface in the short period of 5 hours. [T. M. T.]

NEUROLOGISCHES CENTRALBLATT.

October 1, 1902. (No. 19.)

1. The Determination of Tactile Sensibility by Means of a New Esthesiometer. J. J. G. BROWN.
2. The Relations Between the Lower Longitudinal Tract of the Fillet to the New Motor Corona Radiata. H. SCHUTZ.
3. Anxiety in Hysteria and Neurasthenia. A. DIEHL.

1.—Brown, in view of the difficulty in determining the degree of impairment of the **sense of touch,** and the defects of the instruments employed for this purpose, has devised a very ingenious **piece of apparatus,** which consists essentially of a screw working in a nut that presses upon a plate, which in turn communicates its motion to a rod passing through a hole in the bottom of the instrument. This plate is kept in contact with the screw by a small spiral spring. The degree to which the lower end of the rod is exposed through the surface of the plate can be accurately measured by means of a small scale on the head of the screw. Experience has shown that with the normal body-sense it is possible to feel a projection of 0.01 mm. with the end of the finger. Other parts of the body, however, are not quite so sensitive. The result of measuring different parts of the body can be readily recorded by means of a curve. He mentions a modification of this instrument in which the single rod passing through the piece of plate is replaced by 6 small rods. This instrument is somewhat more delicate than the other, and it is possible to feel a projection of the 6 rods that amounts only to 0.004 mm. The instrument is small, and, therefore, easy and convenient to carry, and is particularly advantageous because the estimation can be made with great rapidity and the patient is not fatigued. Certain points regarding the employment of the instrument are mentioned, particularly that the metal must be of about the same temperature as the skin. It must be pressed with about the same intensity upon the skin, and in rubbing it across the surface of the body about the same rapidity must be employed for each stroke. Moreover, it makes a difference whether it is rubbed transversely or longitudinally, and it is best to avoid the region in which the bones are subcutaneous. The skin must not be damp, and sometimes it is important in the rather nonsensitive parts to oil the skin before applying the instrument. Hairy parts should be avoided. [J. B.]

2.—Schutz, having had an opportunity to examine 2 brains with **microgyria,** in which there was almost complete disappearance of the temporal, sphenoidal and occipital lobes, discovered that the inferior longitudinal fasciculus was well preserved. He then, by studying this bundle of fibers in the brains of fetuses and newborn children, found that in the latter it is apparently well developed, and traces can even be seen in an 8 months fetus. The fasciculus is most pronounced in the region of the external geniculate body. It consists of 2 types of fibers, partly arising from the optic nerve, and partly belonging to a portion of the corona radiata which begins as a bundle of fibers just to the outer side of the external geniculate ganglion, passes laterally and then spreads out, extending to the first temporal lobe, to the motor regions of the brain, to the inferior longitudinal fasciculus, and to the outer border of the lenticular nucleus. Below the external geniculate ganglion these fibers pass into the substantia nigra, part terminating in a network, and part entering the lateral portion of the median fillet. This band of fibers seems to confirm the views of Schlesinger and Hoche, that the fillet conveys impulses in 2 directions. This group of fibers is interesting physiologically because it has long been suspected that, in addition to passing through the ordinary pyramidal tract, impulses may pass from the motor region of the brain to the periphery. It possibly plays some part in the origin of epileptic convulsions. [J. S.]

3.—Diehl reports his second case. A woman, who after long nursing of her sick husband, developed a fear that she smelled the odor of a corpse, and that certain flowers in the room had been sent as funeral emblems. She then became profoundly frightened, did not respond to questions and became excited. These attacks were repeated from time to time. It was found, upon investigation, that the patient was usually brave even to the point of carelessness. The characteristic of both the case-histories that Diehl has reported is the **intensity of this fear,** sometimes leading patients to believe that it will cause their death, or to wish to die to escape from it. The friends often fear insanity. The forms are rather peculiar. [J. S.]

November 16, 1902. (No. 22.)

1. The Variability of the Prognosis of Paralysis of the Plexus and Nerves of the Upper Extremities. L. BRUNS.
2. Are the Pupils Sluggish in Accommodation and Convergence, or Are There Myotonic Pupillary Movements? J. STRASSBURGER.
3. The Paradoxical Pupillary Reaction and Personal Observations upon the Narrowing of the Pupils During the Shadowing of the Eyes. J. PILTZ.

1.—Bruns, in an experience of 8,500 cases of nervous disease, has observed 95 cases of **paralysis of peripheral nerves** of the extremities, and 38 cases of paralysis of the **brachial and lumbosacral plexuses.** The nerves chiefly affected were the radial, 28 times; the ulnar, 22 times; and the perineal, 11 times. The brachial plexus was involved 33 times, the lumbosacral plexus 5 times. The causes of the paralysis of the brachial plexus were, in 10 patients, injuries during birth, in 5 dislocation, in 2 anesthesia, in 12 patients traumatic injuries, in 3 neuritis and in one paralysis of the lower portion of the plexus from pressure of an innominate aneurysm. The causes of lumbosacral paralysis were pelvic tumors in 3 patients, peritonitis in one, and in one pressure of the child's head upon the plexus during birth. After carefully sifting the material, Bruns concludes that only 47 cases of paralysis of the peripheral nerves can be used for statistical purposes. Of the 22 patients with paralysis of the radial 19 recovered and 3 did not. These 3 belonged to 10 patients in whom there were fractures of the humerus. Of 6 patients with paralysis of the ulnar 2 recovered and 4 did not. All were cases of injury. Of the 47 patients affected, the total results showed 31 recoveries and 16 nonrecoveries. Of the 23 patients with paralysis of the brachial plexus 6 recovered and 17 did not. It, therefore, appears that the prognosis of traumatic paralysis of the plexus is less favorable than traumatic paralysis of the peripheral nerves. There appears to be no reason for this difference in the anatomical structure of the plexus. As, however, in the plexus paralysis there is usually more prolonged action of the injurious agent, it is possible that this may account for the more unfavorable outcome. The cause of plexus paralysis appears to be, as a rule, more severe than that giving rise to peripheral nerve paralysis. [J. S.]

2.—Strassburger criticizes Saenger's articles in which he speaks of a myotonic movement of the pupils. He believes that, although the movement resembles the myotonic reaction in Thomsen's disease, nevertheless, we are not yet justified in regarding it as anatomically the same thing. [J. S.]

3.—Piltz reports a patient with atrophy of the optic nerves in whom the pupil contracted every time the eye was darkened. He gives in great detail the description of the reactions that occurred. He concludes that there are various forms of paradoxical reactions of the pupils, among others paradoxical accommodation reaction, the apparent paradoxical light reaction and the true paradoxical light reaction. The paradoxical accommodation reaction has hitherto been observed only in functional disease of the central nervous system, the apparent paradoxical light reaction has only been seen in a case of iridectomy, the true paradoxical light reaction is exceedingly rare and may be simulated by various accommodation reactions, by hippus, by the warmth reaction and by the orbicularis reaction.

Hitherto only 5 entirely satisfactory cases of paradoxical light reaction have been reported. The true paradoxical light reaction only occurs in severe organic diseases of the nervous system. [J. S.]

December 1, 1902. (No. 23.)

1. Is There an Autogenetic Regeneration of the Nerve Fibers? A Contribution to the Knowledge of the Neurons. E. MUNZER.
2. Remarks upon Cure in High Latitudes. B. LAQUER.

1.—Munzer has performed a series of experiments upon rabbits in order to determine whether **regeneration of the nervefibers occurs.** He usually exposed the sciatic nerve on the left side and excised a piece from one to 2 cm. in length. At the end of a variable interval the nerve was again exposed and the muscles supplied by it tested electrically, and then the animal killed and the preparation studied. In no case was there any union between the peripheral and central stump. The peripheral portion was atrophic. It had always adhered firmly to one of the muscles of the thigh. In this peripheral portion there was quite a plexus of newly formed fibers. These appeared to proceed from a nodule that formed at the point of secretion, and, therefore, it is not certain that they regenerated from the fibers themselves. Munzer thinks that there is still reason to regard the neuron as a trophic unit. [J. S.]

2.—Laquer states that it is desirable in **sending patients to high altitudes** to accustom them to these altitudes slowly. It often requires one or 2 weeks, accomplishing the journey in very easy stages. Of the greatest value is indulgence in various open-air sports. [J. S.]

LA SEMAINE MEDICALE.

November 26, 1902.

Abdominal Aortitis. TEISSIER.

Teissier reports 3 cases of abdominal aortitis. The condition is rarely primary. It may be secondary to inflammation of the heart or vessels above this point. When such is its origin, it receives the name **aortitis by extension,** and the term **aortitis by propagation** should be applied to those cases in which the inflammation extends from a neighboring organ, such as the kidney. The leading symptoms of the condition are a **sharp pain at the level of the aorta and the iliac arteries; the deviation of these vessels and their mobility.** The pain which is extremely sharp may be easily differentiated from hyperesthesia of the abdominal walls and epigastric pain accompanying affections of the stomach and intestines. It is to be remembered also that the pain radiates along the course of the iliac vessels. When the aorta is compressed between two fingers it is found to be increased in volume, to have lost its elasticity and to be deviated slightly from its normal position, usually toward the left, more rarely to the right. It also may be moved between the fingers. Generally a systolic souffle may be heard, sometimes a double murmur. Among the minor symptoms which are to be elicited are the impossibility of such patients to rest in bed in the ordinary relaxed attitude, and there is frequently seen a contraction of the right upper half of the abdomen. Gastric symptoms are by no means uncommon and include gastralgia and vomiting. Teissier has observed changes of temperature at different levels of the abdomen and an increase in rectal temperature. The author also adds that he has arrived at the conclusion that an increase in tension **of the tibial artery compared to the same degree of pressure extended over the radial artery** is a point of great value in establishing the presence of pathological conditions of the subdiaphragmatic vessels. When, on the other hand, an increase in vascular tone is apparent in the abdominal vessels and there is a decreased tension of the tibial artery which may attain a sufficient intensity to suggest aneurysm of the abdominal aorta, it may be stated positively that the condition is purely reflex and dependent upon some neuropathic disturbance. [T. L. C.]

December 3, 1902.

Surgical Intervention in Chronic Nephritis. R. LEPINE.

Lépine presents a summary of the literature of **surgical intervention in chronic nephritis.** He quotes the views of many French, English and German surgeons. [T. L. C.]

Society Reports.

NEW YORK OBSTETRICAL SOCIETY.

Meeting held January 13, the president, Dr. E. H. Grandin, in the chair.

Dr. S. Marx presented a specimen of **ruptured tubal pregnancy,** rupture having occurred about the eighth week. The entire fetal sac could be seen hanging by the secundines to the ruptured opening, choked with chorionic villi. Besides illustrating many embryonal features, the history of the case was unusual, as there had been no uterine hemorrhage. Dr. H. J. Boldt then presented a number of pathological specimens. He showed **5 cystic tumors** from a patient who had complained of abdominal pain for 8 years; a unilocular ovarian cyst of the right side, to which the appendix was adherent, hydrosalpinx of the inner end of the left tube, pyosalpinx of the external end of the left tube, ovarian abscess of the left side, and secondary abscess of the omentum. He showed a specimen of a **thickened appendix** removed during ventrosuspension of the uterus, containing a piece of egg shell. He also showed a **ruptured uterus** due to the sloughing of a submucous fibroid. Three openings had been made by a curette, 4 days before abdominal hysterectomy for diffuse septic peritonitis. Sepsis, however, caused death. Drs. Goffe, Barrows and Dudley recalled cases in which intestines had been pulled down by an opening made by the curette. Dr. Marx recalled 2 cases of sloughing fibroid following labor, successfully removed through the vagina. Dr. Boldt then showed a **ruptured ovarian cyst** which had caused fatal hemorrhage. The hemorrhage occurred in a secondary cyst within a ruptured ovarian cyst. Dr. Boldt then described a **carcinomatous uterus** removed by abdominal hysterectomy. Death followed on the fifth day, from intestinal paresis. He presented a large interstitial myoma removed by abdominal myomectomy, on account of the large size of the tumor and the small size of the vagina. His last specimen was a uterus showing **frequently recurring adenomatous hyperplasia,** removed on account of procidentia with recurrent hemorrhage. Although the uterus had been curetted several times, hysterectomy was eventually necessary. Dr. Ralph Waldo has successfully used a strong solution of silver nitrate in a similar case which had resisted all other treatment.

Dr. J. R. Goffe presented a large specimen of **submucous fibroid,** removed by supravaginal hysterectomy, from a patient suffering from hemorrhages. He also presented the wall of an ovarian cyst much thickened from inflammation. Six months before operation the patient had fallen from a hammock, which had caused rupture of the ovarian cyst, filling the abdomen with blood and tumor contents. Dr. Barrows recalled 2 cases in which such tumors, rupturing during examination, were demonstrated by operation. Dr. G. W. Jarman also reported the history of a case in which an ovarian cyst had been ruptured during examination. Dr. H. J. Collyer recalled a case which refilled 2 weeks after rupture during examination. Drs. Boldt, Dudley and Janvrin reported similar cases.

Dr. Barrows reported the case of a woman with **septicemia** healed by intravenous injections of formalin, details of which have already appeared in the **Philadelphia Medical Journal,** (January 24, 1903, page 150). Dr. W. S. Stone said that this case showed that further animal experimentation was necessary before attempting this treatment in other cases. Dr. W. E. Studdiford mentioned Webster's results. Dr. Dudley thought that the curative power of gating the peritoneum and in hypodermoclysis. Hypodermoclysis with normal salt solution has also given excellent results. Mr. Dudley thought that the curative power of formalin could not be determined in this case, because local treatment had also been employed. He believed that intra-uterine irrigation is harmful in this class of cases.

Dr. J. C. Edgar demonstrated **some new instruments; a return-flow glass catheter** for intra-uterine irrigation, made of 2 pieces of glass tubing, grooved in the inner surface, and a **Bossi dilator**, which he demonstrated upon the rubber model of a partially dilated cervix. He said, however, that he preferred the 2-blade dilator of Gans, because the hand could be inserted at the same time.

PHILADELPHIA OBSTETRICAL SOCIETY.

Meeting held January 2, Dr. J. M. Fisher, president, in the chair.

Dr. M. M. Franklin reported a case of **fibromyoma of the round ligament**, about the size of a walnut, in a woman of 29, situated in the inguinal canal just outside of the internal abdominal ring. Pressure caused pain and vomiting, and the tenderness was increased during menstruation. There was also dysmenorrhea. On operation, a fibroliomyoma of the round ligament was found and excised. Dr. J. C. Da Costa had never seen a fibromyoma of the round ligament, though he had operated upon 2 cases of fibroma of the broad ligament. Dr. W. Krusen believed this tumor to be rare. The diagnosis may be very puzzling, as lipoma, adenomyoma, sarcoma and lymphangiectatic myoma have all been reported upon the round ligament, external to the internal abdominal ring. Dr. E. E. Montgomery stated that tumors of the round ligament were very rare. He has never seen a case.

Dr. C. P. Noble reported an **operation for abdominal pregnancy that had existed 21 months.** A woman of 30, sure she was pregnant, failed to be delivered of a child at the expected time. Two months later, at a gynecological dispensary, the diagnosis of an abdominal tumor was made. Three months afterward she came to the Kensington Hospital for Women, with the diagnosis of fibroid. Dr. Noble made a presumptive diagnosis of abdominal pregnancy, which was confirmed by operation. The fetus occupied the left side of the abdominal cavity, extending into the pelvis, the uterus being pushed to the right and elevated. The fetal sac was so thick that it was impossible to outline the fetus. This was removed, but the uterus was left in place. The patient recovered. Dr. Montgomery discussed the diagnosis of such cases and reported in detail a similar case. Dr. Krusen also recalled a similar case. Dr. C. C. Norris had never seen so large a fetal sac in the abdomen. In closing, Dr. Noble said that the one danger in the operation was hemorrhage. This was the first full-term pregnancy that Dr. Noble had found in the abdominal cavity. He believes the whole sac should be enucleated, provided preliminary ligation is possible. This is impossible if the placenta is attached to the intestines.

Contribution to the Clinical Study of Anachlorhydria and Investigations Concerning Decomposition-Processes in the Gastro-intestinal Tract and Their Treatment.—Luigi Ferrannini (*Centralbl. f. inn. Med.*, Dec. 20, 1902) reviews some of the literature relating to anachlorhydria and reports several cases. **He divides the condition into the primray and secondary forms.** He finds that the presence of HCl in the gastric contents is associated with a smaller amount of ethereal sulphates in the urine than is the absence of HCl in the same patient. He **has tried treating the condition with pilocarpine** and has had some good and some unsatisfactory results. [D. L. E.]

Special Article.

TROPICAL DISEASES.*

FIFTH LECTURE IN A COURSE ON TROPICAL DISEASES.

ABSCESS OF THE LIVER.

By CAPTAIN CHARLES F. KIEFFER,
Assistant Surgeon, U. S. Army.

Gentlemen: We take up for discussion today the most important complication or sequel of tropical dysentery, suppurative hepatitis, abscess of the liver. Now, abscess of the liver is a very rare disease in this climate. Kobler, for instance, found 10 abscesses in 1307 autopsies, and, of these ten, eight were the result of antecedent dysentery. In the tropical zone we find the incidence of suppurative lesions in the liver to be enormously higher, and the reason for this is twofold. First of all, the vastly more common distribution of the chief etiological factor, the ameba coli. Secondly, the predisposition to suppurations arising from the very common occurence of passive congestion of the liver in the white settlers in tropical climates. The exigencies of a hot climate and the mode of life pursued by the average colonist throw an extra burden of physiological activity on the liver. The result is an exaltation of the functions of the gland with a resultant hyperemia. The immediate effect of this condition is probably shown in the newcomer by particularly active digestion. He eats more than is good for him, certainly much more than is necessary. He indulges in alcohol more than he has been accustomed to, perhaps, at home. Now, this condition would be of trivial moment if the processes of oxidation were aided by a sufficient amount of exercise, but just here is where the difficulty begins. The continuous moist heat rapidly saps the restless energy that was bred in the more stimulating climates of the north. Lassitude is speedily followed by pronounced aversion to all forms of physical exercise. The manner of life followed in the tropics, where hosts of native servants are employed to fend away all physical exertions from their white masters, tends to make the surrender complete, and in a little while our newcomer has brought his physical work to an absolute minimum.

Just here the hyperemia with increased function may be succeeded by a passive congestion, with stasis and diminished function, and our friend wakes up to the realization of the fact that he has a "liver." It is hard to say, in any case, where the one process ends and the other begins, where the physiological gives way to the pathological process. The patient becomes sallow, has anorexia, with coated tongue and, perhaps, morning nausea. He is conscious of his liver. He complains of a dull, heavy aching in his right hypochondrium, or only of a sense of fulness in that region. In some cases a brisk purge with a more reasonable regulation of the mode of living, a closer conformity between supply and demand, terminates the condition. Maybe, nature takes a hand, and a sharp colliquative diarrhea depletes the liver and restores the normal state. In a large majority of cases the condition is not relieved or only slightly, and the congestion becomes permanent, bringing with it a very much greater liability to infections which, centering in this area of diminished resistance, tend to produce suppurative changes. I have decided to consider the treatment of this condition with the prophylactic treatment of abscess.

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*Fifth lecture delivered at the Jefferson Medical College, Philadelphia.

When we study the etiology of abscess of the liver we find there are three broad classes:

(1) *Traumatic Abscess.* Traumatic abscess is usually solitary. It may arise from a severe contusion of the organ, without a lesion of the skin, or it may result from the penetration of a vulnerating body, a bullet, a knife or a needle. It has been shown that the liver blood is relatively richer in bacterial forms than any other portion of the circulation, and this explains the formation of abscess even without break of the skin.

(2) *Pyemic Abscess.* Under this head I have grouped the common infections that may end in abscess. The lesion in this class of cases is usually multiple. It may begin in embolism of the portal vein from inflammatory lesions affecting the radicles of the vein. Examples are ulcerations in the colon, appendicitis, hemorrhoids and, rarely, typhoid ulceration. Cases may arise in embolism of the hepatic artery in ulcerative endocarditis and pulmonary gangrene. Occasionally abscess may arise from the extension of an infective process, such as pylephlebitis, or in cholelithiasis with obstruction. In these latter cases both the bacillus typhosus and the pneumobacillus of Friedländer have been found as the direct bacterial agent. Echinococcus cyst of the liver may suppurate and form abscess. The round worm, the liver fluke and the balantidium coli sometimes cause abscess, and, finally, it has been observed in measles, epidemic influenza and perforating ulcer of the stomach.

(3) *Tropical Abscess* brings us to our subject proper. In the study of the special etiology of tropical abscess we must consider the predisposing causes. First of all, remember the very great tendency to passive congestion of the liver that obtains, to some extent, in a large proportion of settlers in the tropics. Malaria, chill and exposure are also important predisposing factors, but the greatest of all is alcohol. Waring, after a careful study of these cases, decided that in 65% there was a marked history of the abuse of alcohol. Mark this, gentlemen, the *abuse* of alcohol. I am not one of those who hold to the dictum that alcohol is a poison in the tropics. We have all heard this doctrine expressed in epigrammatic rules of varying force. My experience has been that, in the tropics, alcohol, in moderation, produces no more harmful effects than it does here. The abuse of alcohol in hot climates, however, is a much more serious matter in this, that the reckoning comes much more promptly. In temperate climates, a man dissipates for twenty years, and nature presents her bill as a cirrhosis of the liver. On the equator, a man dissipates for two years, and nature audits his account, with a big, red pencil, as an hepatic suppuration. You will find in latitude 0, even as in latitude 40, however, that you can no more practise medicine with clinical epigrams than you can do surgery by rule of thumb or forecast weather by rhyming proverbs. Let me quote you a little more of the poet-pathologist Kipling:

> "When the 'arf made recruity goes out to the East
> 'E acts like a babe an' 'e drinks like a beast,
> An' 'e wonders because 'e is frequent diseased
> Ere 'e's fit for to serve as a soldier.
> When the cholera comes—as it will past a doubt—
> Keep out of the wet and don't go on the shout,
> For the sickness comes in as the liquor dies out,
> An' it crumples the young British soldier."

And there you have this subject of the etiology of abscess epitomized.

We next study the exciting causes, and here we find, first of all, amebic dysentery. I think that a careful study of figures, viewed from both directions, will give you a clearer induction to this question. Woodward, in 3,680 dysentery autopsies, found abscess of the liver in 779, or 21%. Boston collected data of 2,430 autopsies with 486 abscesses, or 20%. Strong, in 79 autopsies, found 14 absceses, 17%. Osler, in 93 cases, saw 23 abscesses develop, or nearly 25%.

Now, when we consider these facts from the other side, we find that tropical abscesses were found to be preceded by dysentery, by Zancarol in 59%, Waterman in 72%, Smith in 84% and McLeod in 97½% of all cases observed. In my own experience, in one series of 35 abscess cases in soldiers, in which the previous medical history was attainable and the patient's memory did not enter into the calculation, I found dysentery in every case. In a second series of 25 cases in natives and civilians I failed to elicit a history of dysentery in 3 cases.

In all of these figures we must make additional allowance for the very great number of latent dysenteries, as well as for the cases in which no effort was made to elicit the history of a dysentery one or two years before. Some cases of amebic infection at their beginning may have been so mild as to have produced only a transient diarrhea which the patient may have forgotten. You must also bear in mind the fairly common occurrence of the amebæ in the colon without the production of any dysenteric symptoms, just as the bacillus diphtheriæ may occur in the throat, and the rare cases of quite extensive dysenteric ulcerations without any symptoms. These latter do occur, in terminal states, when the adynamia is so great that no special reaction to the process in the colon takes place. I recall one such case in particular, an old officer of the army, who died of a very extensive chronic kidney lesion, going through a long terminal illness. In this case there was nothing whatever to call attention to the colon and yet, at the autopsy, most extensive dysenteric lesions were found. These are the factors that must be added to the figures I have quoted you.

Taking all these observations into account, it seems fairly reasonable to make the following deductions: 20-25% of severe amebic dysenterics eventuate in abscess of the liver; 85% of all tropical abscesses are due to infection from the ameba coli. I say these deductions are reasonable, I believe the latter to be at least 5% below the probable rate of incidence. I will recall to you what I taught you concerning the demonstration of the amebæ in the pus of these abscesses in the lecture on acute dysentery. In the large majority of cases they are easily demonstrable. In some few you will find it necessary to rub away some of the abscess wall, on a gauze sponge, to show the amebæ and, in a certain proportion, you will not be able to demonstrate the amebæ until the abscess has been discharging some days. The dysentery always antedates the abscess. It is true, a hepatitis of some degree may antedate the dysentery and to some extent simulate the suppurating lesion, but careful study of your cases will show you that the dysenteric infection precedes abscess formation. Manson states that abscess is rare among natives in India, the liability of European to native soldiers being as 95 to 5, and this although the native is more liable to dysentery. Now, here come into play again the predisposing causes. In Manila and the Philippines the native is quite prone to this disease and, indeed, all natives are who have adopted, in a measure, European habits of living. When our Malayan brother goes on the "shout," the result comes just as inevitably as it does to the Caucasian. European women and children rarely suffer from this disease, and here again the reasons are obvious.

The relation in point of time between the abscess and the dysentery is of some importance. Rarely, severe hepatitis, running a rapid course to suppuration, begins almost with the first symptoms of dysentery, and again abscess may not take place for one or two years after the dysentery.

Classing, for the sake of convenience, the cases of tropical abscess not amebic, as idiopathic, we have a small group to consider. The balantidium coli, just as it produces dysentery, may also be the cause of hepatic suppuration. The remaining cases are infections by pyogenic organisms, sometimes also the typhoid organism, attacking the feebly resisting, congested liver. Cantlie maintains that all intrahepatic abscesses are amebic, and that the idiopathic abscesses are suprahepatic or subhepatic, that is abscesses of the dome or concavity.

Morbid Anatomy. The liver, that is the seat of beginning abscess formation, is congested and decidedly enlarged. There will be one or more areas of necrosis. These areas are grayish and ill defined. They shade off very gradually into apparently intact liver structure. The center of the necrotic area will contain a few drops of bloody or chocolate-colored, inspissated pus. Later, liquefaction takes place over the entire area. The abscesses may be the true solitary or single abscess that has resulted from the coalescing of two or more primary lesions, or they may be multiple. The tropical abscess is solitary in about 70% of cases. It is single from coalescence or double in about 15%, and the remaining 15% of cases are multiple. In seven cases out of ten the large abscess is found in the right lobe of the liver and always tends to the convexity of the lobe. The left lobe is involved in 3% and the lobule of Spigelius in 3%. The remainder of the abscesses is found in the dome of the liver. Of course, the multiple abscess is disseminated.

The abscess may be the size of a pigeon egg or it may be as large as a cocoanut or even larger. In fact, the whole right lobe may be involved until it resembles a large cyst. The capsule of the liver and the peritoneal coat are involved in an active perihepatitis whenever the abscess nears the periphery of the gland. The wall of the abscess may have a loose, ragged appearance, or it may be firm and thick from compaction. This, you must understand, is not a true wall but consists of altered liver tissue in three fairly distinct zones from within outward: (1) A completely necrotic layer; (2) a layer which has not progressed to necrosis but in which the cells are inactive and (3) a layer or zone of intense hyperemia. When the abscess is large, particularly when two or more have coalesced, thickened bloodvessels may span the cavity exactly as you sometimes see in tubercular cavities in the lung. The contents of the abscess is the so-called liver pus. It is thick, reddish-brown or chocolate-brown in color. It may be marbled or streaked with blood or yellow pus. It has a characteristic sweetish odor which may be offensive or fecal if the abscess lies in proximity to the bowel. Microscopically, the pus contains necrotic liver structures and fairly intact liver cells, it contains pus cells, amebæ, elastic tissue and blood. Bacteriologically the pus is either sterile or infected. In the large majority of cases it is sterile and contains only the amebæ. But it may be infected, and then the staphylococcus, the streptococcus and the colon bacillus are found, very rarely the typhoid bacillus and the pneumobacillus of Friedländer.

The symptom complex of hepatic suppuration may be marked or it may be obscured, perhaps, by the intensity of the phenomena of some co-existing state. In a few instances there is nothing to call attention to the liver until sudden rupture and the appearance of the characteristic pus in expectoration or bowel movement establishes the diagnosis. Usually, however, the symptoms are quite marked and are chiefly these four: Fever, sepsis, enlargement of the liver and pain. The onset is usually gradual. The patient complains of loss of flesh, loss of strength, of pronounced disability for muscular effort. With this failure there are dyspeptic symptoms, anorexia and nausea. There is a distinct sense of fulness in the region of the liver accompanied with discomfort or dull, aching pain. The patient becomes anemic and gradually takes on a color that is quite characteristic. Indeed, it is almost possible to pass through a tropical ward and pick out the "livers" from their faces. The color is sallow and slightly icteroid without giving the distinct impression of jaundice. It is neither so dark as the color of chronic malarial poisoning nor so lemony as the hue of cachexia due to malignant disease, but is midway between the two.

The temperature ranges give us the best information. Fever is the most constant symptom and is of the type you know as hectic, a hectic of narrow range. An irregular temperature accompanied with chill, with sweating, with regular remittances and the fairly constant periodicity as to time of day, all of which indicate deep-seated suppuration. The temperature is usually a vesperal rise; it is preceded by slight rigors, perhaps only a chilliness, and followed by a drenching sweat. The range is not great, 102° to 103° representing the average evening curve, excursions to 105° being quite unusual. The classical descriptions of the disease spoke of the violent rigor that was supposed to signalize the formation of pus. This you will not commonly observe. I believe it to be the exception rather than the rule. The sweats are drenching and contribute greatly to the depression and exhaustion of the patient. They follow the fastigium of the fever and are also prone to come during sleep, whether it be by day or night. So that you would properly call them, not night sweats, but sleeping sweats. They may be so extensive as to saturate the bed clothing.

Enlargement of the liver is another fairly constant symptom. The enlargement is symmetrical and in its extreme development may reach the third rib in front or the scapular spine behind or, extending downward, it may reach the anterior superior spine of the ilium. Enlargement downward is not, however, the rule. The common increase in liver dulness will be found upward. This is a point of considerable importance, and I wish to emphasize it because the percussion of the upper border of the liver is habitually neglected as compared with the lower border. In the usual position of the large majority of tropical abscesses you will find that the upper limit of liver dulness is normal at the mid- and parasternal lines. When we reach the nipple line we find a sharply defined extension of the dulness upward, extending well on toward the axilla. The lower border of the liver is not commonly projected far downward, although, in the symmetrical enlargement of the liver, it may be found one or two fingerbreadths below the costal margin. On inspection you find the right hypochondrium full and bulging. There may not only be apparent fulness or sleekness of the right side but also obliteration of the intercostal spaces. When pus comes close to the surface you will find a superposed edema, and, in extreme cases, you may even be able to demonstrate fluctuation in the abscess. Auscultation may also reveal a peritoneal or liver friction that has developed very much in the same manner as a pleural friction in inflammations of that membrane.

Pain in liver abscess may be entirely lacking. Commonly there is a sense of weight and fulness, or there may be a dull, gnawing pain. When the abscess nears the surface, particularly when any perihepatitis develops, pain becomes marked and localized and is then a valuable guide to the location of the abscess. There is, usually, tenderness on palpating the lower edge of the liver, particularly in the nipple line. If perihepatitis becomes marked, the pain will be more lancinating or stitch-like, simulating the pain in pleurisy; indeed, when the abscess invades the dome of the liver, you may have symptoms of a low pleurisy, with lancinating pains and marked dread of breathing. This is the direct pain. Reflected pain is quite constant, and you must always be on your guard for the symptom. Abscess of the liver is frequently expressed by a severe reflected pain in the right shoulder. This pain may be quite constant, its occurrence is very common and is explained by the fact that the sensory nerve supply of the diaphragm and the suspensory ligament is supplied by the phrenic, which, as you know, is commonly given off from the fourth cervical with an occasional anastomosis with the fifth cervical. These two roots also supply the shoulder of that side. The only other pain symptom of importance is that, sometimes, sharp pain is felt in the esophagus when a food bolus passes the level of the diaphragm. A dry, hacking, improductive cough may be present and mislead you by directing your attention away from the liver. Respiration shows no marked changes unless the pus approaches the diaphragm, and inflammatory extension takes place into the respiratory tract.

The decubitus is quite characteristic. The patient lies on the right side almost on his right front aspect. The shoulder is drawn down and the right knee strongly drawn up to relieve the tension of the abdominal muscles. Always remember that the decubitus is of value in roughly localizing disease or injury. The man, even as the animal when mortally hurt, lies on the injured side, and the decubitus I have described should immediately call your attention to the fact that somewhere near the patient's right middle there is a mortal hurt. Jaundice is rare, indeed is not a factor in this disease and probably only exists to any marked extent when the abscess presses on the bile-ducts. In the same manner, when the abscess presses on the portal vein, ascites may develop, to a moderate degree, and, while it may have no bearing on the prognosis of the case, it adds some important factors to the operative treatment. Pneumonia at the right base may denote contiguity of the abscess to the diaphragm.

Let us next consider the terminations of liver abscess. Waring's analysis of 300 fatal cases showed the abscess intact in 56%. The abscess had been opened by operation in 16% and in the remainder spontaneous opening had taken place, the chief points being the pleura in 5% and the colon in 3%. When operative treatment is not had, the abscess either ruptures or, in some very rare cases, becomes encysted or encapsulated. The favorite site of spontaneous rupture is into the right pleura. If the disease advances comparatively slowly, the diaphragm becomes sealed to the liver capsule, the visceral pleura to the diaphragm by inflammatory adhesions, and then the opening may be direct into the lung or a bronchus. In these cases there is sudden dyspnea with expectoration of a large amount of liver pus and a coincident amelioration of all the symptoms or even a cure. The second point of spontaneous rupture is into the intestinal tract, commonly into the hepatic flexure of the colon. In these cases sudden discharge of liver pus by the bowel is followed by decided improvement in the symptoms. Rarely, the abscess may rupture into the duodenum, the pelvis of the right kidney or the peritoneal cavity. It may also tend toward the integument and point either in the skin of the abdomen near the costal border or in an intercostal space.

The prognosis of this condition depends on two main factors, the number of the abscesses and the time when the case is brought to operation. In earlier days the vicious dogma prevailed that it was wise to wait for the pus to determine its own direction and not to operate until this "determination" had taken place. In the vast majority of cases the "determined" spot was a grave. In the great part of the remainder the suppuration had continued so long that amyloid changes had developed in the kidney or liver, or the patient had died of exhaustion or sepsis. 90% of cases of single abscess, brought to fairly early operation, recover. In cases of spontaneous rupture into the most favored location, the colon, 50% recover. Rupture into the lung or pleura does not do nearly so well. I have done three consecutive operations for three apparently distinct abscesses in the one case, with ultimate recovery. In another case I saw a man who, two weeks before admission to my wards, had an abscess rupture into a bronchus with discharge of a large quantity of pus by the mouth. On the day of admission he had a large evacuation of liver pus by the bowel, and, one week later, I opened an abscess in his right lobe that contained one liter of pus. That man got well after a tedious convalescence. In 162 fatal cases the morbidity was given as due to the following causes: Severity of the disease and accompanying dysentery, 125 cases; bursting of the abscess into the peritoneum, 12 cases; into the pleura, 11 cases; gangrene of the abscess wall, 3 cases; diffuse peritonitis, 3 cases; perforating pneumonia, 3 cases; rupture of adhesions, 2 cases; pneumonia, 2 cases and rupture into the pericardium, one case.

The *diagnosis*, gentlemen, is quite difficult unless the abscess be large and the signs so prominent as to be unmistakable. The common error of diagnosis is to call these cases malaria. Osler says he has never seen a case in his wards that had not previously been drenched with quinine. I wish I could exact from each of you gentlemen a promise on beginning the practice of medicine, that you will never make a diagnosis of malaria without microscopical evidence. I speak from a large experience when I say that without such evidence it lies in no man's clinical acumen or his diagnostic skill to say this fever is malarial and that one is not. Therefore, the first distinction in these cases will be the presence or absence of the malarial parasite. When there is enlargement of the liver in malaria there is very much greater enlargement of the spleen. Lastly, the fever of the two conditions is quite distinct. It is true that malaria has sometimes a distinct periodicity, but it is always subject to diurnal variations. Although your fever may come regularly every day or every second day, it does not come at the same period of the day. A febrile paroxysm, recurring regularly at or near the same hour every day, is almost certainly not malarial. Other conditions that simulate liver abscess are hepatic colic, with fever, particularly if the process be accompanied with suppuration in the gall-bladder, suppuration in or near the right kidney, empyema or pneumonia of the right base and ulcerative endocarditis.

In all obscure cases, attended with the signs of sepsis, insert an aspirator to make your diagnosis clear. Remember always that it is vastly better to mistake other things for abscess than to overlook abscess. In tropical practice, or in this zone when dealing with recent returns from the tropics, you must always bear abscess of the liver in mind and in the presence of progressive deterioration, even without definite symptoms referred to the liver, it becomes your duty to make a thorough exploration of that organ.

The question of leukocytosis is of some importance. It is usually very marked, ranging from 12,000 to 48,000 whites. Councilman has reported a case with 53,000. Osler, in a small series of cases, found absolutely no leukocytosis in three, and Cabot found none in one case out of five. So this diagnostic point must be considered only of corroborating value.

One final point in the diagnosis. Sometimes the abscess may be so intimately connected with the parietes that it is difficult to say whether the aspirator needle is in the liver or only in a mural abscess of the abdomen. Hearn and Osler report such a case. In the usual cases, when the liver is punctured, the respiratory excursion gives a pendulum-like movement to the needle. In this class of cases this movement may be absent, and your only means of distinction will be a careful exploring incision.

In my next lecture I will take up the treatment of liver abscess.

LA PRESSE MEDICALE.

December 13, 1902. (Volume II, No. 100.)

1. Recent Acquisitions in Intestinal Digestion: Secretine and Enterokinase. E. ENRIQUEZ and L. HALLION.
2. The Radium Treatment of Lupus. F. TREMOLIERES.
3. The Regular Weighing of Cardiac Patients. R. ROMME.

1.—By experiments it was found that acid injected into a vein caused the secretion of pancreatic juice. The substance causing this secretion, found in the intestinal mucous membrane, has been called **secretine.** While it is known that this substance causes the elaboration of a definite amount of pancreatic juice, its chemical nature remains unknown. **Enterokinase** is a soluble ferment, found in the intestine, which regulates the quality of the pancreatic juice secreted. It is destroyed by heat, may be extracted and dried, acts without any relation to quantity, and is easily fixed on fibrin. The means of obtaining enterokinase, its localization, usefulness and action are described. [M. O.]

2.—**Radium** has active rays which are of value **in treating lupus.** They are distinctly bactericidal. The powdered chloride of radium is placed on the skin affected, and left there for varying lengths of time, from 6 to 48 hours. The epithelium becomes macerated and, under moist applications, new epidermis grows. In 25 days a cicatrix forms, as a rule. If left on too long, ulceration may result. While expensive, this treatment is decidedly valuable in lupus. [M. O.]

3.—**Weighing cardiac patients regularly** will show the absence or presence of dropsy. Gradual diminution in weight with diuresis is gratifying; gradual increase in weight with increasing symptoms, dyspnea, etc., may show dropsy; sometimes even before any symptoms appear. By regular weighing and regulating the liquid ingested, cardiac patients may be kept in excellent condition. [M. O.]

Foreign Bodies in the Esophagus.—Ecot reports in full detail the case-history of a corporal who swallowed a fragment of cartilage, triangular, pointed and flat, in a piece of canned meat. This stuck in the esophagus, and caused perforation of the arch of the aorta 16 days later, with death in 16 hours, from repeated hematemesis. The autopsy report follows. Another case-history is given, in which a similar foreign body eventually reached the stomach and intestine, and was finally passed. Ecot concludes that when the foreign body swallowed is pointed or sharp, no instruments should be passed, since this may cause perforation. But if any symptoms of infection or suppuration are noted, operation should no longer be deferred. (*Archives de Médecine et de Pharmacie Militaires*, December, 1902.) [M. O.]

Original Articles.

THE TOXEMIA OF PREGNANCY.*

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Definition:—An auto-intoxication occurring during pregnancy.

Causes:—It is generally recognized at the present time that the so-called toxemia of pregnancy is caused by toxins produced in the bodies of mother and child, and retained because of a lack of excretion or by incomplete metabolism or by both. These toxins may be the result of chemical decomposition of food and of the waste material of tissue change, largely increased by pregnancy. They may be formed by similar processes occurring in the child's body. The symptoms may be caused by an as yet unknown group of toxins which may exist in the body during the period of gestation, but not at other times or, as some believe, be produced by bacteria and their toxins.

There has been in the past few years a marked change in the opinions of the profession at large, or at least of those who have more carefully considered the pathology of excretion during the pregnant state. There are still many theories on the subject, but a marked reaction has set in against the old theory of attributing all cases of the so-called toxemia of pregnancy, and one of its final manifestations, eclampsia, to disease of the kidney or insufficiency of their functions. I do not think that I could do better than quote almost *verbatim* a portion of the article on this subject, which was written by Dorland, (*Amer. Jour. Obstet.*, September, 1900). "The tendency today is to ascribe the convulsive seizures and albuminuria to one and the same cause, namely, the presence in the blood of a certain toxin of unknown constitution and origin. The frequency of marked hepatic lesions in autopsies on eclamptic women points to the probability of the toxin being liberated in the liver. Pregnancy directly increases the production of toxic principles, and, in case of organic insufficiency, intoxication must occur. Pregnancy is characterized in the beginning by a marked increase in the waste products of the body, and also in the production of leukomains. The toxicity of the urine is increased. The elimination furnished by menstruation ceases, and the condition of pregnancy increases the work of the lungs and heart. There is an increased tendency to dyspepsia with intestinal fermentation. As long as the kidneys can do so, they dispose of the morbid products of the bowel and thus still further add to the toxicity of the urine. The function of these organs may be impaired by the overwhelming amount of toxic matter in the blood and prove inadequate to its elimination." Continuing, he says "that in reality there is an hepatic inadequacy rather than a renal."

Budin and Penard express practically the same opinion, and the latter states that the word eclampsia should be given up, for the paroxysm is but a symptom, the disease being due to hepatic insufficiency, and the kidneys are only secondarily affected. Other writers go still further and state that not only eclampsia and its preceding symptoms, but pernicious nausea of pregnancy, salivation of pregnancy and certain forms of hepatic degeneration, are also due to the retention of toxins in the blood. The post mortem changes found in the brain and other organs are of such a nature as to make it difficult to prove that they are not due to the intensity of the bloodpressure during the convulsions, or to the tremendous muscle spasm.

Briefly, the pathological changes found in the liver are a degeneration of the cell protoplasm principally around the central vein of the lobules; in the kidney, degeneration of the convoluted tubules; in the placenta, patches of hemorrhage and subsequent areas of degeneration; in the urine, albumin may or may not be present; in many cases it is. During the period in which the patient is suffering from toxemia, the amount of solids in the urine is markedly decreased. The general opinion at the present seems to be that the best clinical index to the amount of solid excretion in the urine is obtained from the percentage of urea; and while this in the pregnant state, usually from some as yet unexplained cause, is less than in the nonpregnant condition, still an average of from one and one half to two per cent. generally occurs. It has been noted several times that, when the urea suddenly decreases, symptoms of auto-intoxication appear almost immediately. Various authors have ascribed toxemia to the presence in the blood of large quantities of indican, acetone and many other products produced by an insufficient decomposition of the nitrogenous foods. As predisposing causes we have lithemia, chronic hepatic catarrh, and a most important cause undoubtedly is deficient renal action, or actual disease of the kidneys, subacute or chronic. Long continued worriment, fright, exposure, irregularities of food and drink, tight lacing and sedentary habits are all predisposing factors.

During the past two winters I have had occasion to note the effect on pregnant women of the catarrhs of the stomach and intestines, which are seen as secondary consequences of influenza, and I am of the opinion that these are often predisposing causes of what has seemed to be a rather intense form of toxemia. So far as my personal experience goes, I have seen fewer cases of marked toxemia in anemic women, unless the anemia was that of nephritis, than in women who may be described as full-blooded. It is reasonable to suppose, if one or more of the organs of excretion or elimination is diseased or rendered less capable of action during pregnancy, its structure will be attacked, its weakened cells becoming incapable of disposing of the greater amount of toxins, and, the blood which supplies them being toxic, their vitality is still further reduced, and degeneration results. This degeneration begins nearest the source of the bloodsupply, traveling outward from the artery, farther and farther into the parenchyma of the organ, and this is the usual picture presented at autopsy.

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*Read before the North Branch of the Philadelphia County Medical Society, May 5, 1902.

Symptoms:—A certain number of symptoms are common to all cases of toxemia in pregnant women. There is generally some headache, frontal in type, sometimes severe, at other times simply a dull and constant sense of pressure as though a tight band were encircling the forehead. Occasionally there is no headache at all. The patient very often complains of soreness about the orbits; there is often a sensation of specks or flashes of light before the eyes, sometimes as though a shaft of light were passing to and from one or both eyes; at times there is even an actual failure of vision; and the ophthalmoscope may show a degeneration of the fundus. In other cases photophobia is present, and sometimes there are no eye symptoms at all. The patient usually complains of feeling dull and heavy, having lost interest in things around her and all sense of joy at the approaching birth of her child. In a number of instances I have found toxemic patients sitting idly in a chair and rubbing their eyes. On asking them what was the matter, they would tell me that they did not know, but that they did not feel well, and their eyes felt as if a "mist" was before them. In very rare instances there are actual delusions of vision. While, as a rule, the mental tendency is toward dulness, these patients may be subject to attacks of nervous irritability or rage. They feel the changes of weather very much, especially when these changes are accompanied with a fall of barometric pressure. There may be attacks of irritability of temper and occasionally absolute mania. Often, when you ask them to tell you how they feel, they will tell you that they feel badly, they feel restless, cannot sit still, but yet can give no absolute symptoms of any kind. The skin is dry and muddy, sometimes there is slight jaundice; in very many cases the bowels are said to move once or twice a day, but, despite this fact, the patient has a sensation as if they had not been thoroughly emptied. Urination is frequent, and the amount of urine passed at each act of micturition is less than normal. As the condition progresses, the patient complains of an almost constant dull, burning sensation below the sternum (pyrosis), which she describes as "heart burn" and states that it usually is accompanied with the eructation of sour fluid into the throat. The appetite may be voracious, and at times there is an unusual craving for certain articles of food, particularly those of a salty or acid nature. Nausea may or may not be present, likewise edema of the face, ankles, hands and external genitalia.

Here let me say that the symptoms of the toxemia of pregnancy, as described in nearly all text-books and articles in journals, except those of recent date, are misleading. We find the same cut and dried set of symptoms described by all; the flashes of light before the eyes, the mental apathy, the pulse, the dry skin, etc., are well known to every medical student of the present day; but in many cases I have noticed that these symptoms, while generally present, were not especially prominent and, had not frequent examinations of the urine been made, the condition of the patient would undoubtedly not have been recognized.

I will here describe a few cases which have come before my notice, giving each as a type, the most prominent symptoms being those which at first sight might appear to come from disease, acute or chronic, of the principal organs of digestion or excretion. I call attention to these types of the condition only to enable those unfamiliar with it to recognize it more easily and possibly prevent this most dangerous condition being confounded with some simple attack of indigestion, hysteria or bad temper, a mistake that has been made far too frequently.

In the most commonly described form the kidneys would seem to be the organs which suffer most. In this variety the skin is pale, and edema, more or less marked, is a prominent symptom. The heart often has an accentuated second sound as heard in true renal disease. The urine, beside having the characteristics which will be discussed hereafter, contains a considerable amount of albumin and casts (granular, hyaline, etc.,). The mental dulness is marked and the ensemble of symptoms points to uremia, which, as the disease progresses, has in addition a strong tendency to convulsions of an eclamptic type.

This form is shown in the case of Mrs. S., age 21 years, primipara, who had scarlet fever in a severe form at seven years of age. The toxemia began almost simultaneously with pregnancy. She suffered from dulness, headache, slight dizziness, edema of the lower extremities extending to the abdomen and over the rest of the body. The patient was markedly anemic. The symptoms generally resembled those of kidney disease. The urine examinations showed no albumin; a urea percentage varying from 0.6% to 1%. Later, during the eclamptic convulsions, albumin and casts were found and these persisted after the convulsions.

The second class of cases may be described as of a gastro-intestinal type. In this class we find the most prominent symptoms to be those of a chronic gastro-intestinal catarrh, the urine, however, is characteristic of toxemia. Salivation is often a marked symptom; there is neuralgia in different parts of the body, especially in the face. Many of these patients have always had a weak digestion; a tendency to attacks of catarrh of the stomach or intestines. In this class of cases we often find, in addition to those symptoms common to all cases of toxemia, a strong tendency to nausea and vomiting. Transient nausea may appear in the first month or two of pregnancy as a reflex phenomenon, but if after once disappearing it re-appears late in gestation and is persistent, it is very likely to be toxemic. Toxemia is regarded as one of the causes of pernicious nausea of pregnancy. The lips often show a curious scarlet color. Substernal burning or pyrosis is nearly always present. Constipation or attacks of slight diarrhea and the expulsion of gas are often present. There seems to be a sort of crisis occurring every now and then in which the usual classical symptoms become marked, the urea decreases, constipation occurs, the nausea becomes worse and there are attacks of abdominal cramp which, in severe cases, I have nearly mistaken for the beginning of a miscarriage. The appetite is lost or becomes voracious or capricious. There is apt to be mental depression, melancholia or apathy. In this form the urine may or may not contain albumin, it is of low specific gravity, contains a small amount of solids and a low percentage of urea, acetone is often found; the skin is muddy or slightly jaundiced and dry. The taking of food is followed by marked dyspepsia and a sensation of fulness in the epigastrium. In some cases the symptoms of the second variety are present and, in addition, there is more jaundice. The mental condition is markedly dull, the patient is irritable or melancholy. Edema is very often entirely absent. In my experience this latter variety has been extremely dangerous and is a type which, if not treated promptly, continues to the true eclamptic convulsion. The tendency to deposits of pigment in various parts of the body I have seen once or twice in patients having this type of toxemia, but as they were brunettes it would be impossible to say whether or not these deposits had any connection with the toxemia. I simply mention it because these deposits have been attributed to toxemia by some writers. I have seen skin eruptions in only one case.

These types are well represented in the following cases.

CASE 1.—Pregnant for the second time, after an interval of four years. During the last two years she has been troubled with a mild chronic gastric dyspepsia. When five months pregnant she was seized with continuous nausea, pyrosis, some vomiting and marked distress immediately after taking food. The nausea was absolutely continuous. The bowels were constipated or slightly moved every day, the tongue was coated, there was no headache, no dizziness and no specks before the eyes. She complained of mental dulness and occasionally of a shaft of light coming and going from the right eye. Her skin was muddy and on a few occasions very slightly jaundiced. There was little change in the pulse excepting an increased tension. There was some pain across the fundus of the uterus. The urine examinations, five or six in number, showed a decrease in the specific gravity, it averaging about 1.008, reaction acid, no albumin, no sugar and a urea percentage averaging about 0.95%. Absolute recovery upon treatment showing very markedly the good effects of high rectal irrigation with normal saline solution and a regulated diet.

CASE 2.—Multipara, strong and hardy, pregnant between seven and eight months. Labors had been normal and easy; she had had nausea up to the third month, when it had disappeared. For two or three months before coming to me she complained of an increasing drowsiness, constipation, dull frontal headache and heart-burn. A week before she consulted me she noticed that she was becoming yellow. When I first saw her she was markedly jaundiced, the bowels constipated, and the area of hepatic dulness not increased. The urine showed deficient urea, low specific gravity, slightly increased bile pigments, no crystals of leucin or tyrosin; the pulse was of high tension and slow. No blood examination could be made. The recovery was complete under treatment with repeated doses of calomel, sodium phosphate, small doses of nitrohydrochloric acid and a regulated diet.

CASE 3.—A most interesting history is the following: A woman, a dark, swarthy brunette, of German descent, was first seen by me in her first pregnancy, some seven years ago. She was then in her third month. I was sent for because she thought she was going to miscarry. She had violent uterine cramps, headache, nausea and a general indescribable feeling of what she termed unrest. I examined her vaginally and found no bleeding, no dilatation of the os or softening. So great was the cramp that I was obliged to give a sedative to relieve the pain; indeed, so certain was I that I was dealing with a threatened abortion that I gave three or four full doses of paregoric and viburnum. Although the pain subsided, the other symptoms became worse, and finally I noticed that the mental condition was decidedly dull and muscular twitchings were beginning. Examination of the urine revealed a urea percentage of less than 1%. Entire cure followed large doses of calomel, rectal irrigation and a low diet. This patient has been under my care since her first pregnancy, some four times, and in every pregnancy these symptoms have returned, starting about the third or fourth month. She is toxemic from the beginning to the end of her pregnancy, although when she is not pregnant her excretion is perfectly normal. I always examine her urine once a week, but it does not show renal disease. The deficiency of action in her case seems to be entirely in the liver and intestines. Except the light flashes and mental dulness, this patient does not show a single classical text-book symptom of toxemia, but her urine tells the tale.

The urine in the toxemia of pregnancy shows in all types, except the renal, a marked similarity, and it is upon the examination of the urine that we must depend for our diagnosis, and for the study of the results of the treatment. The day is passed when the physician can boil a sample of urine in a spoon and by the presence or absence of albumin make a diagnosis for or against toxemia. The presence of albumin, unless accompanied with casts or blood and a low excretion of solids, is of no significance in pregnancy. There is no doubt that renal disease is often present, either caused by the toxemia, or what is more often the case, a pre-existing nephritis made worse by pregnancy. The typical urine of a toxemic patient is light in color, frequently passed, although the entire twenty-four hours excretion is below normal in quantity. The specific gravity is low, varying from 1.002 to 1.012 or 1.015. Albumin may or may not be present, very often it is entirely absent. In the renal type, as has been stated, casts will be found. In the other types there will be no casts. Sugar in the form of lactose has no signification; if glucose is present, it would, of course, show the presence of diabetes mellitus.

At present we believe that in the excretion of urea we have the most valuable index of the solid excretion; this substance during pregnancy is never excreted in as large amounts as in the nonpregnant condition; the reason for this we do not know. Further, the amount of urea seems to decrease as pregnancy advances, although this lessening is not very marked. We may say that a fair average excretion is about 1.5 per cent. The increase in the toxemic symptoms is almost invariably preceded by a decrease in the urea percentage. Any decrease to below one per cent is dangerous, especially so if such decrease occurs suddenly. In very many instances, if the urine is carefully studied, it will be found that the urea percentage drops suddenly, as for instance from 1.5 per cent. to 0.5 per cent. or less. It is not unusual to find a rapid decrease following a sudden change of temperature, especially if the weather is damp, the patient having been exposed to a cold east wind. It might be expected that a sudden reduction of the skin excretion by a sudden fall of temperature would cause the waste material, which otherwise would pass through the skin, to be excreted by the bowels and kidneys, thus raising the amount of solids in the urine, but this is not so. Acetone and indican are often found. I will not take time to describe the various tests for obtaining the actual amount or the percentage of urea, these can be found in any text-book on urine analysis. Personally I have found the apparatus of Squibb or Lyon, the former using Labarraque's solution and the latter the Knop's hypobromite solution, to be the best. The disadvantage of the hypobromite solution is its unpleasant smell.

It is impossible to lay too much stress on the value of the clinical study of the urine of pregnant patients who come under our care. Far too little attention is paid to this by medical men; of course, it takes time, and more than the general practitioner often feels that he can give, but it has become a necessary part of the proper attendance of every obstetric patient. From the fifth month on, the urine should be examined once every week, and should the patient show symptoms of indigestion, headache, constipation or deficient excretion in any form, the urine should be examined every day. Don't wait for the eclamptic convulsion or the horribly fatal nausea which often kills in three or four days; these are the "beginnings of the end" usually, and they are always much more easily prevented than cured. Personally, I always look with suspicion on any headache, nausea or indigestion in a pregnant woman, and I tell my patients to report to me at once if they have any of these symptoms even for a day, and to bring a specimen of their urine with them.

Pathology.—We know little of the pathology of this condition beside the changes in the urine and blood which have been mentioned. We have the anatomical changes found at the post mortem examination of those who have died of eclampsia. Of these changes it is difficult to tell which are due to the violent contraction of the various muscles, increased bloodpressure, and the other phenomena of the convulsion, or which are the results of the toxemia. Schmorl cites three cases in which the symptoms of toxemia of pregnancy, namely, headache, eye disturbances, vomiting, albuminuria and stupor in the latter part of pregnancy were very marked, but all died without convulsions. Post mortem changes were found in the kidneys, heart, liver and brain. Similar cases by Wendt and Bouffe de St. Blaise show that there is a toxemia of pregnancy, simulating the toxemia that leads to eclampsia, but which ends without convulsions. Schmorl further gives the following changes found in various organs of those dying of eclampsia: *Kidneys,* in a majority of cases there is degeneration of the epithelium, occasionally necrosis of epithelium, and thrombi in the glomeruli and smaller veins and arteries. The above changes were found in 72 cases to a more or less extent. In one case the kidneys were perfectly normal, but similar changes were found in other organs. *Liver,* hemorrhagic and anemic necrosis, fibrinous exudation and thrombi in the inter- and intralobular branches of venæ portæ. In ten cases with jaundice the same changes were found as in the uncomplicated cases. Three of the above cases similated symptomatically "acute yellow atrophy." *Brain.*—In 58 cases out of 65, there were present small hemorrhages, thrombi and softening. *Heart.*—In 72 cases, fatty and parenchymatous degeneration of the muscle fibers were present. Thrombi are of rare occurence. *Lungs.*—In 66 cases thrombi in the bloodvessels were found, also hemorrhage and fibrinous exudation in the alveoli, the latter of rare occurrence.

(To be Continued.)

UTERINE CARCINOMA.

ITS TREATMENT BY THE COMBINED USE OF THE FINSEN LIGHT AND THE ROENTGEN RAY.

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When uterine cancer was first recognized by the medical profession it is impossible to determine.

But it is evident that the condition, when fully developed, was recognized by the ancients as an incurable malady. Yet, that they in any way appreciated the pathological conditions which brought about the symptoms and which they regarded as most certainly and speedily fatal, we have no reason to believe.

Diseases of the female genital organs received very little consideration and no intelligent treatment until the century that has just closed.

Medical knowledge was at a very low ebb a century ago. The few shining lights that appeared among the followers of Aesculapius were unable to awaken the rank and file of the profession to new or improved methods of procedure.

The father of modern gynecology was that prince of physicians, J. Marion Sims, and to him, more than to any other man that has ever lived, woman owes a debt of gratitude for his courage and skill in bringing to the attention of the profession the necessity for a careful and intelligent study of all diseases of the female reproductive organs and their appendages.

It was he who gave the impetus that has resulted in the careful study of this large class of diseases. This has resulted in making women more healthy, relieving them from conditions previously considered incurable, and it has raised the surgery of the female reproductive organs from a trade to a science. For the triumphs of the last half-century Sims opened the way. Like many a pioneer, he never dreamed of the triumphs that were to be won through his initiative.

The pathology of uterine cancer is still in dispute. The embryonic theory of Cohnheim, which has been generally accepted for the last 25 years by the profession, is now contradicted by many of the leading pathologists of the day.

Be this as it may, our present methods of treatment are founded upon the theory of the epithelial origin of cancer. The human body is the prey of germs, both acting from within and without; withdraw light from us, and we speedily succumb to the attacks of the myriad forms of bacterial life.

That light-rays (the actinic) can reach the interior of the body can be demonstrated by any one with a focusing arc-lamp, such as we use in the treatment of tuberculosis of the lung. This can be done by binding a photographic plate to the back of the patient; sufficient light will pass through the body speedily to blacken the plate. The same thing can be demonstrated by using concentrated sunlight, and it will be found that these rays are much more powerful than those produced artificially.

The experiments of Duclaux and Blunt on the bactericidal influence of sunlight paved the way for Finsen's brilliant achievements in phototherapy. That carcinoma of the uterus is, at first, a purely local disease is, we think, accepted by the large majority of the profession who are working in this branch of surgery and therpeutics.

The study of the minute anatomy of the pelvic cavity and its contents shows how the lymphatics of this part of the body are so arranged as to be less readily infected from an eroded surface than those of most other regions of the human system. This is owing to the comparatively small number of the lymphducts in this region and also to the smaller caliber of these lymphducts in comparison to the size of the epithelial cancer-cells making migration to other parts of the system very difficult, rendering infection less rapid and less easy than from carcinomatous growths that originate in other regions.

This being the case, a method of treatment that will destroy these organisms in their original bed and before their migrations have involved too much adjacent tissue, is the great desideratum in the treatment of carcinomatous disease of the female generative organs and the approaches to them.

We think that this method has been found in the Finsen light, supplemented with the Röntgen-rays.

We have yet to know or read of a surgeon who, as yet, considers hysterectomy as, surely, more than a palliative measure.

A gentleman who has had a large experience with this operation said to us, quite recently, that he had never known of a case of carcinoma uteri that had been cured by hysterectomy. However, by it the patient is spared much suffering, and her life is also lengthened, but it very seldom cures. Undoubtedly, the most distressing symptoms are mitigated and life is made endurable by removal of the organ. But, even with the most extensive ablation, it is impossible to know that all the diseased tissue is removed. Recurrence is the rule within the year, yet the operation is justifiable if no better treatment can be devised.

That this subject is receiving much attention on the part of the profession, and is being very carefully investigated, is evidenced by the fact that so large a number of articles treating of this subject have appeared in the last few years in the various medical journals of the world.

In a not very exhaustive search of current literature of this subject the writer has found 64 special articles written on uterine carcinoma within the past twenty months.

Then we have the exhaustive treatise by Cullen, the most satisfactory work of the kind ever put in print. Is this large volume of literature an indication of an increase in the number of cases actually occurring, or is it that the disease is more often discovered, from being more closely studied and because it is being brought more generally to the notice of the profession? In this way, we believe, a large class of cases is reported that have heretofore not been available for statistical study and classification.

Our investigations lead us to believe that more cases are being brought to light, not that there are relatively more cases of the disease. Dr. Moore-Madden, whose experience in the observation of uterine cancer is second to none, is of the opinion that there is a large increase in the number of women attacked by cancer of the uterus, especially during the last few years. With this opinion we cannot agree. His statistics indicate that his position is well taken, but statistics are often misleading. It has been well said that you can prove anything, except the truth, by statistics.

It is the generally accepted opinion of the medical profession that unrepaired injuries of the uterine cervix and vaginal walls are a cause predisposing to carcinoma. The fuel is here laid, and it only needs the match to start the flame. There is an unknown tendency of constitution, in certain lines of descent, that seems to present a pabulum for the fruitful culture of the cancer-germ. This tendency gives rise to the popular idea of heredity in many forms of disease.

We do not believe in the hereditary transmission of constitutional disease, but we do believe in a condition of tissue which is favorable to the growth of certain disease germs when they are deposited upon it, as it has not the power to resist the germicidal invasion.

It may be that the phagocytes of certain constitutions are not strong enough to assimilate these bacilli and prevent their poisoning the system.

These phagocytes are the scavengers of the system, and but for the power they display in destroying infective bacilli the human race would soon become extinct.

On the phagocytic theory alone we can, in the present state of our knowledge of the causation of disease, account for the escape of the large majority of mankind from infection by the germs of malignant diseases.

Theories as to the causation of cancer have claimed the attention of the pathologists for centuries and seem likely to be an unsolved problem for many years to come.

The literature of the various remedies that were expected to prove specifics in the treatment of this dread disease is interesting and instructive.

Many remedies, once useful to a certain degree, have fallen into disrepute and ceased to be used, because they did not accomplish all that their enthusiastic advocates claimed for them. A few of these will bear mention. About twenty years since Chian turpentine was strongly advocated as a curative agent in cervical carcinoma. We took particular pains to test its efficacy in the wards of the St. John's Hospital. As the drug was expensive, it was claimed the want of success was often due to an adulterated or substituted article. We, therefore, procured our supply through Schieffelin & Co. A careful and systematic use of the drug was made, as at that time we were seeing a goodly number of such cases. We were unable to see any beneficial effect in any of our patients from the use of this drug. The experience of other operators coincided with ours.

The juice of the Brazilian alveloz was the next application brought prominently into use, notably by Dr. Lush. Beyond modifying the character of the discharge it has proved of little utility. Its deodorizing qualities are better met now by potassium permanganate.

Golden seal is of undoubted value when there exists a fungating, bleeding cauliflower excrescence, when better remedies are not at hand. It will also prove of great value in staunching the hemorrhagic flux.

Another valuable remedy in this class of disorders is the once vaunted specific, thuja occidentalis. This remedy is exhibited in the form of a tincture, in doses of 20 to 30 drops, three times a day, and should be remembered as a useful aid in controlling the hemorrhage of uterine carcinoma.

Schultz claims a curative effect in cervical carcinoma from the injection into the tissue of absolute alcohol. The treatment is so excessively painful as to require an anesthetic before being employed.

Probably no remedy comes to us more strongly endorsed by creditable authority than pyoktanin. It was vaunted as being a specific in all forms of carcinoma. We have used it freely and carefully in uterine carcinoma, but have been grievously disappointed in our results. Its particular field was claimed to be uterine carcinoma. We have used it without stint per oram and locally, but with no beneficial results. We expected so much from this remedy that our use of it was extended over a period of several years, yet we have not been convinced of its utility in any form of carcinoma in any locality. As a local application it is the bane of the nurse, as it stains so indelibly everything it comes in contact with, integument as well as clothing.

The use of escharotics in the treatment of cancer (and supposed cancer) of the cervix is one of the most dangerous and pernicious in its effects so far as my experience has extended, of any form of treatment dealing with disease in the region under discussion. The remedy has, in many cases, been worse than the disease. I recall a case in which, less than three years back, a professor of gynecology by the use of caustics in the treatment of uterine fibroma produced a rectovaginal fistula. The diagnosis was carcinoma. The case came under our care more than a year after the cauterization; there was complete occlusion of the rectum from nonuse and the thickening caused by the numerous cauterizations, the vagina having assumed the function of the rectum. This uterus was the seat of several fibroid tumors. Had scrapings or clippings been taken in this case, the error could not have occurred.

The most persistent and indefatigable worker in the field of cauterization, for a period covering more than 30 years, was John Byrne. He was careful, painstaking and insistent upon the efficacy of his procedure. In the earlier part of his career his method of dealing with cervical malignancy was of the best of methods in vogue, and we found it very useful before better methods presented themselves.

We believe that a very satisfactory method has now been reached in the treatment of carcinoma uteri, especially when the disease originates in the cervix. This method is the combined use of the Finsen light and Röntgen-rays, the principal dependence being the Finsen radiance. The penetrating power of the Röntgen-rays speaks for great caution in its use in this region, especially in recurrent cases, in which hystectomy has been done. We have found that an hour's exposure to the Finsen light and from five to eight minutes' exposure to the X-rays is a good proportion. This proportion has given good results and, as yet, has not produced any undesirable symptoms or done any injury.

With my first patient, and in the fixed position of the light as arranged by Finsen, the patient had to be placed in a very constrained position to have the light enter the vaginal canal. We have detached the tube from its fixed position and mounted it upon a stand. The stand has a heavy iron base, weighing about 75 pounds. Its center is perforated and a piece of tubing screwed into it. In this tubing is fitted a rod which can be fixed at any elevation by a set-screw. To the upper end of the rod is attached a hinged head, which has a square opening to receive a rod of iron which carries the tube; this hinge is controlled by a clamp screw. The distal end of the rod has attached to it a small rod by a hinged joint; this rod passes through a clamp joint attached to a collar, which is fitted to the tube arising from the base. This collar can be raised or lowered and is fixed by a clamp screw. By lowering or raising the adjustment, the angle of the tube can be varied at will. By the adjustment on the upright it can be raised or lowered. With these adjustments we can vary the height or angle of the tube to suit the patient and not subject her to the fatigue of a very constrained position for an hour or more, as was necessary with the original mounting.

To meet the varying angle of the tube, we have had to provide for the change of height and angle of the arc-lamp; were this not provided for, we would be deprived of the greater portion of the actinic rays.

To provide for these adjustments we have removed the four wires, by which the lamp is hung, in Copenhagen, and attached it to a yoke by a hinged joint, the yoke being the terminus of a rod sliding in a tube. This is attached to the head of the frame which incloses the lamp. A quadrant with a slit in it for a clamp screw, which is attached to one arm of the yoke, controls the angle of the lamp absolutely.

Thus we have an apparatus by which the light can be used at any desired angle and height. From the description this arrangement may seem complicated, but it is really so simple that almost any one seeing it would say: "Why have I not made such an arrangement myself?"

As is often the case, there are cheaper substitutes offered to the profession, claiming to accomplish the same result by less expensive methods. I have yet to see a good substitute for the Finsen apparatus, though we would welcome it.

There is one that is put out from New York. It has somewhat the appearance of a searchlight, with a cap over the front opening containing a small aperture about three inches in diameter. This is claimed to be a substitute for the Finsen light, because there are no hot rays to cool down. The why of this is very easily explained. If any one will observe the circle of light cast upon a surface by a searchlight, they will see that the center of the circle corresponds to the dead point in the light caused by the carbons and their carriers intercepting the light. At this point, there being no light, there is, therefore, no heat.

The application of the light and radiance requires considerable thought and skill, the deposits being differently arranged in each case.

When the vagina is not involved, we can use an ordinary bivalve speculum and protect the lateral walls with tinfoil. We have had an extreme case in which the vagina would only admit a bivalve 2½ inches long; in the course of six weeks we could use a posterior blade of the speculum 5½ inches in length.

Leadfoil is readily arranged so as to fill up the space between the blades of the speculum.

With the Finsen light the external parts only need the protection of some fabric, but with the Röntgen-rays we need metallic protection and, of all metals, lead is the most satisfactory. We have had two patients come to us who had been subjected to the X-ray treatment, one of whom had an ulceration on both thighs, while in the other, though only the left thigh was involved, the lesion extended down to the muscles. So far we have never produced anything more than a slight erythema which usually passes away in a period of 36 hours. The patient is placed in the recumbent position on her back, and the rays so arranged that they will impinge upon the diseased surface. So far as the Finsen-rays are concerned, we can let them play upon the parts for an hour or more, but with the X-ray it is different, the time must be limited and, when hysterectomy has been performed, we use more caution, as we cannot limit their penetration and there is no uterus back of the vagina to intercept and partially absorb the rays.

With the experience so far gained, we believe we have in this combined use of decomposed light and X-radiance a method of treatment that promises more for this class of sufferers than any operative, local or constitutional measure yet devised.

When we can have a patient, bleeding profusely on the least movement, cured in 3½ months, we have a plan that is worth the trial. In this case the vagina was almost occluded by the carcinomatous deposit and the cervix and uterus invaded. The hemorrhage diminished from the very first treatment and, after six weeks, the patient was able to go about without producing any flux. In another patient, in whom the cervix had been twice amputated, the proportional exposure to the X-rays was longer and the result satisfactory.

It is very desirable that this combined treatment should be extended and carefully carried out. Our hope is that it may in time supersede all operative procedures, as it will bring treatment to bear upon portions of tissue that cannot be enucleated by the knife. The influence of pregnancy on carcinomatous growths is baneful. With the X-rays we have healed a recurrent cicatricial ulcer in a patient six months pregnant; why should we not expect as good results, under the same conditions, when the cervix is the seat of the carcinomatous growth?

BIBLIOGRAPHY.

Wiggine. Med. Press and Circ., June 7, 1899.
Veit. Berlin. klin. Woch., 1899, No. 15.
Gessner. Berlin. klin. Woch., 1899, July, 3.
Savor. Med. Record, Dec. 2, 1899.
More-Madden. Med. Ann., p. 616, 1900.
Reis. Am. Jour. Obst., Feb'y, 1899.
Jonnesco. Practitioner, Dec., 1899.
Gottschalk. Brit. Med. J., Apr. 8, 1899.
Parsons. Med. Record, Jan'y 14, 1899.
Landau. Br. Med. Jr., Nov. 25, 1899.
Clarke. Scalpel, Feb'y, 1900.
Shaw. Lancet, Sept. 20, 1902.
Smith. Am. Jour. Obst., Aug., 1902.
Stuber. Cincin. Lancet Clin., Aug. 16, 1902.
Beck. Med. Rev. of Rev., Aug. 25, 1902.
McMurtry. Louisville Jour. M. and S., July, 1902.
Conant. Boston M. and S. Jour., July 24, 1902.
McGuire. Virginia Med. Semi-Monthly, May 9, 1902.
Soiland. South. Calif. Pract., April, 1902.
Leary. Boston M. and S. Jour., Apr. 17, 1902.
Tuttle. Boston M. and S. Jour., April 17, 1902.
Dardenne. Lancet, Mch. 8, 1902.
Hence. Zeitschrift f. Geburtsh. u. Gynaekol., Vol. XLVI, pt. I.
Horwitz. Jour. Am. Med. Ass., Nov. 30, 1901.
Meyer. Zeit. f. Geburtsh. u. Gynaek., Bd. XLIII, H. 1.
McMurtry. Am. Prac. and News, Mar. 15, 1900.
Humiston. Jour. Am. Med. Ass., Sept. 29, 1900.
M. Hanfield-Jones. Br. Med. Jour., Jan'y 19, 1900.
Selberg. Virchow's Arch., Bd. C. L. K., H. 3, 1900.
Sinclair. Centralbl. f. Gynaek., 1900, No. 4.
Calderini. Ann. de Gynec. et Obst., Sept. and Oct., 1900.
Grusden. Muench. med. Woch., June 12, 1900.
Kuestner. Centralbl f. Gynaek., 1900, No. 14.
Cullen. Buf. Med. Jour., Oct., 1900.
Kelly. Jour. Am. Med. Ass., May 19, 1900.
Lorel. Gaz. de Gynec., Nov., 1900.
Disc. N. Y. Acad. Med., Med. Record, Dec. 8, 1900.
Grouzdcy. La Gynecologie, 1900, No. 4.
Lonard. N. Y. Med. Times, Sept., 1902.
Werntheim. Centralbl. f. Gynaek., March 8, 1902.
Cromson. Ann. Gyn. and Ped., March, 1902.
Baldy. Amer. Jour. Surg. and Gyn., March, 1902.
Gilman. Columbus Med. Jour., Jan'y, 1902.
Adamkiewicz. Lancet, Feb'y 1, 1902.
Pressly. Charlotte Med. Jour., Jan'y, 1902.
Henry. Western Med. Rev., Jan'y, 1902.
Jack. Int. Jour. Surg., Jan'y, 1902.
Cumston. Am. J. Obst., Jan'y, 1902.

REPORT OF A CASE OF TRANSVERSE MYELITIS IN A NEW BORN INFANT.*

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of Philadelphia.

(From the William Pepper Clinical Laboratory, Phoebe A. Hearst Foundation.)

William J. D., aged 3 months. Born February 7, 1902. The father is in good health, denies any history of syphilis, but at times uses alcohol to excess. The mother is in good health, but of a nervous temperament. The parents have had four children. The mother knows nothing of the first labor, as she was under ether when the child was born. It did not survive. The second child was born in what is said to have been a normal labor and is living and well. The third child was a breech presentation and lived but two weeks. The fourth child, the patient, was delivered feet first, and was only made to breathe after an hour's work by the physician in attendance. The mother says that the accoucheur had to make considerable traction upon the baby to bring it into the world. The condition of the child was not noticed by the mother until four weeks after its birth, as she herself was very ill. Her attention was first attracted by the baby's inability to move its lower limbs from the position in which they were put, and its seeming failure to notice when it was touched on this part of its body. I first saw the child when it was eight weeks old, and examination at this time revealed a fairly well nourished infant. As it lay upon its back it would move its head from side to side and throw the arms about, but the rest of the body remained as an inert mass. There were no respiratory movements of the thorax or abdomen, but at regular intervals there was a sinking in of the sides of the chest walls at about the region of the diaphragm. The abdomen was flaccid, flabby and sagged down on either side. There were no contractions of the abdominal muscles. The lower limbs were perfectly flaccid and there was absolutely no voluntary movement. The bowels were only moved by enema. The mother stated that the child passed its urine naturally. The bladder could easily be palpated. It was then about the size of a small peach. Later it could be outlined through the abdominal walls, its upper border reaching to within ½ inch of the umbilicus. Pressure of the hand caused an intermittent flow of urine; plainly an incontinence of retention. The knee jerks were absent, as were also the plantar reflex and the skin reflexes of the abdomen. There was no contraction of the abdominal muscles when the child struggled. Sensation of pin point was lost on the anterior aspect of the body as high up as the xiphoid cartilage. The only way to confirm this was by looking for expressions of pain on the child's face, or by noting some recognition of feeling. Up to the xiphoid there was certainly no sensation, but above this the baby would cry or move its head and arms. On the posterior aspect sensation was lost up to the second thoracic vertebra. The arm reflexes and the palmar reflexes were present. The pupils reacted freely to light. There was no evidence of cranial nerve palsy. There was no deformity of the spine, which may be considered straight, but for a tendency to a right-sided curvature, which was probably due to loss of power in the supporting muscles of the spine. The feet were warm; there was no atrophy of the legs or thighs, and the mother thought the legs were sharing in the general growth of the child.

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*Presented to the Philadelphia Pediatric Society, May 13, 1902.

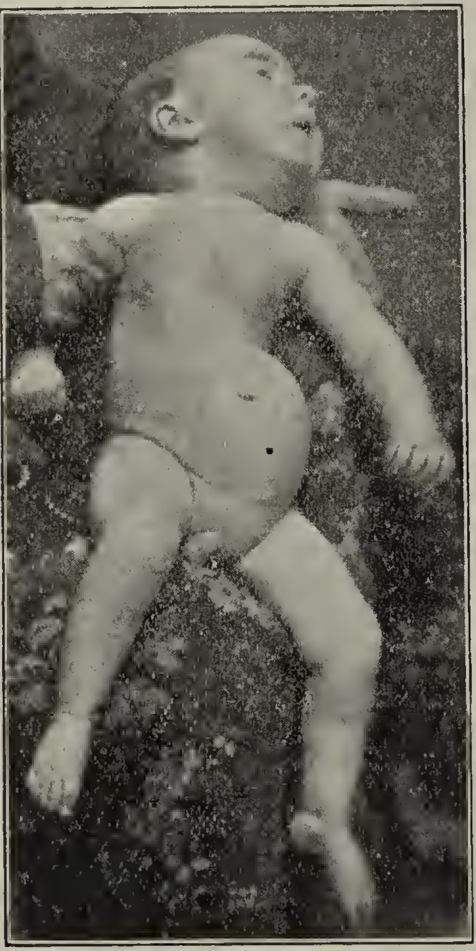

FIG. 1. Shows flaccid Palsy of the legs; flaccid abdomen and scoliosis.

The diagnosis lies between a transverse lesion between the second and third dorsal segments, and a stretching of the spinal roots.

This latter, however, can almost be excluded on account of the anesthesia up to the cervical segments. The possibility of such a condition must, however, be considered in explaining the flaccid type of paralysis.

The other features of the case pointed to a spinal cord lesion, completely transverse in character and high up in the dorsal cord.

While it is perfectly true that most cases of complete transverse lesions of the cord are associated with a spastic type of paralysis and increased reflexes, certain investigations, recently reported by William Alden Turner, of London, are important in the consideration of just such a condition as we have here. In a paper recently read before the New York Neurological Society, on an experimental study of the reflexes in total transverse lesions of the spinal cord, Dr. Turner* said: "The temporary abolition of the knee jerks was more commonly noted after high than low transections, but in no instance was complete absence observed. The influence of shock in laboratory transection was small, its effect being limited to distal parts. Many years ago, when working with Dr. Ferrier on experimental lesions of the cerebellum, he had noticed, in a case transected at the eighth dorsal segment, that the knee jerks were brisk and increasing immediately afterward, and that they lasted for months. He describes some recent experiments on rhesus monkeys, showing that the effect on the knee jerks was influenced by the level at which the section was made. If the section had been made at or below the fourth dorsal segment, the knee jerks were present as soon as the monkeys came out from the anesthetic. A patulous anus was rare. The limbs were in a state of flaccid palsy, rigidity and contracture occurring in time. In transection at the second or third dorsal segment some difficulty was experienced temporarily in eliciting the knee jerks, and they seemed to be quickly exhausted.

Transection at the first dorsal and the eighth cervical segments resulted in the knee jerks being temporarily obtained with difficulty, entirely failing after 15 or 30 minutes.

Various theories had been advanced to explain flaccid paralysis with loss of the knee jerks in man. The most commonly accepted explanation was the Bastian-Jackson theory, which ascribes the loss of reflexes to cutting off cerebral influences.

In no case in which the cord had been completely severed had any return of the reflexes been observed."

Dr. Turner reported a case in which dislocation of the fifth cervical vertebra resulted in complete flaccid paralysis and loss of the knee jerks. Post mortem examination showed that there was not complete transection, a thin bridge, about one mm. thick, persisting. This band was shown by microscopical examination to consist of degenerated white fibers.

G. L. Walton, of Boston, said that the present tendency in favor of cerebral reflex centers was largely due to Bastian's observations, but the reflex conditions found in disease were too varied to be explained by the acceptance either of cerebral or spinal centers. If the knee jerks were temporarily lost, it was because the cerebral reflex center was rendered ineffective by injury or functional separation from the lumbar region.

One point of divergence was in the newly born, in whom the knee jerks were faint or wanting and the cutaneous reflexes active. The other point of divergence of the knee jerks from the plantar reflex appeared in complete severance of the cord.

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*Reported in Philadelphia Medical Journal, May 3, 1902.

In order to elicit the knee jerks a certain degree of muscular tonicity is essential. Permanent loss of the knee jerks in cases of severance of the cord might be due to inability of the spinal centers for tonicity. In the prematurely born the spinal centers might not be able to act until the cerebral centers controlled the tonicity.

It will be seen that the symptoms in this case were fully consistent with a transverse lesion of the cord, which might be a hemorrhage, or even a temporary dislocation of the vertebra. The X-rays, however, showed no special bone lesion.

It would appear at first that the flaccid palsy was a result of a lumbar lesion or a traumatic lesion of the roots or leg nerves.

The absence of pain and of wasting were against a peripheral lesion. The character of the bladder and bowel paralysis was also that of a high lesion and pointed against a local lesion in the lumbar enlargements.

If the lesions were those of a lumbar nature, traction at birth might have been the cause.

The exact cause of the high lesion I am not in a position to say. I am inclined to believe, however, that the feet presentation had something to do with the condition.

Autopsy.—The spinal cord only was examined. Upon opening the spinal canal it was seen that the entire dorsal cord was flat. After the cord was removed, the collapse or flattening was found to extend from the second dorsal to the eleventh dorsal segment. (See Fig. II). The cervical and upper dorsal cord appeared to be normal. The lumbar enlargement was likewise normal in size, consistence and appearance. The pia mater over the collapsed area was thickened, and the superficial spinal vessels were distended and tortuous, which is shown very well in the photograph. (See Fig. III). The microscopical examination of the cord was very unsatisfactory on account of an accident to the cord during the photographing process. The cord became dry, hence it was only with difficulty that sections could be made and stained sufficiently well to obtain good results. The nerve-cell groupings, as well as the relation of the gray to the white matter, appeared normal. The ganglion cells stained black by the Weigert hematoxylin method: this, as has been shown in previous contributions, is due to the associated iron pigmentation or transformed blood pigmentation of the nerve-cells. The area of collapse of the cord was wider than a normal dorsal cord of three months. The pia was intact, and some of the medullary tissue showed black by the Weigert hematoxylin. Masses of granular material stained a deep red with the eosin stain, and this was evidently extravasated blood, although it was impossible in the sections to recognize the individual red corpuscles.

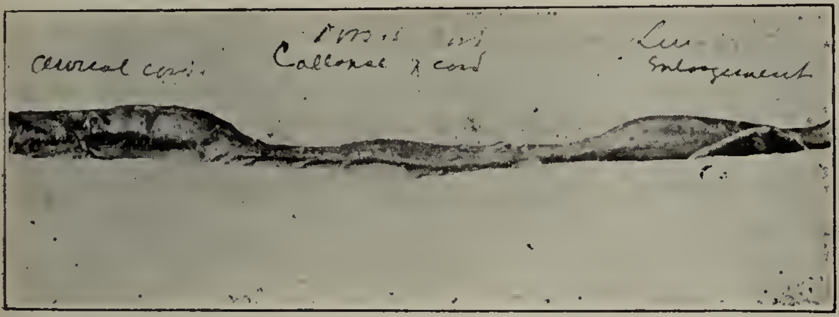

Fig II. Shows a normal appearance of the cervical and lumber cord, with the flat area of the dorsal cord.

It appeared at first that we had to do here with a defective development of the spinal cord, but a more complete examination leaves little doubt that the condition was the result of some assault to the nervous system after complete cord formation. The caliber of the cord, as evidenced by the pial tube in this area, suggests that the spinal cord had filled this tube in the normal process of development and as a result of a hemorrhagic process, softening of the cord and resorption of degenerated cord substance, there was a loss of contour of the cord, giving us the flattened cord so well shown in the photograph. It is quite possible, even probable, that this hemorrhagic condition and flattening of the cord occurred at birth, but it could not with any degree of positiveness be declared that the condition had not developed in the latter months of pregnancy, after the cord had attained its approximate size.

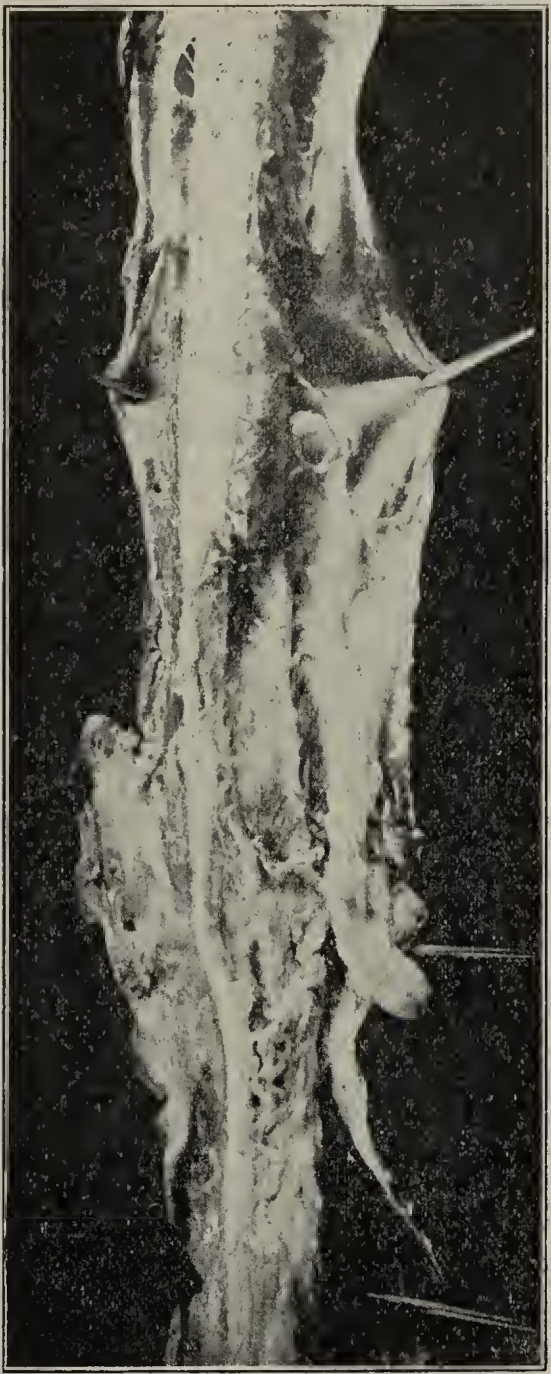

Fig. III. Anterior [illegible] v of the spinal cord showing the size of the collapsed cord with the distended and tortuous anterior spinal artery.

RETINAL HEMORRHAGES: AN AID TO THE EARLY RECOGNITION OF GENERAL ARTERIAL DEGENERATION.*

By HENRY C. HADEN, M. D.,
of Galveston, Texas.

Recognizing the importance of the detection of degeneration of arteries in the early stages, and the relation which it bears to the future life and usefulness of the individual, I desire to report the two following cases of hemorrhages into the retina, which I believe to be dependent upon this condition.

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*Read before the University of Texas Medical Club, March 10, 1902.

I have selected these cases, not that there is anything remarkable in their clinical histories, but because they well illustrate a rather common occurrence which receives but cursory attention. Furthermore, they represent the first manifestations of the disease occurring in two periods of life. The first patient was a woman whose advanced years would lead us to expect vascular changes, the other a man in the full vigor of life.

Case 1.—Mrs. C. M., aged 60, of Bethlehem, Pennsylvania, consulted me first in October, 1899, at which time I ordered glasses to correct her refractive error, hypermetropia and astigmatism and also presbyopia. With correcting glasses the vision of each eye was normal. There were no ophthalmoscopic changes, each fundus appearing healthy. Her general health, she said, was good.

On January 2, 1902, one year and four months later, she again consulted me, complaining of dimness of the vision of the left eye, which she had noticed for the past few weeks. With the glasses which I had ordered in 1899, her vision of the right eye was normal, but that of the left only 5/22.3 of normal. The ophthalmoscopic examination showed in the right eye clear media and no apparent changes in the fundus. The veins were darker in color and fuller than usual. The media of the left eye were clear. There were present some light yellowish dots of doubtful significance in the upper and outer part of the fundus, and along the inferior branch of the superior temporal artery were the remains of a small hemorrhage which had undergone partial absorption attended by pigmentary deposits. It lay just above the macula and a little to the outer side. The visual fields were measured, but presented no alterations in their peripheral limitations; in the left field, however, there was an absolute scotoma, representing the hemorrhagic area in the retina. The woman gave the following history: For the past year she has been passing large quantities of urine daily, also often being compelled to get up at night to pass urine. She suffered from shortness of breath upon the least exertion and became easily fatigued. For years she has had much mental worry, which was worse of late. She is the mother of a number of healthy children. In appearance, she is a large, well-preserved woman with healthy color. Her family history is good. The patient has led an active, energetic life.

Some months ago she consulted her family physician in regard to her health. He told her that she was in a normal condition and advised that she should take whiskey when she felt fatigued. A physical examination was made at my request by Dr. Coley, of Philadelphia. His report was as follows: Heart's apex was displaced slightly to the left; marked accentuation of the aortic second sound, which was clear; high tension pulse with a suggestion of radical thickening. Urine examination made by Dr. Kalteyer: Color, pale yellow; transparency, clear; reaction, acid; specific gravity, 1014. In one of the specimens there was a faint trace of albumin; no sugar present. Microscopical examination: Epithelial cells, but no casts were found. As she did not remain in the city, it was impossible to make repeated examinations or to measure the amount of urine voided daily.

I again measured her refractive error and found a change in the axis of the astigmatism in the left eye which, when corrected, gave her 5/6 vision. I believed that the hemorrhage was the result of the rupture of one of the small vessels due to degenerative changes taking place in its coats, and felt justified in explaining frankly to the patient that she was in a condition which would necessitate her taking more than usual consideration in her manner of living. She was advised to avoid excitement and to enter into as few as possible of the many enterprises which are incumbent upon a woman of her charitable disposition and social position. A diet was suggested to her. Nitroglycerine, gr. 1/100, three times a day and small doses of potassium iodide were prescribed. Alcoholic beverages were forbidden, and certain mineral waters advised. Three weeks later she came to me when I found the ophthalmoscopic appearances the same and the scotoma as before, but the vision of the left eye was normal. She said she was feeling generally better. I have not seen her since, but have heard indirectly through her daughter that her health is improved.

CASE 2.—Mr. C. R., aged 32, of Galveston, Texas, came to consult me on September 24, 1901, giving the following history: For the past two months his eyes had been very weak and he had noticed that the vision of the right eye was not so sharp as that of the left. He was wearing smoked glasses to protect his eyes from the sunlight. Ten years ago a pterygium was removed from the right eye. He said that his general health is fair; drinks whiskey in moderation and smokes large numbers of cigarettes. The vision of the right eye was 6/15 of normal, the left 6/6. The muscle balance-tests showed weakness of the internal recti muscles. The irides responded normally to stimuli. The pupils measured 3 mm. There was a small congenital coloboma of the left iris. With the ophthalmoscope the media of the right eye were seen to be clear, the disc somewhat pale to the temporal side, but, generally, the fundus presented a normal appearance. The refractive error was estimated to be hypermetropia and astigmatism of small amount. The left eye presented similar appearances, but the disc was congested. Homatropine was prescribed, and he was directed to return the next day, in order that I might correct his error of refraction. Business prevented him from returning until five days later, when, under the influence of a cycloplegic, his refractive error was measured. The glasses giving him normal vision in each eye, that of the left being more acute. As a matter of routine in all cases in which a cycloplegic is used to determine the refractive error I make a second examination of the fundus while the eyes are under the influence of the drug. In the right eye the appearances were the same as when seen five days before, except that there was a very small flame-shaped hemorrhage, quite fresh, along one of the smaller vessels, leading from the central artery toward the macula. It was about ½ a disc's diameter from the disc, apparently in the fiber layer of the retina. The left eye was as before. By direct questioning I obtained the following additional history. That by moderate drinking he meant that he was never intoxicated, but that he took nips continually throughout the day. He had noticed for some time that he passed a large quantity of urine. He had dyspnea upon exertion and had little power of physical endurance. There was no history of syphilis. The visual fields were measured and found to be practically normal. A little contraction of the colors for the right eye. There were no scotomata. The physical examination made by myself at the time was as follows: No apparent change in the size or position of the heart. No valvular lesion. The second sound was clear and accentuated. The pulse was of high tension and of unstable rhythm, the number of beats per minute varying from 60 to 105. There was no distinguishable thickening of the vessel walls.

Urine analysis made at the Pathological Department, University of Texas: Color, dark amber; transparency, clear; sediment, not of large quantity, pale and whitish in color; reaction, acid; specific gravity, 1017; albumin, present with acetic acid, but not with nitric acid; urea, 15½ gm. per L.; indican, none; sugar, doubtful reaction with Fehling's solution, negative with phenylhydrazin-hydrochlorate test. Microscopical examination: Many crystals of CaC_2O_4, good bit of mucus, few epithelial cells, many bacteria, some hyaline and pale granular casts, fungi, no blood or pus. Urine analysis: Color, amber (pale); transparency, clear; sediment, a goodly quantity of mucus floated about in the specimens; otherwise only slight sediment. (The sediment thought to be mucus was principally fungus growth). Reaction, acid; specific gravity, 1003. Albumin, faintest trace with acetic acid, but none with nitric acid. Urea, 5½ gm. per L.; indican, none; sugar, none with Fehling's solution. Microscopical examination: Some mucus; very small amount of CaC_2O_4; very few epithelial elements, many bacteria; no pus or casts were found. He was referred to his family physician.

On the following day, October 1, another small hemorrhage was seen to have occurred directly below the first, also upon a small artery. The rest of the eyeground was unchanged. He was advised to stop drinking, to avoid stimulating foods, and to lead a well-regulated life, free from excitement; to take moderate exercise in the open air. To assist in the elimination of the inflammatory products I gave him 1/30 grain of bichloride of mercury, three times a day. I warned him that he was in a somewhat critical condition, and that his future state of health and usefulness depended upon his manner of living.

Six days later, October 7, the first hemorrhage had nearly disappeared and the second was fading. When seen, at the end of four days, the hemorrhages had entirely disappeared. In a second examination of the urine, made two days after the first, no albumin or casts were found. I have not seen him professionally since, but met him upon the street one month and half later, and he said that he was feeling much better and was paying more attention to his way of living.

Hemorrhages into the retina without manifest inflammatory changes, or, as they are sometimes called, apoplexies of the retina, are of no uncommon occurrence. The causes for hemorrhage here are the same as elsewhere: Trauma, great physical exertion followed by rupture of the vessel walls, compensatory extravasation accompanying suppressed menstruation, etc., and changes in the blood and in the vessel walls, all of which are foreign to the present consideration, except the last.

The hemorrhages to which I refer are more particularly classed as idiopathic; and, unless, because of their size and situation, they produce alteration in the vision, they are allowed to pass with but little attention. They are usually discovered during the routine examination of persons who consult the oculist for the relief of eye strain.

These hemorrhages must not be confounded with those which occur in the retinitis of advanced Bright's disease. They are transitory and after a few days or months are absorbed, leaving the retina in an apparently normal condition or with a small scar, as in the first case. But they go only to return, which may be in weeks or perhaps not for years. When they come again it may not be in the retina, but in some organ of more vital importance. They are little red danger-signals which nature sets out to show that in some way she is being abused. Albumin may not be found in the urine at the time. In each of these cases it was found only in one specimen, and then only in a very small amount.

In the first case, that of the elderly woman, upon her return to her home she consulted her family physician, who made an examination of the urine and found no albumin, listened to her heart and heard no murmurs. He then told her that there was absolutely nothing the matter with her and criticised me severely.

It may be that the presence of the small amount of albumin was only a physiological albuminuria, but, when physiological or transitory albuminuria is accompanied with retinal hemorrhages, I believe that it is significant of something more than functional derangement. It is said that small hemorrhages such as these occur in the retina owing to a temporary increase in bloodpressure because of their lack of support from surrounding tissues, even when the vessels are in a healthy condition. I do not believe that in the normal state the retinal vessels are much more liable to rupture than small vessels elsewhere; for, although they are not packed tightly in dense tissues, they are supported by the intraocular tension which is most exquisitely susceptible to changes in bloodpressure.

Mr. Adams Frost says that "the intra-ocular tension, acting like the air-chamber of a fire-engine, tends to keep the circulation uniform and to prevent slight differences in the bloodpressure from effecting marked changes in the retinal circulation." On the other hand, in diseased conditions of the vascular system we are more liable to find hemorrhages here than in many situations, for the following reasons: The vessels have very thin walls, they are terminal vessels, dividing dichotomously, and there are no anastomoses. So that, if through disease the vessels lose their elasticity, even temporary rise in the bloodpressure is likely to cause their rupture. That these hemorrhages take place early in the disease is probable, for the vessels are so small that even a slight thickening of the intima is sufficient to narrow their lumen enough to block the bloodstream.

It is but natural to think that these changes, going on in vessels which are presented to view under a magnifying power of 16 diameters, would be seen before the hemorrhagic state is reached. Unfortunately, however, it is not the vessel wall we see, but the bloodcurrent, for the walls are transparent. As the hyaline material deposited is also transparent, there may be considerable thickening of the media and adventitia without apparent change in the size of the vessels, provided the lumen is not encroached upon. The only manifestation of these changes may be an increase in the width of the light streak of the vessels.

There are certain other alterations in the vessels in this condition which are more or less minute and of interest to the ophthalmologist, but which would not be appropriate in a paper of this general character.

The following are my conclusions:

1. Retinal hemorrhages, associated with high arterial tension and accompanied by transitory albuminuria, are significant of beginning widespread arterial degeneration.

2. That in those cases of so-called physiological or transitory albuminuria, occurring in active, healthy young business men or students, in those who are working under forced pressure, ophthalmoscopical examination should be made for retinal hemorrhages.

3. When retinal hemorrhages occur without albuminuria, the patient should be kept under observation, the urine to be examined from time to time and the quantity passed noted.

4. In case of finding these conditions, it is our duty to warn the patient of his condition and, as Osler says, "so gain his intelligent co-operation," and preserve his life and usefulness.

A few weeks after this paper was read I received a letter from Case 1. She wrote that she was suffering from vertigo and headaches and that her physician said that she had "hemorrhoids and general congestion." These manifestations are, I think, a rather interesting sequel in the history of the case, as they are undoubtedly a part of the same general process first commented upon.

Health Reports.

Health Reports: The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon-General, U. S. Public Health and Marine-Hospital Service, during the weeks ending February 7 and 14, 1903:

SMALLPOX—United States.

CALIFORNIA:	San Francisco	Jan. 18-25.	8	1
ILLINOIS:	Chicago	Jan. 24-31.	14	3
INDIANA:	Elwood	Jan. 24-31.	2	
	Evansville	Jan. 24-31.	4	
	South Bend	Jan. 24-31	1	
KENTUCKY:	Lexington	Jan. 24-31	12	
	Newport	Jan. 24-31	1	
MAINE:	Biddeford	Jan. 24-31.	26	
MARYLAND:	Baltimore	Jan. 24-31.	2	
MASSACHUSETTS:	Boston	Jan. 24-31.	7	1
	Haverhill	Jan. 24-31.	3	1
MICHIGAN:	Grand Rapids	Jan. 24-31.	9	
NEBRASKA:	Omaha	Jan. 24-31	1	
NEW HAMPSHIRE:	Manchester	Jan. 24-31	3	
NEW JERSEY:	Camden	Jan. 24-31.	4	
	Hudson County, including Jersey City	Jan. 25- Feb. 1	5	
	Newark	Jan. 24-31.	2	1
NEW YORK:	New York	Jan. 24-31.	3	1
OHIO:	Cincinnati	Jan. 23-30.	12	
	Cleveland	Jan. 24-31.	10	3
	Dayton	Jan. 24-31	1	
PENNSYLVANIA:	Altoona	Jan. 24-31	6	5
		imported from Pittsburg		
	Erie	Jan. 24-31.	9	
	Johnstown	Jan. 24-31.	10	1
	McKeesport	Jan. 24-31.	3	
	Philadelphia	Jan. 24-31.	29	4
	Pittsburg	Jan. 24-31.	16	6
	Pottsville	Jan. 24-31.	11	
SOUTH CAROLINA:	Charleston	Jan. 24-31.	3	
	Greenville	Jan. 17-24.	1	
TENNESSEE:	Memphis	Jan. 24-31.	2	
UTAH:	Salt Lake City	Jan. 17-24	16	
WASHINGTON:	Tacoma	Jan. 18-25.	1	
WISCONSIN:	Milwaukee	Jan. 24-31.	8	1

SMALLPOX—Foreign.

CANADA;	Hamilton	Jan. 1-31	1	
	Winnipeg	Jan. 17-24.	1	
FRANCE:	Marseilles	Dec. 1-31		37
GREAT BRITAIN:	Birmingham	Jan. 10-17	1	
	Bradford	Jan. 10-17.	35	
	Dublin	Jan. 10-17.	2	
	Liverpool	Jan. 10-17.	42	2
	London	Jan. 10-17.	2	
	Manchester	Jan. 10-17.	16	1
	Nottingham	Jan. 10-17.	13	
INDIA:	Bombay	Dec. 23-Jan. 6.		18
ITALY:	Palmero	Dec. 27-Jan.30.	24	1
MEXICO:	City of Mexico	Jan. 11-18.	3	
RUSSIA:	Moscow	Jan. 3-10.	3	1
SPAIN:	Malaga	Dec. 1-31.		10
STRAITS SETTLEMENTS:	Singapore	Dec. 13-20		1

YELLOW FEVER.

COLOMBIA:	Panama	Jan. 19-26.	4	2
ECUADOR:	Guayquil	Jan. 3-17.		35
MEXICO:	Vera Cruz	Jan. 19-26.	4	

CHOLERA—Insular.

PHILIPPINES:	Manila	Dec. 7-13.	7	5
	Provinces	Dec. 7-13	318	207

CHOLERA—Foreign.

MALTA:	Quarantine Island	Jan. 17.	7	from Alexandria.
EGYPT:	Alexandria	Jan. 5-12.	1	5
STRAITS SETTLEMENTS:	Singapore	Dec. 13-20.		5

PLAGUE—Insular.

HAWAII:	Honolulu	Jan. 18.		1

PLAGUE—Foreign.

INDIA:	Bombay	Dec. 23-Jan. 6.		341
	Karachi	Dec. 21-28.	39	20
MEXICO:	Mazatlan	To Jan. 5.		60

SMALLPOX—United States.

			C.	D.
ALABAMA:	Mobile	Feb. 6	2	
CALIFORNIA:	Los Angeles	Jan. 17-24.	4	
	Sacramento	Jan. 24-31.	4	
	Stockton	Jan. 1-31.	10	
COLORADO:	Denver	Jan. 17-24.	17	
ILLINOIS:	Chicago	Jan. 31-Feb. 7.	16	
	Galesburg	Jan. 24-31	5	
INDIANA:	Indianapolis	Jan. 17-24	152	36
MAINE:	Biddeford	Jan. 31-Feb. 7.	16	
	Eastport	Jan. 31,	7	
MARYLAND:	Baltimore	Jan. 31-Feb. 7.	4	
	Cumberland	Jan. 24-31	1	
MASSACHUSETTS.	Boston	Jan. 31-Feb. 7.	6	
	Haverhill	Jan. 31-Feb. 7.	1	
	New Bedford	Jan. 31-Feb. 7.	1	
MICHIGAN:	Detroit	Jan. 24-31.	42	
	Grand Rapids	Jan. 31-Feb. 7.	14	
MISSOURI:	St. Louis	Jan. 24-Feb. 1.	26	
NEBRASKA:	South Omaha	Jan. 1-31.	1	
NEW JERSEY:	Camden	Jan. 27-Feb. 3.	2	
	Newark	Jan. 31-Feb. 7.	2	
NEW YORK:	New York	Jan. 31-Feb. 7.	2	
OHIO:	Cincinnati	Jan. 30-Feb. 6.	11	1
	Dayton	Jan. 31-Feb. 7.	6	
	East Liverpool	Jan. 1-31.	2	
	Hamilton	Jan. 1-31.	5	
	Toledo	Jan. 10-31.	19	
PENNSYLVANA:	Altoona	Jan. 31-Feb. 7.	1	
	Philadelphia	Jan. 31-Feb. 7.	33	2
SOUTH CAROLINA	Greenville	Jan. 24-31.	1	
UTAH:	Salt Lake City	Jan. 24-31.	19	1

SMALLPOX—Foreign.

AUSTRIA:	Prague	Jan. 3-17.	14	
BARBADOS:		Jan. 2-16.	4	
BELGIUM:	Antwerp	Jan. 3-17.	10	3
BRAZIL:	Rio de Janeiro	Dec. 27-Jan. 10		9
CANADA:	Winnipeg	Jan. 1-31.	2	
CANARY ISLANDS	Las Palmas	Dec. 27-Jan. 17	31	1
GERMANY:	Altona	To Jan. 22	11	1
GREAT BRITAIN:	Birmingham	Jan. 17-24.	5	
	Leeds	Jan. 10-24.	19	
	Leith	Jan. 10-17.	2	
	Liverpool	Jan. 17-24.	51	1
	Nottingham	Jan. 3-10.	1	
	Sheffield	Jan. 10-24.	3	
MEXICO:	City of Mexico	Jan. 18-25.	5	2
RUSSIA:	Moscow	Dec. 27-Jan. 3.		1
	Odessa	Jan. 3-17.	12	
	St. Petersburg	Jan. 3-10.	49	6
STRAITS SETTLEMENTS:	Singapore	Dec. 20-27.		3
TURKEY:	Constantinople	Jan. 4-11		3

YELLOW FEVER.

BRAZIL:	Rio de Janeiro	Dec. 27-Jan. 10.		56

CHOLERA—Foreign.

MEXICO:	Tampico	Jan. 18-31.		3
	Vera Cruz	Jan. 24-31.	6	3
EGYPT:	Alexandria	Jan. 12-19.	4	3
HAWAII:	Honolulu	Jan. 29.		1
		Jan. 30.		1

PLAGUE—Insular.

BRAZIL:	Rio de Janeiro	Dec. 27-Jan. 1.		6

PLAGUE—Foreign.

MEXICO:	Mazatlan	To Feb. 4.	278	217

JOURNAL DES PRATICIENS.

December 13, 1902. (16me. Année, No. 50.)

1. Abundant Water with Pyrexia. LIEGEOIS.
2. The Diet in Dyspepsia. HENRI HUCHARD.
3. Polymorphous Erythema following Vaccination. H. DAUCHEZ.
4. Spasm of the Glottis. MERY.

1.—Liégeois advises **diaphoresis and diuresis in typhoid fever**, since oxidation is increased and the toxin withdrawn from the blood. Thus, besides much water, from 4 to 6 quarts daily, milk, weak alcoholic drinks, broths, sodium benzoate, etc., are given. In fact, the ingestion of abundant liquids is of value in all **the infectious diseases accompanied with fever**. [M. O.]

2.—In treating **dyspepsia with hyperchlorhydria**, Huchard advises milk, very little meat, green vegetables, fish and water. But little should be taken at a time. Magnesia is the laxative of choice. No strychnine or hydrochloric acid should be given. In **hypochlorhydria** he gives meat well cooked, stewed fruits, rich vegetables, soup, milk, wine, massage, but no raw foods, spices, etc. [M. O.]

3.—Dauchez reports 3 cases of **polymorphous erythema following vaccination in infancy**. They are probably the result of the vaccine, which does not possess constant virulence. [M. O.]

4.—Méry reports a case of **spasm of the glottis**, in an infant, 17 months old. The attack only lasted a few seconds, and recovery followed. Belladonna and antipyrine are advised to prevent recurrence; rickets should be treated; and cold water, ether, etc., may be of value during the attack. [M. O.]

The Philadelphia Medical Journal

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See Advertising Page 8

Vol. XI. No. 9 February 28, 1903 $5.00 Per Annum

A Ripper Bill for the State Asylums.—The State of Pennsylvania was the original seat of "ripper" legislation, but in this State this kind of legislation was originally applied to cities, not to hospitals for the insane. New York adopted the idea, however, and applied it to the state asylums. By this legislation all the boards of managers were abolished, and the state hospitals were handed over, bound and tied, to a triumvirate, called a Commission of Three, located and doing business in Albany.

This pernicious job was effected in New York about one year ago, and we said at the time that there was grave danger that the evil example would spread to the Great Neighboring Keystone State on the south. It is but a short distance from Albany to Harrisburg as the political crow flies. Our prognostications are not unlikely to come true, for there is a bill in preparation which, if we are correctly informed, will soon be presented to the Pennsylvania Legislature, the object of which bill is to "rip out" the present boards of managers, and hand the asylums over to a "Committee of Three." We published a leading editorial on this subject last week, but we do not intend to let the subject drop.

There is a remarkable apathy, even ignorance, apparent toward this bill. No one seems to think that it is anybody's business. Can it be possible that the numerous state asylums for the insane in Pennsylvania can thus be insidiously "ripped," and that no one will enter a protest? Let the public, let the asylum men, let the medical profession consider what it means!

It means that all local self-government will be gone, and that a centralized system (an imperialism) will be established in Harrisburg, and that this autocracy will govern many asylums (and jails, too) and will appoint an army of retainers, and will spend every year millions of dollars. Let us hear from the people!

Dr. Simon Flexner.—The departure of Dr. Simon Flexner from Philadelphia for his new field of activity in conjunction with the Rockefeller Institute, will be a source of regret in this city, wherein it was hoped he would remain to do distinguished work. But Dr. Flexner's friends everywhere will congratulate him on the fact that he has been advanced to a position that will be one of very great opportunity and distinction in the scientific world.

It begins to look, indeed, as though our old established schools are to have rather formidable rivals in some of the great new Institutes which our multimillionaires are founding. What with the immense financial resources of these new endowments, and their consequent ability to pick off the very best men in the scientific field, it looks as though the older schools and universities will be the sufferers.

We are sorry, in a sense, that this is to be so. We have never quite liked the idea of dissevering the work of original investigation from the work of teaching. We fear that teaching will suffer, even if science gains. We believe that students need the inspiration of great teachers, and we fear the results if the best men are to forsake the schools.

We hope yet to see some of our older and better medical colleges so endowed that they can compete, not at a disadvantage, with the millionaire institutes. We trust that the next rich man who has a fund to give away, will give it to a teaching institution.

These reflections are suggested by Dr. Flexner's good and well-deserved fortune. He will take away from Philadelphia the best wishes of many friends; and perhaps when he comes back sometime, he will find that Philadelphia also has a great endowment both for teaching and for investigation.

Pseudo-Scientific Work Under the U. S. Government.—It is highly important that the scientific work done under the auspices of the U. S. Government should be subjected to careful scrutiny and criticism. There is immense temptation—and not a little opportunity—for incompetent men to foist themselves into snug governmental berths by the use largely of political influence.

Commissioner W. T. Harris, of the Bureau of Education, has brought this whole subject prominently before the government and the public by his opposition to the continuance of Mr. Arthur MacDonald in the position of "Specialist in Education as a Preventive of Crime and Pauperism." Dr. Harris' character and position are such that his course in this matter deserves the careful consideration not only of Congress but of the scientific public.

The scientific work of Mr. Arthur MacDonald has never appealed to us as being of a character to deserve the endorsement of the U. S. Government. Certainly there is nothing in it thus far that makes it worth a large Congressional appropriation. One of Mr. MacDonald's latest works is a case in point. This is his "Plan for the Study of Man" which was published by the Government last June, and was supplemented by another document in December, containing statistics of crime, suicide, insanity and other forms of abnormality. From these publications it is evident that the author is not an expert student of the subject, but has relied largely upon a crude system of anthropometry and upon the compilation of statistics from other works; for instance, the U. S. Census, Mulhall's dictionary, and some European publications. We have not been able to see that his own reflections on these tables of statistics are of any great value. In fact, Mr. MacDonald's comments give rise to the suspicion that he did not fully understand what he was quoting.

The main point that he has brought out in some of his work seems to us to be (although possibly Mr. MacDonald may not have so intended) that as education increases crime increases, and, therefore, education is the cause of crime! So dangerous are statistics in unskilled hands!

We are not entirely surprised that Mr. MacDonald's work should give evidence of mere amateurish activity, for we are informed by the most reliable authority that he is not a graduate in medicine nor entitled to the degree of "doctor" either of philosophy or of laws. What other degree of "doctor" he has, we do not know, but we presume it is of something, for he has used the title of "doctor" in some of his books. We cannot state our opinion too positively that the work of the bureau which he seeks to have established for himself in Washington would demand the services of a man of far different and far wider scientific training than Mr. MacDonald has enjoyed. An intimate knowledge of the anatomy and physiology of the nervous system, of the sciences of psychiatry and neurology, as well as of the use of statistics, is absolutely essential for a man who is to occupy such a post. We speak these words merely in the spirit of scientific criticism, and, if not too late, for the guidance of Congress in an important matter of public concern.

Aseptic and Antiseptic Surgery.—In the *Lancet* for February 7 is found the President's address at the annual meeting of the Harveian Society, and for his subject W. Watson Cheyne chose the discussion of the comparative merits of aseptic and antiseptic surgery. In this address Mr. Cheyne endeavors to show that the attempt to practise aseptic surgery is productive of much more frequent wound infection than follows the practice of antiseptic surgery. He claims that the reason wounds suppurate from buried sutures and that stitch abscesses occur, is not because the materials have not been thoroughly sterilized, but because after sterilization they have not been kept in antiseptic solutions and used directly from there, and because during the progress of the operation the surgeon has not used in and outside of his wound the usual carbolic and bichloride solutions.

We feel confident that this paper will not appeal to American surgeons. Nearly every view expressed on this subject is opposed, we believe, to that taken by most surgeons in this country. Nor do we feel, in comparing the two methods, that the writer has been altogether fair. Few surgeons anywhere practise absolute asepsis, excepting in abdominal work, whereas Mr. Cheyne would have us beleve that the aseptic surgeon allows no bichloride solution in the operating room, and that, if a nurse or assistant should by accident contaminate the hands, they have no opportunity of overcoming it by the use of an antiseptic solution. He speaks as though the surgeon practising asepsis had been obliged to give up the use of catgut and buried sutures, whereas, as a matter of fact, in this country, where asepsis is most generally practised, catgut and buried sutures were never more extensively used.

Mr. Cheyne still uses and advocates strongly the use of marine sponges, stating that they can be easily and thoroughly disinfected by a solution of 1-20 carbolic. He also condemns the use of gauze draining, stating that rubber tubing is much better. Although he avdocates the "limited use of antiseptics," it would appear from this article that he used these agents most generously, keeping both his instruments and sponges in antiseptic solutions, surrounding his field of operation with wet antiseptic towels, and frequently using the solutions in the wounds. Certainly no one would deny the necessity for using antiseptics when there is any doubt as to the aseptic surroundings or the sterilization of instruments, sponges, dressings and sutures. Nevertheless, we believe that it has been proved once for all that our aim should be to do aseptic and not antiseptic operations; certainly an aseptic surgeon is much more careful of his technique and sterilization than one depending upon the use of antiseptic solutions and materials. Never before in this country has aseptic surgery been more generally practised, and certainly never before have our wounds healed more kindly. We believe that Mr. Cheyne has been misinformed regarding the results obtained by the carrying out of aseptic principles.

Loeb's Work on the Sea-Urchin's Eggs.—In our issue of January 3, 1903, we criticised the work of Loeb and the conclusions he drew from his experiments, basing our criticism on a paper by Loeb and Lewis, which appeared in the *American Journal of Physiology*, 1901, Vol. VI, p. 305, in which it was evident to us that the water in which the eggs experimented on were kept, had not been sterilized, so that the action of bacteria could not be excluded. Since then our attention has been called to a paper by Loeb, which appeared in *Archiv für die Gesammte Physiologie*, November 8, 1902, in which the author makes it evident that the eggs of the star-fish (*Seesterneier*), with which he experimented, were kept in sterile sea-water as well as in other solutions. His conclusions, briefly, are (1) that in the same sea-water and under the same conditions, mature (*reife*) but unfecundated eggs of the star-fish die quickly, while immature (*unreife*), as well as mature, fecundated eggs, remain alive for a longer period or permanently. (2) That the rapid death of the mature, unfecundated eggs depends upon internal processes and not upon the bacteria in the sea-water. (3) That oxygen and free hydroxylions accelerate the maturation of the eggs, and that, on the other hand, deficency in oxygen and a neutral or slightly acid reaction retards or prevents maturation. (4) If star-fish eggs are artificially prevented from undergoing maturation, they remain alive much longer than when they undergo maturation. But in eggs that have started on the process of maturation, deficiency of oxygen or the presence of an acid reaction will prevent rapid death. (5) That the processes of maturation and of fertilization are not necessarily based upon the same chemical processes. (6) That the fecundating action of the spermatozoon depends upon the introduction by that cell of certain substances which accelerate the course of certain (synthetic?) processes in the ovum. This may be also accomplished by the addition of certain ions (e. g. the hydroxylions of nucleinic acid). By the addition of certain ions Loeb has produced normal embryos and embryos capable of development. But, on the other hand, the addition of enzymes has failed to produce like results. Such are Loeb's claims.

Implantation of Malignant Tissue.—The recurrence of malignant disease after operation is, in many cases, undoubtedly due to the deposition of neoformative cells in the operating field during operation. The implantation of malignant tissue in the abdominal incision and the subsequent development of the disease is, we are sorry to say, not an infrequent sequela or occurrence after the performance of hysterectomy for uterine carcinoma. Furthermore, a like catastrophe sometimes occurs after the execution of Kraske's operation for carcinoma of the rectum, the disease, in many cases, redeveloping between the sacrum and skin surface, thus demonstrating conclusively a malignant implantation and not a deposition by the lymphstream, because the lymphchannels would naturally convey the carcinomatous cells toward the pelvis (the natural tendency of the lymphstream), rather than toward the cutaneous surface. The development of this condition obviously points to the weak link and incompleteness of our operative technique, and hence should lead to the adoption of such precautionary measures as would exclude the possibility of malignant implantation and render our work more nearly the acme of perfection. Some investigators have, however, instituted methods to combat the occurrence of this condition, but to be successful more universal and more rigid measures must be employed. An area of malignant disease should only be attacked after the careful consideration and employment of every agent of defence that will insure success and the prevention of recurrence from the implantation of neoplasmic cells.

Russian Medicine in the Past.—An interesting bit of the history of Russian medicine was unearthed by Dr. Lachtin in the musty archives of the Imperial Palace. It appears that in the seventeenth century there flourished in Russia two kinds of doctors, the "foreign doctors" and the "Russian *lekars*" (healers). The former ministered to the ills of the royal family and nobility, while the latter restricted their activity exclusively to the treatment of soldiers, the rest of the populace getting along as best they could without any medical aid or by the aid of superstitious and ignorant quacks. The study of medicine by the Russian *lekars* was on the same footing as the acquirement of any manual trade. The aspirant for a medical profession engaged himself as an apprentice to a Russian or foreign physician and was practically a slave. These "students" received no previous education whatever and were usually recruited from among the tramps and drunkards. They received during their apprenticeship food and a little over a rouble (50 cents) a month.

The caste of Russian physicians embraced *lekars* proper, or surgeons, barbers, bonesetters and oculists. The specialties, however, were interchangeable and the barbers, bonesetters and apprentices often took the place of the *lekars.* The salary received by the latter amounted to 2-5 roubles a month (one to two and a half dollars). This was barely enough to keep them in clothes and food, and they frequently petitioned the czar to save them from impending starvation.

As to medical erudition, it was practically *nil* in those days. Diseases were diagnosed as "internal fever," "breaking in the breast," "faint in the head," "internal scurvy," "phlegmonous disease," "impurity of the body," etc. The treatment consisted mainly in the administration of wine and vinegar and a few other remedies of animal origin, such as an infusion of a rabbit's ear in milk for the cure of suppuration of the ear.

An Abuse of Liberty of Conscience.—Recently a bill was introduced in the New Hampshire Legislature to prohibit the "practice" of Christian Science. It was most stringent in its provisions, and we are not surprised that it was defeated. We can understand fully, although in this case we cannot sympathize with, the hesitation of our legislatures and courts to suppress the practice of any religious sect whatever. Such measures are against the spirit of our civilization and our laws, and physicians should understand, better than some of them do, that this is not a problem of easy solution. To meet this question with proper argument, requires some forethought and not a little careful and moderate use of words. To inveigh against the spirit of the times, will not help any cause however righteous.

We have always said in these columns, and we repeat, that it is an abuse of the plea of religious toleration to permit any religious sect to tamper and trifle with disease. There are just and rational limits to all things, and even "religious toleration" is not allowed as a cloak to cover infractions of the moral law. Witness the polygamy of the Mormons, against which laws are passed. There are men still living who believe it a proper thing to burn "heretics" at the stake. Needless to say, their practice is not tolerated. So when a mushroom sect (a thing that has grown up in a night), composed almost entirely of very ignorant people, attempts to cure malignant and infectious diseases by religious mumbo-jumbo, it should not be tolerated. This is not a question of religion; it is a question of hygiene, of sanitation, of epidemic disease, of pestilence, of life and death. No sophistry should be allowed to obscure this question simply because such sophistry is erroneously claimed to be written into the Constitution.

The New Hampshire Legislature was actuated probably by what it considered to be a lofty adherence to the principles of religious toleration. Probably the Christian Scientists would do no very serious mischief, even if they did disseminate the germs of disease among such enlightened statesmen. But that all is not due to the spirit of religious toleration up in Concord, N. H., is evident from the following glowing tribute from a newspaper of that city:

> "Rev. Mary Baker G. Eddy makes her home in Concord; she has done much for Concord in everything looking to the upbuilding of the city and its interests; she has been willing to contribute in every way that good citizenship can demand or expect," etc., etc., etc.

Evidently there's money in it!

Mrs. Reed's Pension.—Republics are not always ungrateful, but their gratitude is only too likely to be measured by a small pecuniary standard. The pension of $125 a month, which Congress has voted to the widow of Dr. Walter Reed, is something, even if it is not very much. When compared with the largess given to successful soldiers, such as Lord Kitchener, it seems ridiculously small and inadequate. Who has done the greater service for mankind, the man who helped to add a few South African provinces to the British Empire, or the man who helped to demonstrate how to control yellow fever in Cuba?

A Physician for President of the United States.—It is rather interesting to note that the recently elected governor of Rhode Island, who is a physician, has been prominently mentioned as a candidate of one of the great political parties for the Presidency. It is not the function of this Journal to boom any man for President of the United States, even if he be a doctor of medicine, but still we cannot fail to note this interesting fact. Dr. Garvin is not the only physician who is a governor of a State at the present time. There is also Dr. Pardee, of California. It is often said that only soldiers and lawyers are elected to the presidency. Well, there is also General Wood, who is both a soldier and a doctor. Stranger things have happened than the election of a physician to be President.

Current Comment.

AN INDEPENDENT DOCTOR.

We doubt if a practitioner has ever received a court appointment through a more curious set of circumstances than those which, if report is true, have raised Dr. Botkine to the position of court physician at St. Petersburg. The court physicians in Russia have hitherto been almost exclusively German. It appears that a short time ago, the Tsaritsa suffering from some affection of the throat, the Tsar summoned to her aid a Russian physician named Botkine. This gentleman requested Her Imperial Majesty to remove the wraps from her throat in order (we quote a daily paper) "to apply his ear so as to ascertain what was wrong with the larynx." The Empress declined to remove the wraps, remarking that "up to now no doctors who had attended her had made such a request." Dr. Botkine, we are told, "had no other course open but to retire." The Tsar on hearing an account of the circumstances "made some remarks on the too obedient German physicians and appointed Dr. Botkine court physician." It is to be regretted that we cannot more generally reckon upon pleasing one person if we displease another, as seems to have been the result of Dr. Botkine's action in this instance.

—*The Lancet.*

PURE FOOD.

Prof. Wiley, of the Agricultural Department, expresses himself as much disappointed over the outlook for the pure food bill now pending in the Senate. The bill has passed the House and would probably pass the Senate if the omnibus statehood bill did not stand in the way. It is the result of fifteen years' effort to stop the sale of harmful adulterations, and the swindling of the public by selling articles under false names, particularly food and drugs. But the outlook for action by the Senate is not promising.

—*The Philadelphia Press.*

Correspondence.

EDUCATION FOR MEDICAL MEN.

By THOMAS R. EVANS, M. D.,
of Ashland, Ky.

To the Editor of the **Philadelphia Medical Journal:**

Your leading editorial in the **Journal** of the 14th. inst., in which you state that "some standard of preliminary education must be insisted upon," no doubt met with favor among the "Grecians," or that comparatively small class of men in the profession in the United States who enjoy the advantages of a classical education.

It is a remarkable fact that so many doctors are without a polite amount of preliminary education. Of course, you have heard the story concerning the father of three sons. The most stupid he would have study medicine. The illiteracy of medical students was surprisingly brought to my attention some years ago.

I examined the papers of a class of about eighty men. It was in one of the oldest and most famous universities in the United States. Its medical graduates are famous in competitive examinations.

The men whose papers were examined had been studying medicine in the university for *twenty-seven months*, or took three courses, and, while the subject matter was correct in nearly every instance, I felt like rejecting three out of four of the candidates for graduation, because they either did not, or could not, correctly write the English language. If punctuation had been counted, about sixty out of the eighty odd would have been rejected. A few of the candidates were A. B.'s of literary schools. The professional study of medicine is unlike the study of law or of theology. Men are apparently more impatient to wait on a study of the "humanities" previous to the study of medicine.

Reviews.

A Nurse's Guide for the Operating-Room. By Nicholas Senn, M. D., LL. D., C. M., Professor of Surgery, Rush Medical College in Affiliation with the University of Chicago; Attending Surgeon to the Presbyterian Hospital; etc., etc. W. T. Keener & Company, Chicago.

This guide for the nurse in the operating-room well fills the purpose for which it was written. It is to be regretted that there has not yet appeared a complete book on surgical nursing. The task of writing such a book would be difficult, it being hard to decide how much surgery to include and how much to exclude. The little book before us is intended only to supply the nurses with information regarding preparations for, and assistance during, operations. It might well form a part of such a book as that just referred to. It describes the preparation for an operation in a private house and the various kinds of apparatus which are used as adjuncts to surgical operations. Sterilization of the various articles used in surgery is also carefully described. A small portion of the book is devoted to the treatment of patients after operation, to wound complications, shock, hemorrhage, etc. The latter part of the book is made up of lists and pictures and the instruments necessary for the various operations of general surgery. To a nurse devoting herself to surgical nursing or to one who is in charge of an operating-room, or who only occasionally arranges for operation, this book is to be commended.

[J. H. G.]

Manual of Antenatal Pathology and Hygiene. The Fetus. By J. W. Ballantyne, M. D., F. R. C. P. E., F. R. S. (Edin.). Lecturer on Midwifery and Gynecology, Medical College for Women, Edinburgh, etc., etc. New York. William Wood & Co., 1902. Pages, 527.

Dr. Ballantyne has made the field of antenatal pathology and hygiene peculiarly his own. He very generously states that there have been many workers in this field of research, but that he has had the extraordinary fortune to be able personally to examine nearly 300 specimens embracing almost all the leading types of antenatal morbid states. In addition, because of his supremacy in this field, the material of other workers has been placed at his disposal. The result of this extensive investigation and the increasing magnitude of the work are shown in the present volume, which is but the first on the subject. This book, which includes fetal physiology and pathology alone, is to be followed by a second volume upon teratology and morbid heredity. Dr. Ballantyne has divided the subject of the present volume into two portions. The smaller book treats of the antenatal in relation to the postnatal and neonatal pathology, and includes the first 6 chapters of the book. This is most scientifically presented and is illustrated by schemes of antenatal life, which render the intricate subject perfectly plain to the reader. The larger portion of the work is comprised in the second book, which treats of the pathology and hygiene of the fetus, as well as of its anatomy and physiology. We are safe in stating that there is not in existence anywhere a more complete résumé of the subject than the present book. Types of transmitted fetal diseases, including fetal variola, vaccinia, measles and all the exanthemata, fetal malaria and fetal tubercle are to be found fully treated of and, where possible, illustrated by colored and other plates. Aside from the scientific value connected with the various subjects described, the reading is most entertaining. An appendix to the work contains a list of the published works of the author, as well as an index of the authors quoted and a complete index of the subjects treated. A close examination fails to find any omission, and one is surprised at the vast amount of information not generally known that the author has condensed within his book. We take pleasure in heartily congratulating both him and his publisher, as well as the profession, upon the appearance of this unique work.]W. A. N. D.]

Acute Dilatation of the Stomach. By H. Campbell Thomson, M. D. (Lond.), M. R. C. P., Assistant Physician to the Middlesex Hospital, Medical Tutor in the Medical School. New York, William Wood & Co., 1902.

Acute dilatation of the stomach is a monograph of 54 pages in which the author reports 5 cases and gives abstracts of the 44 cases which he has been able to find recorded in the literature. The condition may follow some pre-existing disease: it may be a primary condition or it may follow surgical operation. Typical cases are characterized by sudden onset, by the vomiting of enormous quantities of fluid and by severe general symptoms which often terminate fatally within a few days.

The author discusses the subject under the headings of etiology, symptoms and physical signs, morbid anatomy, course and prognosis, pathology and treatment. [J. M. S.]

American News and Notes.

PHILADELPHIA AND PENNSYLVANIA.

Recent Appointments.—Dr. James Tyson, professor of the theory and practice of medicine in the Medical School of the University of Pennsylvania, has recently been appointed visiting physician to the Pennsylvania Hospital, in the place left vacant by the death of Dr. Frederick A. Packard. It is strange that just 40 years should have elapsed since Dr. Tyson was resident physician at the Pennsylvania Hospital. Dr. Tyson's son, Dr. T. Mellor Tyson, has just been appointed visiting physician to the Philadelphia Hospital, filling the vacancy caused by the resignation of Dr. James Tyson.

Sanatoria for Tuberculosis Patients.—A bill providing that 2 sanatoria for poor consumptives be erected, one in the Pocono region and one in the Mont Alto region, at a cost of $250,000 each, was introduced into the Pennsylvania Legislature, February 19th. The institutions are to be so constructed as to accommodate ultimately not less than 2500 patients each. Governor Pennypacker is authorized to appoint a committee of 5, to be known as the Pennsylvania State Tuberculosis Committee, for selecting the site, determining the arrangement, construction and equipment of buildings, and regulating the administration of the institutions. The bill is supported by the Pennsylvania Society for the Prevention of Tuberculosis.

Surgeon-General, N. G. P.—Dr. Robert G. Le Conte, of Philadelphia, a graduate of the University of Pennsylvania Medical School, formerly assistant-surgeon in the U. S. Navy, has been appointed surgeon-general of the National Guard of Pennsylvania by Governor Pennypacker, to succeeed Dr. John V. Shoemaker.

New Municipal Hospital, Philadelphia.—Work will soon be started upon this institution, on the McAlester farm recently purchased by the city. The contract for the building was awarded to the lowest bidder for $143,200. The building will be 200 by 150 feet, of brick and terra cotta, with all modern equipments. It will be completed in 190 working days, and will probably be ready for occupancy by next fall. It will stand on an isolated position, in the midst of the 55 acres of the site purchased, and will be used as a smallpox hospital only. Other buildings for treating cases of scarlet fever and diphtheria, and an administration building will be erected later.

Dr. Mitchell Honored.—A large reception was given on the evening of February 27, in honor of Dr. S. Weir Mitchell, of Philadelphia, by the University Club. Most of the prominent men of Philadelphia were present.

The Health of Philadelphia.—During the week ending February 21, there were 248 cases of typhoid fever reported, with 27 deaths, as compared with 287 cases, with 21 deaths, in the week previous. The greatest number of cases reported were found in the 34th. ward, with a good many in the 33rd., 22nd., 24th. and 29th. wards. The 6th., 35th and 41st. wards alone had no cases. All the other infectious diseases snow a similar decrease, when compared with the figures of the preceding week, there having been 25 cases of smallpox with 6 deaths, 71 cases of scarlet fever with 2 deaths, and 51 cases of diphtheria with 11 deaths reported. Smallpox still exists in Darby, where 14 cases have already been reported.

The Cost of Typhoid Fever.—The President of the Water Board of Reading, in making a plea for the filtration of the city's water, has made the following estimate of the ravages of typhoid fever from a financial standpoint: "The Reading death-rate, though low, presents a formidable loss in the past 3 years. The laws of some states place a limit on the value of human life. While there is none in the State of Pennsylvania, $5000 may be considered low. There have been 1021 cases of typhoid fever reported and 127 deaths during the past 3 years, therefore, 127 lives, valued at $5000 each, $635,000; 127 burial expenses, at $60 each, $7620; 1021 medical expenses, $40 each, $40,840; 1021 expenses of nursing, at $20 each, $20,420; loss of time by those who recovered, estimated at $1.50 a day for six weeks, $48,276; total for 3 years, $752,156; average expenditure per year, $250,718.67. A sum which, if capitalized at 4%, will represent an investment of $6,267,966.75. The estimated cost of filtration of the entire water-supply is $350,000. If even 50% of the typhoid cases could be prevented, the cost to the community from sickness and death will greatly exceed the cost of filtration."

Philadelphia Hospital.—The new Children's Hospital, which was completed several months ago, has at last been occupied, the children from the various departments having been moved there last week. There are now 60 children in the hospital, which has accommodations for over 50 more.

Children's Convalescent Home, Gwynedd.—This institution, which was to have been opened February 16, for the reception of patients, is not completely finished and on that account the opening has been postponed until some time next month.

Smallpox in the State Normal School, Erie.—The State Normal School and the Public Schools of Edinboro have been closed on account of a severe outbreak of smallpox among the pupils of the former institution. In an hour after it had become known that 7 students had smallpox, 400 pupils had packed their trunks and left. Some of these, it is said, have been stricken with the disease since reaching home.

Society Meetings Next Week.—The following societies meet next week at the College of Physicians, Philadelphia, at 8.15 p. m.: Monday evening, March 2, Academy of Surgery; Wednesday evening, March 4, College of Physicians, and Thursday evening, March 5, Obstetrical Society.

NEW YORK AND NEW JERSEY.

Rockefeller Institute, New York City.—Dr. L. E. Holt, secretary of the Rockefeller Institute, established some years ago, with a donation of $2,000,000, by Mr. J. D. Rockefeller, for furnishing facilities for original investigation in problems of medicine and hygiene bearing upon the prevention and cure of disease, has just announced authoritatively that the pathological laboratory of the institute will soon be built in New York City, as was announced in the **Philadelphia Medical Journal**, February 14, (page 272.) In June last Mr. Rockefeller gave the institute an additional sum, exceeding $1,000,000, for the purchase of a site and the erection of a pathological institute. The site selected, the Schermerhorn farm, extending from the East river to Avenue A, Sixty-fourth to Sixty-seventh streets, has the great advantage of being situated far from the thickly populated section of the city, especially from the tenement quarters. The institute building, soon to be erected, will be a model laboratory, provided with the most elaborate equipment for investigation in physiological chemistry, hygiene and preventive medicine; pharmacology and therapeutics; normal and pathological physiology; and bacteriology. Dr. Simon Flexner, at present professor of pathology at the University of Pennsylvania, has been appointed chief director of the new institute. He will have under him 4 directors, one for each of the above-named departments, each director to have several assistants. It has also been decided to erect a hospital, in the near future, where special groups of patients may be treated, as the Rockefeller Institute is intended not only to discover the cause of disease, but also to develop new methods of treatment. It is expected that the laboratory will be ready for work by October 1, 1904. It is hoped that the people may be educated in matters of hygiene, by popular public lectures upon that subject, a hygienic museum and the diffusion of suitable literature. The new laboratory will have much in common with the Pasteur Institute, Paris, but it will probably also have a number of new features which that institution has not. Dr. Flexner, the director-in-chief of this new pathological laboratory, was born in Louisville, Ky., March 25, 1863, and was graduated from the University of Louisville Medical School in 1887. After doing some postgraduate medical work at Johns Hopkins University, he left for Europe, studying at Strassburg. From 1891 until 1898 he was associate professor of pathology at Johns Hopkins University Medical School, and in 1899 became professor of pathology at the University of Pennsylvania Medical School. He is at present director of the Ayer Clinical Laboratory of the Pennsylvania Hospital and pathologist to the University and Philadelphia Hospitals. He is a member of the American Philosophical Society, of the Washington Academy of Sciences, vice-president of the Philadelphia Pathological Society, member of most of the local medical societies, and corresponding member of the

Medico-Chirurgical Society of Bologna. Four years ago Dr. Flexner was a member of the expedition sent by Johns Hopkins University to Japan and the Philippines, to study diseases peculiar to those islands, and in 1900 he was one of the government medical experts sent to San Francisco, to determine whether the disease which had appeared there was bubonic plague. He is the author of a great number of important works upon pathology, having been especially prominent in discovering the etiology of dysentery and the nature of snake venom.

Mount Sinai Hospital, New York City.—The annual competitive examinations, to fill the positions of medical and surgical resident physicians, becoming vacant July 1, 1903, and January 1, 1904, will be held at Mount Sinai Hospital, Lexington avenue and Sixty-sixth street, March 19 and 20, 1903. Graduates in medicine or gentlemen to be graduated before July 1, 1903, should send their applications in writing to Dr. Julius Rudisch, in care of the hospital.

A Serum for Treating Cholera Infantum.—The President of the New York Board of Health is having a serum prepared for the treatment of cholera infantum. He stated last week that a large quantity would be ready for use among the children of the poor, before the hot weather of the coming summer. He says that no scientific announcement of the results obtained from the use of this serum will be made for some time, as his assistants wish to test the efficacy of the serum before publishing any account of its use.

Harlem Hospital, New York City.—The new building for this institution will be begun in April, on Lenox avenue between 136th. and 137th. streets. The building, of 5 stories, in the form of a T, will cost about $300,000. There will be rooms for out-patients, medical, surgical, maternity and childrens' wards, special rooms for septic cases, operating rooms, instrument rooms, sterilizing rooms, etherizing rooms, X-ray rooms and rooms for the physicians, nurses, etc. The kitchen will be upon the top floor, while the roof of each ward will have a roof garden for the treatment of patients overcome by the heat. It is expected that there will be room for 150 patients. The plans show space for 2 more wings which may be added later. They would double the capacity of the hospital.

Typhoid Fever in Ithaca.—Up to February 22, 25 deaths have occurred from typhoid fever in the city of Ithaca, 12 of them having been students in Cornell University. A large number of new cases have been reported in the last few days, making the total number of cases since the outbreak of the epidemic very close to 500. Most of the Cornell students have left Ithaca, temporarily at least. It is also announced that there are over 100 cases of typhoid fever at present at West Seneca, N. Y.

NEW ENGLAND.

Harvard Medical School.—Work is soon to begin upon the new buildings of the Harvard Medical School, in the Back Bay fens, Boston. If there are no serious delays in securing the necessary material, it is expected that the new buildings will be ready for occupancy in 1904. They will occupy a lot consisting of 26 acres and will cost over $2,000,000. According to the original plans, the five medical school buildings will surround the 3 sides of an open court, 520 by 215 feet. There will also be one building for the dental school and a large power house. The new hospital for babies, to be built in memory of the late Dr. T. M. Rotch, Jr., to cost $136,000, $76,000 of which have already been subscribed, will also be built upon this ground. The babies' hospital will contain 50 cribs and several incubators.

Sanatorium for Convalescent Patients.—Miss Ethel Folsom, of Pittsfield, Mass., has leased a beautiful old estate at Lee, which she is fitting up as a sanatorium for convalescent patients from the New York hospitals. Miss Folsom intends to have the house filled with such patients from May to November, as her guests. The place is to be called the Berkshire Tavern.

Smallpox in Massachusetts.—Massachusetts has at last practically recovered from the epidemic of smallpox, which originated in that State in 1901. During the week ending February 21, not a single case of the disease was reported outside of Boston, and the 10 cases reported in Boston all occurred in the same tenement house. This is the first week since October, 1901, that no cases of smallpox have been reported in the towns of Massachusetts except Boston. The Boston health authorities believe that sporadic cases will still appear, possibly at the rate of one a week throughout the summer. On account of the prevalence of the disease, vaccination has been quite general, so that the people are now better prepared to ward off any further attack of smallpox. It is regarded as impossible that the disease will gain such a strong hold in Massachusetts again for many years to come. Boston has ample facilities for handling the disease. Brockton converted its almshouse into a hospital; Brookline has a little shanty to use for smallpox cases and is now considering additional facilities since no special provisions were made in the new hospital; Cambridge established a smallpox hospital near Fresh Pond; Chelsea has had one for a number of years; Everett built a new one, intended to accommodate Revere as well; Fall River constructed one a few years ago; Fitchburg erected one last year; Lawrence has just finished a building; Lowell had one since the serious epidemic in 1872; Lynn enlarged its pesthouse last summer; Malden converted a private dwelling into a smallpox hospital; Marlboro built one 2 years ago; Newton has had one for some time; Salem also had one before the last epidemic broke out; Somerville took a dwelling in 1901 and remodeled it; Springfield was provided; Worcester has had one for a number of years. Leominster took 2 houses and changed them into a hospital; Arlington patients are to be cared for in Somerville according to an agreement reached last year; Waltham and Newburyport were prepared for cases of the disease; Marblehead fitted up its old armory for the treatment of smallpox cases; Gardiner built one in 1901; Melrose took an old building last year and moved it; Watertown built a new one last winter; Wakefield built one recently for $5000; Medford is using the pumping station house. Northbridge is using the old farmhouse; Quincy built on the marshes; Palmer has remodeled a farmhouse; Pittsfield built last year; Framingham uses a school house; Athol a farmhouse and Amesburg has a smallpox hospital which was built before the epidemic. Taunton and Holyoke also are prepared to take care of smallpox if it should reappear.

Smallpox in Biddeford, Me.—The smallpox epidemic, which has been quite severe, now shows signs of decreasing. An entire day has even passed without a case having been reported, and only 6 cases were reported last week. No deaths from smallpox have occurred recently, and the Health Board believes the epidemic to be under control.

Bequests.—By the will of the late Emily E. Sears, $5000 were left to the Boston Children's Hospital.—By the will of the late Mary L. Baldwin, $1000 each were left to the Church Home for Orphan and Destitute Children, the Rachael Allen Home for Aged Women, and the New England Peabody Home for Crippled Children, and $500 to the Floating Hospital, Boston.

SOUTHERN STATES.

American Medical Association.—The committee of arrangements for the next meeting of the American Medical Association, to be held in New Orleans, May 5-8, met January 26 last. At this meeting it was decided that Washington Artillery Hall should be the central hall for the coming congress; that the section on medicine should meet there, and that the Bureau of Registration and Information and the Post Office should also be located in this building. The general and scientific exhibits will also be placed in Washington Artillery Hall. A subcommittee has been appointed to collect information regarding the climatology, sanitary and health conditions of New Orleans and Louisiana. The members of this committee will also arrange to give information to members in regard to the time and meeting places of the various sections, general meetings, hotels, boarding houses, entertainments, banquets and places of amusement. The preliminary arrangement of sections is as follows: Medicine in Washington Artillery Hall; surgery, pediatrics, obstetrics and gynecology, in Odd Fellows' Hall; hygiene and sanitary science, and nervous and mental diseases in the First Presbyterian Church; pathology and physiology in the Knights of Temperance Hall; skin diseases in the Y. M. C. A. Hall; ophthalmology, otology and laryngology, in the College of Pharmacy, and the general sessions will probably be held in Tulane Theater. Railway rates have been reduced by all the railroads running to New Orleans. For full information upon that subject apply to Dr. H. L. E. Johnson, Jefferson Place, Washington, D. C. Excursions from New Orleans to Cuba are also being arranged. It has been suggested to arrange a river excursion upon a large steamer, and an evening tea at the St. Charles Hotel.

Johns Hopkins Hospital Historical Club.—At the last meeting, held February 9, Dr. Howard A. Kelly read a most interesting paper entitled, "Some French Contributions to the Early History of Appendicitis." The first case recorded in France was in 1758.

Presbyterian Eye and Ear Hospital, Baltimore.—The twenty-fifth anniversary of this institution was held February 21. A reception was given by the managers to show the great progress made by the institution during the past 25 years.

Tulane University Medical School, New Orleans.—By the will of the late A. C. Hutchinson, an estate consisting of almost $1,000,000 was left to Tulane Medical School. The bequest is intended to increase the Medical School by the erection of hospital, dispensary and laboratory buildings. He also left $20,000 each to the Eye, Ear, Nose and Throat Hospital, St. Anne's Asylum and the House of the Good Shepherd, New Orleans.

Hospital for Infectious Diseases, Baltimore.—The Health Commissioner is very anxious that a hospital be established in Baltimore, for the treatment of the minor infectious diseases. At present there is no hospital where patients can be taken with diphtheria or scarlet fever. Children attacked by measles in an asylum cannot be removed, because the city has no hospital for such cases. Thus it is that epidemics, when they once appear in an institution, are exceedingly difficult to overcome.

State Hospital for the Insane, Springfield, Md.—The new epileptic ward, to cost about $25,000, will soon be begun. Plans have been prepared for a building 2 stories high, containing a dormitory to accommodate 100, 12 private rooms, bath-rooms, living-room, a large dining-room, and a very large dayroom for the inmates. There will be a fire-escape at each end of the building.

Naval Appropriation Bill.—This bill contains a table showing that 498 more officers are necessary to man the ships now under construction, which will be completed in the next 4 years. Among the officers, the appointment of whom the bill recommends, are 30 additional surgeons, with the rank of lieutenant commander, and 120 additional past assistant and assistant surgeons, with the rank respectively of lieutenant and lieutenant, junior grade.

MISCELLANY.

Bubonic Plague in Mexico.—Between February 17 and 24, 6 deaths have occurred from bubonic plague. There were 35 cases under treatment February 23, 8 of the patients being seriously ill. At that time, also, 200 persons were isolated. There have been, during this week, 15 new cases reported, 2 of them among sentries of the Military Hospital. The steamer *Benito Juarez* has reached Mazatlan from Guaymas, with physicians and modern disinfecting apparatus on board. The sanitary precautions are now having the effect expected, and physicians believe that the disease is under control. Even the people now regard the situation as more hopeful. The village of Oso, where the plague appeared last week, has been wholly burned.

Smallpox in the United States.—Between December 27, 1902, and February 20, 1903, 8231 cases of smallpox, with 263 deaths, occurred throughout the United States, as compared with 17,288 cases, with 417 deaths, for the same period of the preceding year.

Obituary.—Dr. Charles C. Conway, at Orange county, Va., February 16, aged 60 years.—Dr. Thomas A. Council, at Baltimore, Md., February 18, aged 30 years.—Dr. Wilbur A. Blauvelt, at Newark, N. J., February 18, aged 26 years.—Dr. William Riddlemoser, at Smithsburg, Md., February 18, aged 42 years.—Dr. Benjamin Bevan, at Pittsburg, Pa., February 20, aged 42 years.—Dr. James I. Scollard, at Clinton, N. Y., February 20.—Dr. George C. Gage, at New York City, February 22, aged 52 years.—Dr. Herman S. Bissey, at Philadelphia, Pa., February 22, aged 48 years.—Dr. A. L. Cressler, at Wilkesbarre, Pa., February 24, aged 75 years.

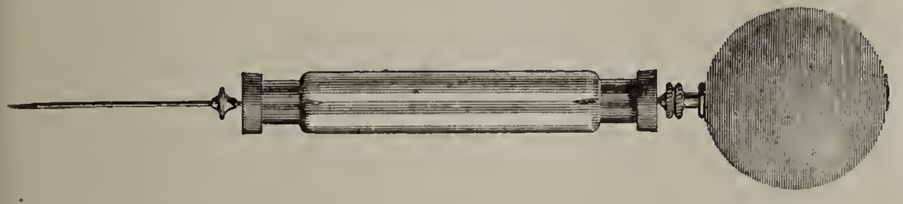
CONTINENTAL EUROPE.

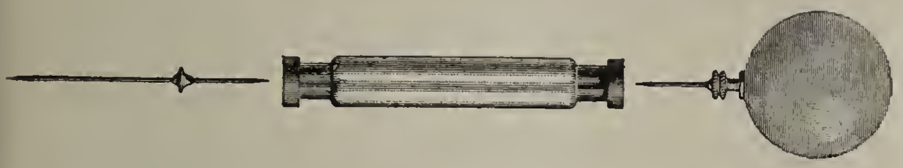
The Treatment of Tuberculosis in Germany.—A report upon the treatment of tuberculosis in Germany, containing many statistics collected by the Imperial Health Office in Berlin, was recently read before the Reichstag. Out of 1000 deaths in Germany of persons between the ages of 15 and 60, 316 are due to tuberculosis alone. Persons under 15 and over 60 are seldom affected. The mortality of the whole population averaged 242 per 100,000 yearly, rising in the Bavarian Palatinate to 329, in Bremen to 337 and in Hesse to 314. The conditions in Germany are shown to be better than in France, Austria and Russia, but worse than in Switzerland, Belgium, Denmark, Norway and, especially, England. The Health Office found that consumption can best be treated in special hospitals, in which Germany now has accommodations for 30,000 patients. The statistics from 1896 to 1901 showed that, on the average, out of 100 cases treated, 87.7 were dismissed as cured or improved; 8.8 as no better; 3.1 as worse, and that 0.4 died. It was hoped that the war against tuberculosis would make further progress through the co-operation of individuals and public bodies with the Government.

Typhoid Fever at Prague.—During January, an epidemic of typhoid fever appeared which, however, seems to have been unusually mild, for though there have been a great number of cases, but 9 deaths occurred during the week ending January 16. The disease is attributed to the impure drinking-water supplied by the Moldau River. The city drainage is also very bad. Although the Austro-Hungarian Parliament has appropriated over $3,000,000 for improving the water-supply and the drainage, nothing has as yet been accomplished.

University Notes.—**Basel:** Dr. Max Burckhardt has been appointed director of the polyclinic, in place of Dr. Fritz Egger, who resigned.—**Berlin:** Dr. Ernst von Leyden has been elected honorary member of the London Clinical Society, and director of the surgical department of the Moabit Hospital.—Dr. Eduard Sonnenburg has been elected honorary member of the Belgian Surgical Society.—Dr. Alfred Neumann has been appointed director of the surgical department of the Friedrichshain Hospital, replacing the late Dr. Hahn.—**Berne:** Dr. Max Howald has been appointed professor of medical jurisprudence.—**Erlangen:** It is rumored that Dr. Strümpell, professor of medicine, will take the place of professor of internal medicine in the University of Breslau, left vacant by the death of Dr. Kast.—**Göttingen:** Dr. Meissner, formerly professor of physiology, celebrated the completion of 50 years as a physician, February 2.—**Graz:** Dr. Adolf Tobeitz has been granted the title of professor of pediatrics.—**Halle:** Dr. Eduard Hitzig, director of the clinic and polyclinic for psychiatry and nervous diseases, will retire in September, on account of serious disease of his eyes. He it was who founded the first clinic for nervous diseases in the Prussian universities, in 1885. He was born in Berlin in 1838, became director of the insane asylum in Zurich and professor in 1875, and moved to Halle in 1879, where he has resided since. Since 1879 he has been in charge of the Nietleben Insane Asylum, near Halle.—**Heidelberg:** Dr. Czerny, son-in-law of the late Dr. Kussmaul, has placed a tablet upon the house at Kandern where Professor Kussmaul used to live. The tablet reads, "Adolf Kussmaul, late professor at Erlangen, Heidelberg, Freiburg, and Strassburg, practised here 1850 to 1853."—**Leipsic:** Dr. Paul Zweifel, professor of gynecology and obstetrics, has been made an honorary member of the English Gynecological Society.—**Munich:** On account of the severe illness of Dr. Anton Bumm, professor of psychiatry, his lectures are being given by Dr. Hans Gudden.—**Salzburg:** Dr. von Drasche celebrated the completion of his fiftieth year as a physician, February 2.—**St. Petersburg:** Dr. Wundt, of Leipsic, formerly professor in the University of Odessa, and Dr. E. Metschnikoff, of the Pasteur Institute, Paris, have recently been elected honorary members of the St. Petersburg Academy of Sciences.—**Vienna:** Dr. Julius Mauthner has been appointed professor of medical chemistry, and Dr. Victor Urbantschitsch, professor of otology.

New Instruments and Devices.





The above are illustrations of the Lynch Aseptic Syringe-Container, an original device for storing and administering serum, and more particularly diphtheria antitoxin. The barrel of the syringe is filled with serum in the laboratory and aseptically sealed with rubber stoppers. The serum is never again exposed, nor is breakage, with its attendant danger of particles of glass, necessary. The needles and rubber bulb (one of each accompanying every dose of serum) are supplied in sterile wrappings, and, as will be seen by the illustrations, it is only necessary for the physician to pierce the stoppers with the needles to have a perfect hypodermic springe. A feature of the device is that half of the contents of the container may be administered, when, by withdrawing the needles the apertures in the stoppers will close, keeping the remaining serum intact and sterile.

Dr. H. M. Alexander & Co. have adopted this device as a carrier for their diphtheria antitoxin, which is also supplied by Messrs. John Wyeth & Bro., as authorized general distributers.

Two New Preparations, Biogen and Dermogen.—In *Le Progrès Médical* (January 10, 1903) Frenkel calls attention to these 2 new compounds, peroxides, one of magnesium, called biogen, the other of zinc, called dermogen. They decompose when acids are added, forming a neutral salt with the metal of the peroxide and hydrogen dioxide, accompanied generally with a certain quantity of ozone. The hydrogen dioxide is very unstable, soon becoming water and oxygen. Thus, in appropriate media both biogen and dermogen furnish oxygen. Biogen is a white powder, tasteless, odorless and almost insoluble in water. Dermogen is a faintly yellowish powder, tasteless, odorless and absolutely insoluble in water. Dermogen is used externally, setting free nascent oxygen upon wounds, when tartaric acid is added. Thus the production of oxygen can be regulated quantitatively. Biogen may be given internally, in doses of 5 grains 3 times daily, without disagreeable effects. The dose varies with the age and constitution of the patient. It is of value whenever oxygen is needed by the organism. In the stomach biogen is broken up into oxygen and salts of magnesium, by the action of the gastric acids. The oxygen is then absorbed in the stomach, or passes through the gastric walls into the tissues. Its first effect is locally antiseptic and oxidizing. It is best given when the stomach is absolutely at rest, after digestion has been completed. Besides, biogen with an iodide, in an acid medium sets free iodine, in strictly calculated amount. When an idodide is added to biogen with acetic acid or alcohol, iodoform is produced. [M. O.]

The Latest Literature.

BRITISH MEDICAL JOURNAL.

February 7, 1903.

1. A Clinical Lecture on Astereognosis in Tabes Dorsalis. G. E. RENNIE.
2. Suture of the Brachial Plexus in Birth Paralysis of the Upper Extremity. R. KENNEDY.
3. Spinal Hydatid Cysts Causing Severe "Compression Myelitis." P. TYTLER and R. T. WILLIAMSON.
4. Case of Hydatid of the Pleura. W. B. RANSOM and W. M. WILLIS.
5. The Effects of Vaccinating During a Menstrual Period. E. R. DAWSON.
6. Preliminary Account of the Investigations of the Liverpool Expedition to Senegambia (1902). J. E. DUTTON and S. H. TODD.
7. A Note on the Treatment of Puerperal Insanity. E. W. WHITE.
8. On the Bilberry (Vaccinium Myrtillus) as a Remedy in Typhoid Fever and Other Infectious Diseases of the Intestine. M. M. BERNSTEIN.
9. Fatal Case of Pemphigus Acutus Malignus. W. J. CAIE.

1.—Rennie reports 2 cases of **tabes dorsalis** in which astereognosis was present. The sensations concerned in the recognition of the physical characters of objects felt with the eyes closed are: (1) The spacing sense; (2) the localizing sense; (3) muscular sense and sense of posture; (4) pressure sense; (5) temperature sense, and (6) pain sense. In order to have the stereognostic sense normal the cerebral cortical centers, the conducting paths and the peripheral receptive sensory mechanisms must be intact. Disturbance of either of these parts of the nervous system may lead to astereognosis. In the cases of tabes reported there is a dissociation of the sensations above enumerated. There was not, however, any evidence of disease of the cerebral cortex in either patient and the author concludes, therefore, that the dissociation took place either in the spinal cord, from defective conduction or in the peripheral, sensory, receptive mechanism. [J. M. S.]

2.—Kennedy believes **birth paralysis of the upper extremity** to be due to forcible depression of the shoulder while the head is bent to the opposite side and rotated. The effects of the injury are evident at birth and consist in a paralysis of the deltoid, the supraspinatus, biceps, brachialis anticus and supinator longus. The infraspinatus and teres minor, in rarer cases other muscles, may also be paralyzed. In some cases the lesion is slight, and spontaneous recovery may ensue; for this reason operation should not be undertaken under two months. If after two months no responses can be got in the muscles with the faradic current, operation is called for. Kennedy reports 3 patients who were subjected to operation. The first was operated upon at the end of the second month. Commencing restoration of the function was first noticed about 12 weeks after the operation, and at the end of 9 months recovery was practically complete. In the second patient operation was undertaken at the end of 14 years. Improvement in the electrical reactions was noticed at the end of 5 months, the time of the report. The third patient was operated upon at the end of 6 months and at the present time, 12½ weeks after operation, shows signs of improvement. In each case the junction of the fifth and sixth cervical nerves was found to be cicatricial. After excision of the scar tissue, the 3 peripheral divisions, suprascapular, branch to the outer cord and branch to the posterior cord, were sutured to the 2 central ends. [F. T. S.]

3.—Tytler and Williamson report a case of **extradural spinal hydatid cysts** in the upper dorsal region which was successfully operated upon. There was complete paralysis of the lower extremities, rectum and bladder and anesthesia of the legs and lower half of the trunk. Laminectomy was performed and 15 hydatid cysts removed from the upper dorsal region. The patient has completely recovered sensation and control of the bladder and bowels and is able to walk with the aid of a cane. [F. T. S.]

4.—Ransom and Willis report a case of **hydatid of the pleura**. The cyst was as large as the urinary bladder and occupied the upper portion of the left thorax. It was drained through an incision in the second intercostal space anteriorly. Later it became necessary to resect a portion of the second and third ribs to facilitate closure of the cavity. [F. T. S.]

5.—Dawson reports the case of a chambermaid, aged 29 years, who was **revaccinated during a menstrual period.** She fainted at the operation and again 2 hours after the operation. The result of the vaccination was successful. Her next menstruation began on the proper day; but, instead of lasting 6 days, as usual, lasted only one day. She missed her menstruation entirely for the next 5 months and presented the symptoms of a premature menopause. At the end of the fifth month she felt sick, fainted and vomited, and the following day she vomited about 2 pints of dark blood, she fainted and was put to bed. Soon after having been put to bed her menstruation appeared and lasted 6 days, as it had 6 months before, before she was revaccinated. The next 3 menstrual periods were normal. Dawson thinks the **amenorrhea** was **due to the shock** of the operation and not to the vaccinia. [J. M. S.]

6.—In 1901 Dutton or Todd reported a case of **trypanosoma in the blood** of an European from Gambia. The disease was characterized by a chronic course, general wasting and weakness, irregular rises of temperature of a relapsing type, local edema, congested areas of skin, enlargement of the spleen, increased frequency of pulse and respiration, but no definite organic lesion. In 1902 the Liverpool School of Tropical Medicine sent an expedition to Senegambia to study this disease. In one town all the horses, 6 in number, were found infected with this parasite. In the same village more than 100 natives were examined without result. The parasite was found in the blood of a white trader who had been in Senegambia for over 20 years. He had lived in close association with the natives. He had been ailing for over a year: he had lost 45 pounds in weight, he complained of weakness, dyspnea on exertion, lack of energy, slight fever and pain in the loins and over the spleen. The liver was slightly enlarged and the spleen was distinctly enlarged and tender. Later, the disease assumed the acute form, and the patient died soon thereafter. The acute exacerbation began with a chill, the temperature rose to 105°, pulse to 130, respiration to 30, there were delirium and Cheyne-Stokes breathing before death. Examinations of 220 natives in the interior of the Kommbo district showed 4 infected with the parasite. The number of parasites present in the blood varied from one to 23 in a single coverslip preparation. Symptoms were entirely absent in the subject who showed the most parasites in the blood. [J. M. S.]

7.—White states that, when the premonitory symptoms of **puerperal insanity** are observed, that is, change of manner and feeling with excitability, extreme quietude of surroundings must be ensured, and careful, skilled supervision of the patient enforced to guard against infanticide or suicide by impulse. The bowels must be attended to and, if there be early insomnia, a sedative draft of potassium bromide, half a dram, and chloral hydrate, 15 grains, must be given at night. The diet should be liberal and sustaining. In all cases the urine must be tested for albumin. The free use of sedatives and hypnotics must be avoided as much as possible. In all cases in the maniacal form opium and its preparations are to be avoided. The child is to be weaned at once. In the melancholic type the preparations of opium and diffusible stimulants are indicated. A gain in weight, except when dementia has supervened, is a favorable sign. [W. A. N. D.]

8.—Bernstein began to give **bilberries (vaccinium myrtillus)** 14 years ago, on account of their astringent action. He gave them in combination with the tincture of opium for fermentative diarrheas with flatulence and for cholera morbus. Their antifermentative action was striking. In 1892 he used a concentrated decoction of bilberries in a severe case of chronic ulceration of the bowels following dysentery, with good results. In 1897 he used a weak infusion in a case of typhoid fever in a child, and it seemed that the disease took a milder course and that convalescence started earlier than he had anticipated. Some bacteriological tests were made, and it was found that bilberry juice would kill the typhoid bacilli sometimes between 24 and 48 hours after being added to a pure culture. The bacillus coli communis was less resistant to its action than this. The author believes that bilberries will keep the intestines aseptic, that they will prevent reabsorption and reinfection and that they will soothe, cleanse and heal ulcers. He believes that they will be very useful in cases of dysentery. [J. M. S.]

9.—Caie reports the case of a farm laborer, aged 21 years, who presented a large number of bullæ on the extensor surfaces of his forearms and the backs of his hands. During the course of the disease he had an attack of hematemesis, occasional attacks of epistaxis and an extensive erythema. His temperature, at first high, fell gradually; he had hiccough, dry, brown tongue and coma; and he finally died. The author considers the case to be one of **acute malignant pemphigus.** [J. M. S.]

LANCET.

Febuary 7, 1903.

1. An Address on Aseptic and Antiseptic Surgery. W. WATSON CHEYNE.
2. The Harveian Lectures on Fibroids of the Uterus and Its Ligaments Considered from a Clinical and Surgical Standpoint. Lecture I. ALBAN H. G. DORAN.
3. Electric Shocks. S. JELLINEK.
4. The Value of Blood Examination as an Aid to Diagnosis and Prognosis. J. H. BRYANT.
5. Note on the Results of the Treatment of an Unusual Series of Cases of Acute Intussusception. HUGH M. RIGBY.
6. A Case of Extra-uterine Fetation. THOMAS H. MORSE.
7. Further Investigations Regarding the Infective Nature and Etiology of Pernicious Anemia (25 Cases), etc. WILLIAM HUNTER.

1.—Treated editorilly.

2.—Doran gives the **surgical anatomy of the broad and ovarian ligaments** with special reference to their association with **fibroid tumor of the uterus.** He claims that the importance of the ovarian ligaments has been very much underrated. In fibroid disease of the uterus they usually remain short. It is a fibromuscular structure liable to become the seat of the fibroid tumor. Fibroid tumor of the broad ligament is anatomically and surgically a disease distinct from fibroid of the body and cervix of the uterus. The diagnosis of a fibroid of a broad ligament is not always difficult. When the tumor is distinctly solid and sessile and the abdominal walls are thin, the outline of the uterus on the anterior surface of the tumor can be defined or even seen. The uterus can sometimes be slid about laterally on the tumor. The cervix lies high, close under the pubes, and is not rarely inaccessible. The treatment of fibroid of the broad ligament should be surgical in each and every case. The dangers of operation steadily increase with the size of the tumor. When the tumor is very large, enucleation is difficult. When the uterus is small and the tumor large, it is advisable to amputate the body of the uterus above the cervix so as to take it away with the fibroid. When the uterus is distorted by fibroids, the round ligament on one or both sides may undergo great hypertrophy. [W. A. N. D.]

3.—Jellinek contributes an article on **electric shocks.** The author inclines to the view that individuals suffering from skin disease are predisposed to accidents from electric shock. He records some interesting experiments on animals which go to show that a high-tension interrupted current is not only harmless for rabbits during chloroform narcosis but is even life-saving, and an otherwise fatal current has no injurious effect on animals in an insensible condition (sleep or narcosis). He also points out that currents which transverse the left side of the body are more dangerous than those which act upon the right side on account of the ganglia of the heart. The author differs from Mr. Aspinall's view that burning of the skin is a provision of nature to protect us against fatal shocks. He holds the opinion that burning decidedly lowers the bodily resistance for electric currents. His experiments also show that both alternating and direct currents from 500 to 600 volts are dangerous and currents of tension of 1000 volts are fatal. With 100 to 200 volts the alternating current is much more disagreeable. Exposure to a direct current causes an increase in the blood-pressure, while with the alternating current a reduction of bloodpressure occurs, showing the different actions of these currents. His experiments also indicate that severe spasm of the muscles during the action of the current is present. He has also observed that, several hours after apparent death of animals from electric shock, they show signs of life, and for this reason he contends that attempts at restoration should be continued for hours or until some sign of death appears. The article contains three illustrations which show the lesions produced in the brain and spinal cord. Most important of these are alteration of the ganglion cells and hemorrhages. The hemorrhages are almost without exception in the gray substance of brain and cord. Turning to the treatment of a patient suffering from electric shock he maintains that, for the numerous hemorrhages, venesection might be performed; artificial respiration is indicated; massage of the abdomen and precordium, placing the patient in a hot bath, and the administration of ether, camphor and strychnine should also be carried out. [F. J. K.]

4.—Bryant points out **the value of blood examinations as an aid to diagnosis and prognosis.** He refers to some of his cases which show the importance of clinical examination of the blood in diagnosis. He confines himself to a discussion of the following topics: (1) The estimation of the number of erythrocytes and leukocytes and the percentage of hemoglobin; (2) examination of the stained blood films; (3) the agglutination power of the blood on certain bacilli; and (4) the bacteriological examination of the blood. In general, his views are in accord with those of most writers on hematology. [F. J. K.]

5.—Rigby presents an interesting series of **seven consecutive cases of acute intussusception** which came under his care in the London Hospital during the 9 days from December 26, 1902, to January 3, 1903. Six of these patients were operated upon, and one was beyond operation at the time of admission. Of the 6 operated upon 5 recovered. This is distinctly encouraging and a strong argument in favor of early resort to surgical interference in this too often fatal form of intestinal obstruction. Rigby states that no class of statistics can be of less value than these, since the operative mortality must vary enormously from time to time according to the pathological conditions present in the intussusception. The moment the invaginated portion of the gut becomes irreducible, the mortality rises from 50 to perhaps 90 or 100%. The time at which operation is performed also greatly influences the mortality. Of the present series there was but one in which the bowel was irreducible and gangrenous; in this case the intussusception was of a retrograde or ascending character and involved only the small intestine. A resection was done, but the patient died. Of the 5 successful cases 4 were in children under 8 months of age. In no case was inflation with air or injection of fluid attempted. The futility of wasting valuable time with these means has been amply demonstrated. These methods are undesirable for two reasons: because of the danger of rupture of the bowel, and because the reduction is apt to be incomplete. Rigby states that his experience has been that this condition is most frequently found in children of good physique. He thinks that vigorous peristalsis is most likely the cause of the trouble and refers to the fact that the 7 cases here reported occurred in the 9 days following the Christmas festivities. In 3 cases the abdomen was opened by a median incision, and in the other 2 cases the opening was made in the lower part of the right semilunar line. In every case the cecum, colon and ileocecal juncture had to be brought up in the wound and manipulated outside the abdominal cavity in order to accomplish a reduction. The keynote of success in operating upon these cases is rapidity. In none of the cases here reported did the operation exceed 15 minutes. The greatest precautions were taken to prevent shock, the limbs and chest being encased in cotton wool and the operations performed on a hot-water pillow. Another point which Rigby lays stress upon is the necessity for early feeding after operation; the children in this series of cases were fed as soon as they recovered from the anesthetic. Stress is laid upon the great necessity for immediate operation in cases of intussusception, and it is urged that no time be lost in attempting inflation with air or injection of fluid. [J. H. G.]

6.—Morse describes a case of **extra-uterine pregnancy** occurring in a woman, 30 years of age, who had been married 2 months. The patient made a good recovery after operation. [W. A. N. D.]

7.—Hunter concludes his paper entitled **further investigations regarding the infective nature and etiology of pernicious anemia.** In an analysis of 25 cases of pernicious anemia, an apparently spontaneous origin was the rule, without exception. In all of these patients he found certain infective lesions in the mouth, tongue, stomach or intestine, either single or associated with each other. Glossitis was present in every case; oral sepsis existed in 24 cases. In some septic gastritis and septic enteritis were present. In 3 cases examined bacteriologically, he found a deep-seated, pure, streptococcal infection of the tongue. Analysis of the liver, spleen and kidney revealed (1) the large excess of iron; and (2) a peculiar distribution between the liver and the spleen—the reverse of that usually obtained. The average percentage of iron in 7 cases of pernicious anemia examined was, in the liver 0.270, in the kidney 0.090 and in the spleen 0.125. In health he found the percentage of iron, in the liver 0.084, in the kidney 0.004 and in the spleen 0.090. In an analysis of the organs in a number of other conditions (7 cases) he found the percentage of iron in the liver and kidney combined 0.079, in the spleen 0.362. He regards pernicious anemia as a specific hemolytic infection, the site and lesions (the tongue, stomach and intestine), the approximate time of contraction, and the probable source of which he thinks he has been able to lay partly bare. The most important feature of pernicious anemia from a pathological viewpoint is intense hemolysis accompanied with pigment changes in the liver, kidney and spleen. He holds that the glossitis is an important pathological change, and it is associated with deep-seated infection. He points out that the contraction of this infective glossitis coincides approximately with the onset of the severe anemia and its accompanying hemolysis. The hemolytic infection which involves the tongue and in some cases the stomach and intestinal tract, is extraordinarily persistent. He then discusses the nomenclature and maintains that the title which would best describe this disease would be "specific infective hemolytic anemia" or "**infective hemolytic anemia.**" [F. J. K.]

MEDICAL RECORD.

February 21, 1903.

1. The Treatment and Care of Consumptives at Their Homes, and the Urgent Need of Local Sanatoria. S. A. KNOPF.
2. The Present Status of Surgery of the Gall-Bladder and Bile-ducts. WILLIAM J. MAYO.
3. Postoperative Malaria, with a Report of Two Cases. JOHN T. MOORE.
4. Trachoma in the Public Schools of New York. WALTER EYRE LAMBERT.

1.—Knopf eloquently sets forth the **need of local sanatoria** for the treatment of consumptives and describes the care of these patients in their own homes. We must imitate, as far as possible, such measures in the home as are in vogue in the best-conducted institutions. Educational measures must first be inaugurated. The patient must be made to know, although he is at home, he can no longer do as he pleases, but his life must be regulated by his physician. Knopf describes the hygienic measures which are so instituted, laying proper stress upon the care of the sputum, and he describes a number of improved receptacles for receiving it. Necessary instructions as to the proper clothing, regulation of exercise, diet and personal hygiene are given, as well as practical suggestions for carrying out the **open air treatment at home.** [T. L. C.]

2.—Mayo sets forth the present status of **surgery of the gall-bladder and bile-ducts.** His paper includes a general summary of 545 operations which were performed by the writer and his brother. Cancer was found in 5% of the cases. In 49 of the cases stones were found in the common and hepatic ducts with or without jaundice. In 26 cases of this series a **chronic cholecystitis** was present, but

no stones were found. Every gall-bladder containing calculi can be looked upon as infected, although with the free circulation of bile and nearly normal gall-bladder found in slumbering stones, it is slight, and the "ideal" operation—that is, complete closure of the gall-blader and abdominal incision—may be performed; but it will occasionally, even then, lead to disaster—to say nothing of the danger of overlooking stones, which may and does happen to the most expert. The ideal operation has been performed largely upon these latent cases, found during other operations, and the surgical conclusions drawn cannot be safely applied to gall-stones in a state of activity, which of itself argues an infection of a more acute type. Cholecystotomy and drainage is the operation of choice in these cases. Patients suffering from active gall-stones with periods of latency, in a fairly normal gall-bladder with patent ducts, are nearly always cured by this method. Drainage is continued until the bile is normal. This is a very safe operation, and, as the gall-bladder is fastened to the abdominal incision, the fundus is permanently elevated and gravity drainage through the cystic duct is even better than in the normal state. [T. L. C.]

3.—Moore reports 2 cases of **postoperative malaria.** He believes that a blood examination should be made in every patient from a malarial locality before operation, and is convinced that many infections that have lain dormant for weeks or for years may be rekindled and become a dangerous factor after operation. Chronic malaria induces the most unfavorable conditions for the healing of wounds and the reaction from the shock of operation and anesthesia. [T. L. C.]

4.—Lambert states that as a result of a thorough inspection of 36 public schools in New York in July of last year it was found that, of 57,450 children examined, 6,690 were found to have some form of **contagious eye disease.** Of these 2,328 were **severe trachoma,** 3,243 were **mild trachoma,** and 1099 **acute purulent conjunctititis.** A large number of cases were excluded from the schools, and there was a coincident increase in the number of trachoma cases treated in the New York eye hospitals. The question of the contagiousness of trachoma is stil unsettled, but Lambert believes that children suffering from eye diseases of this class should be excluded from the schools until the condition has been cured. [T. L. C.]

MEDICAL NEWS.

February 21, 1903.

1. New York Academy of Medicine. Valedictory Address. ROBERT F. WEIR.
2. The Young Practitioner. ANDREW H. SMITH.
3. Functional Disorders of the Biliary Secretion and Their Treatment. H. RICHARDSON.
4. The Treatment of Tuberculosis. CHARLES WILLIAM HEITZMAN.
5. A Contribution to the Surgery of the Internal Saphenous Vein. WILLIAM FRANCIS CAMPBELL.
6. Empyema of the Accessory Sinuses of the Nose. J. H. WOODWARD.
7. A New Sputum Slide. JAMES RAE ARNEILL.

3.—Richardson states that in the **treatment** of this condition the object should be to increase the quantity of bile, and also of the sodium glycocholate in order to hold the excretory components in the bile in solution and at the same time stimulate the gall-bladder to empty itself as often as possible so as to prevent stagnation. A purge of calomel and soda should be given occasionally. At the same time the patient should drink a large tumblerful of water containing 5 grains of sodium bicarbonate, about half an hour before meals, and have an injection of a liter of normal salt solution every other day well up into the colon. To increase the solvent power of the bile, 5-grain capsules of glycocholate after meals will have the desired effect. In cases in which the stone is present or suspected, the dose may be raised to 10 grains. Exercise and diet should be well looked into, as well as the action of the kidneys and constipation. [T. M. T.]

4.—Heitzman believes that the basis of the treatment of this disease presents two factors for consideration: (1) The causative agent, the biological and morphological characteristics of which are well known to us; (2) the individual in whom this agent is present, whether by an inherited predisposition or acquired, in other words, the patient under treatment. [T. M. T.]

5.—Campbell recommends the following procedure: Find the spine of the pubes. From this point project a line 3½ inches long at right angles to Poupart's ligament. The end of this line marks the point for the center of the incision which should be about one inch long and parallel with the fold of the groin. In retracting the edges of the incision, retract the upper edge so as to ligate as near the saphenous opening as possible. [T. M. T.]

6.—Woodward lays down the treatment of this disease and concludes by saying that the treatment conducted in accordance with these specifications is satisfactory, although often it is not possible to check suppuration of the accessory sinuses. Complete eradication of pypogenic infection from them is one of the most difficult tasks in surgery. [T. M. T.]

7.—Arnell describes his **new sputum slide** which makes it possible to examine a large amount of sputum at once. From an ordinary thin window-pane, by means of a glass-cutter's steel, slides 5 inches long by 1⅛ inches wide are cut. (The dimensions may be varied as desired.) One end of such a slide is slowly heated in the blast, then bent to furnish a handle and allowed to cool slowly. If the cooling is too rapid it is likely to crack. A little experience is necessary to make these slides successfully. By means of a file lubricated with sweet oil the sharp edges of the slide are rounded off. The raised handle keeps one's fingers from coming in contact with the sputum. The bent glass-slide is also useful later in scraping the sputum from the glass-plate. [T. M. T.]

THE NEW YORK MEDICAL JOURNAL.

February 21, 1903.

1. A Critical Review of Some of the Recent Literature on Tuberculosis. (Second Paper.) JONATHAN WRIGHT.
2. Pulmonary Anesthesia. W. A. BRYAN.
3. A Case of Intussusception in a Baby, Five Months Old. LOUIS FISCHER.
4. Pyemia and Exsection of Part of the Lower Jaw Following a Fracture Due to Tooth Extraction. J. A. HOFHEIMER.
5. The Prophylaxis of Appendicitis. H. ILLOWAY.

1.—Wright contributes his second paper on the review of the **recent literature on tuberculosis.** He says, the most interesting subdivision has been that part which occupies much of the field of research on immunity. In speaking of the inspiration of dust containing tubercle bacilli and their deposition on the bronchial wall, high up, with their later aspiration into the alveoli, he believes to be a physical impossibility. He can only conceive that the tubercle bacilli are carried to the alveolar regions of the lungs by the blood- or lymphstream, for any ponderable substances heavier than air must have been deposited on the cilia-clad surface long before they reached the alveoli. All pathological evidence now tends to contravene the possibility of bacilli in any considerable numbers being caught in the tonsils during the ingestion of food. He then reviews at length the conclusions of Manfredi and Frisco relative to this subject. The recent work done in relation to human and bovine tuberculosis is then spoken of, and from the investigations thus far carried out the transmission of disease from man to animals and *vice versa,* and also from man to man seems to be possible. If this is so, the fight to prevent contagion between man and animals becomes more pressing. The work of Massi on tracheal hemorrhage, Veiss and others on pharyngeal tuberculosis, and Semon and others on tuberculosis of the larynx, are all descibed in great detail. As to the treatment of phthisis drugs now play an unimportant rôle, and the question of serum-therapy occupies the clinician's mind. [P. B. B.]

2.—Bryan, in **discussing pulmonary anesthesia**, first mentions the ordinary anesthetics now employed and the dangers possessed by each, and an outline of their proper administration is set forth. A man who is bound inseparably to one anesthetic will some time meet with disaster. The author thinks the proper anesthetic should be selected for each individual patient. The function of this paper seems to be the description of the advantages possessed by ethyl chloride. This seems to be less dangerous than the common anesthetic employed at this time. Its advantages are, rapidity of action, absence of nausea or vomiting, quick recovery from its effects and, lastly, its safety. The one disadvantage is it cost. [P. B. B.]

3.—Fischer reports a case-history of **intussusception occurring in an infant, 5 months old.** The characteristic symptoms of the condition were vomting, obstruction, constipation, enterorrhagia and a **recession of the abdomen** from the right side. Diagnosis was made early, but surgical intervention was refused. Medical treatment was instituted, but without avail. [P. B. B.]

4.—Hofheimer reports an interesting case of **pyemia following a fractured jaw due to the extraction of a tooth.** Two weeks after the injury the patient developed a huge abscess in the right thigh. After incision and drainage the patient's general condition improved. A few days later another abscess made its appearance at the lower end of the scapula. On June 8, one month after the initial operation, a large pus formation was found in the left gluteal region. These were treated surgically, and the patient recovered. Necrosis was discovered in the jawbone and a portion of it was subsequently removed. The patient made a good recovery. [P. B. B.]

5.—In considering the **prophylaxis of appendicits** Illoway first speaks at length on the etiology of this condition, calling attention to the location of the appendix, its topography and its bloodsupply, all of which are contributing factors. However, constipation he believes plays the most important rôle, and, therefore, our prophylactic measures should be directed to overcome this condition, and by its adoption he believes many cases of appendicitis could be prevented. The treatment should be as follows: Dietary regulations, massage, electricity; digestives and agents directed to increase the power of peristalsis should be administered. Several case-histories are appended demonstrating this method of treatment and the results obtained. [P. B. B.]

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

February 19, 1903. (Vol. CXLVIII, No. 8.)

1. Observations upon Long-Distance Runners. J. B. BLAKE and R. C. LARRABEE.
2. Pulse, Weight and Temperature. J. B. BLAKE and D. D. SCANNELL.
3. Report on Pulse Tracings Taken from the Marathon Runners in the Races of 1900, 1901, 1902. ALLEN CLEGHORN.
4. The Blood. RALPH C. LARRABEE, WILDER TILESTON and W. R. P. EMERSON.
5. The Hearts. RALPH C. LARRABEE and LAWRENCE W. STRONG.
6. Kidneys. JOHN M. CONNOLLY.
7. Physical Characteristics.
8. Medical Treatment of Intestinal Obstruction. THOMAS F. HARRINGTON.

1.—Blake and Larrabee, in their observations upon long distance runners, found that a very rapid **pulse** was unusual. The rate was always increased, though the increase was surprisingly small. They noticed that in the well-trained there was the least change. A moderate irregularity was not infrequent. An intermittent pulse was occasionally present. A thread-like pulse of small volume was found in the rare cases of severe fatigue. **Weight:** The estimation of the loss of weight was only approximate. It varied from 2 to 7 pounds. **Temperature:** The mouth temperature before starting varied from the normal, usually a fraction of a degree, but in some instances it reached 100.6°. The temperature after the run was sometimes raised, often normal and occasionally subnormal. The rectal temperature, however, was invariably raised. The difference between the mouth and rectal temperature, taken at the same time, was often surprisingly large, reaching, in one instance 7°. This is due to the fact that, when running, the mouth was kept open and the force and continuous breathing of cold air lowered the temperature of the mouth. **Blood:** The principal finding was a leukocytosis corresponding in intensity and in type with that observed in various inflammatory diseases. **Heart:** Before the start it was invariably enlarged, due mainly or wholly to hypertrophy. At the finish there was further slight enlargement inferred to be the result of acute dilatation. In some cases murmurs, generally systolic, were heard. Some were heard at the start, while others were considered to be the result of nervous excitement. **Urine:** Showed that an active hyperemia was developed during the race, probably due largely to the irritation from the "toxins of fatigue," inasmuch as the bloodpressure was not increased. The amount was lessened, the color became higher, the specific gravity rose and the reaction became more intensely acid. Albumin, hyaline, a few coarse granular and epithelial casts and more or less blood were present, generally disappearing. **Uremia** was not increased after the race. **Chlorides** were markedly diminished after the race. [T. M. T.]

8.—Harrington gives the causes of this condition as follows: Impaction of fecal matter, foreign bodies in the canal, intussusception and neoplasms. In **obstruction due to fecal impaction** there is generally a history of long-standing constipation with frequent discharge of mucus. The general health becomes impaired, and gradually the obstruction grows more marked until a soft movable mass can be felt, usually in the colon or cecum. In **obstruction due to foreign bodies** the history of the case is most important. **Obstruction due to intussusception** occurs most commonly in children under 2 years of age. There is a sausage-like tumor in the transverse colon, and usually a rectal examination will confirm the diagnosis. The author warns against giving castor oil in this condition and recommends oat-meal, unbolted flour, corn-meal or mashed potatoes. [T. M. T.]

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

February 21, 1903.

1. Ideals in Medicine. NORMAN BRIDGE.
2. The Chemistry of the Tropics. A. B. LYONS.
3. The Physiological Action of the Mydriatic Alkaloids. HORATIO C. WOOD, JR.
4. The Mydriatic Drugs and Their Active Principles. The Ophthalmological Relations. CHARLES A. OLIVER.
5. The Early Appearances, Diagnosis and Treatment of Tuberculosis of the Upper Air Tract. WALTER F. CHAPPELL.
6. A Case of Sarcoma of the Maxillary Sinus, Excision of the Upper Jaw, With Remarks. JOSEPH S. GIBB.
7. The Prophylaxis of Sinus Diseases. D. BRYSON DELAVAN.
8. Acute Sinusitis. J. A. STUCKY.
9. Cutaneous Therapy; Some of the Newer Methods. CHARLES W. ALLEN.
10. Radiotherapeutic Observations. JOSEPH ZEISLER.
11. The Prognostic Value of Tubercle Bacilli in Sputum. LAWRASON BROWN.

2.—See **Philadelphia Medical Journal**, June 21, 1902, page 1106.

3.—See **Philadelphia Medical Journal**, June 21, 1902, page 1104.

4.—See **Philadelphia Medical Journal**, June 21, 1902, page 1104.

5.—Chappell discusses **the early appearance, diagnosis and treatment of tuberculosis of the upper air tract.** He points out that no part of the respiratory passages is immune from tuberculosis and that certain points are more susceptible than others. In the order of susceptibility they are the larynx, pharynx, trachea, tongue and nasal chambers. He discusses at some length the diagnosis of tuberculosis in the larynx during the premonitory or pretubercular stage, the stage on infiltration or thickening, and the stage of ulceration. He then directs attention to pharyngeal tuberculosis, tracheal tuberculosis, tuberculosis of the tongue and nasal tuberculosis, and finally he discusses the medical, surgical and climatic treatment. [F. J. K.]

6.—Gibb reports **a case of sarcoma of the superior maxilla** which occurred in a man, 63 years of age, who had enjoyed fairly good health until the malignant growth developed. Examination revealed a tumor over the left cheek bone and puffiness of the left lower lid, and a mass projecting into the nasal cavity, which was soft, reddish in color and which bled on the slightest touch. A microscopical examination of a piece of the growth snared off from the nose confirmed the clinical diagnosis of sarcoma. The tumor grew with amazing rapidity, and the patient's general symptoms became alarming. A portion of the superior maxilla and a large quantity of a semisolid growth were removed, and the wound was thoroughly curetted of every suspicious-looking mass and packed with iodoform gauze. Seventeen days after the operation there were evidences of recurrence, and two months later the entire cavity was completely filled by a new growth which also projected into the mouth. About a month later the entire superior maxilla was excised, the enlarged lymphatic glands of the neck were removed and the external carotid artery tied. The patient recovered from the operation, and no evidences of recurrence manifested themselves up to the patient's death, which occurred many months later. The author, however, suggests that the sarcomatous growth may have invaded the meninges. No autopsy was held. [F. J. K.]

7.—Delavan gives the following summary regarding **prophylaxis of sinus diseases**: (1) By recognizing the conditions under which inflammation of the sinuses is likely to occur and, if possible, removing them. (2) When removal of the predisposing conditions is not practicable, by guarding the patient against the various exciting causes which may determine an acute attack. (3) When acute inflammation is already threatened, by applying immediate treatment for its relief. [F. J. K.]

8.—Stucky discusses **acute sinusitis**. He reviews the etiology and bacteriology and then discusses the symptoms, diagnosis and treatment. [F. J. K.]

9.—Allen directs **attention to the X-rays in cancer and skin diseases**, and contends that this therapeutic agent, while it shows nothing especially brilliant, is of great value in obstinate and in many instances of practically incurable maladies, so far as other known methods are concerned, and that it bids fair to prove of incalculable benefit. [F. J. K.]

10.—Zeisler contributes **some observations on radiotherapeutics** and states: If he were to attempt an explanation of the beneficial action of the X-rays in all these cases he would surely side with those who deny any particular effect on micro-organisms, but who, basing their opinion on microscopical evidence, as does Scholtz, attribute to the rays a special affinity for pathological cell formations, which, under the influence of the rays, undergo metabolic changes and even entire disintegration. In conclusion he can only say that his experience with radiotherapy so far has made him an ardent advocate of it, and he believes that until it is replaced by something still more marvelous it will constitute one of the most effective weapons in our fight against a large class of dermatological affections. [F. J. K.]

11.—Brown contends that the prognostic value of tubercle bacilli in the sputum is: (1) That the examination of one specimen of sputum is of value if tubercle bacilli are found in proving the case one of tuberculosis of the respiratory tract. (2) That, if no tubercle bacilli are found, one examination is of little value. At least 4 or 5 specimens should be examined after the patient is directed how to collect the sputum. (3) That from one specimen little or nothing can be said in regard to prognosis. (4) That, if the number of bacilli steadily decreases in a series of examinations at intervals sufficiently long, the patient may be improving, but the constitutional symptoms and local signs give much more accurate information. (5) That, if on repeated examinations large quantities of tubercle bacilli are found, the disease has in all probability advanced to cavitation. (6) That the morphology of the tubercle bacilli affords little or no ground for prognosis, but the short bacilli are suggestive of a more active process. (7) That the arrangement of the bacilli in clumps is more apt to be found in the severer cases, but may occur in all. [F. J. K.]

AMERICAN MEDICINE.

February 21, 1903.

1. Chronic Pancreatitis. B. L. HARDIN.
2. Some Further Results in the Treatment of Pulmonary Tuberculosis. J. H. ELLIOTT.
3. Dangers from the Indiscriminate Use of Morphine. T. D. CROTHERS.
4. Routine Examinations of Chyme. A. L. BENEDICT.
5. Briefs on Physical Training. G. FRANK LYDSTON.
6. Gonorrhea in Children. H. LOWENBURG.
7. Vital Statistics: A Plea for Actuarial Administration and Control of the Great Resources of Preventive Medicine. JOHN S. FULTON.
8. The Importance of Mechanical Manual Training to the Surgical Student. D. VAN METER.

1.—Hardin reports a case of **chronic pancreatitis** in detail for the purpose of showing (1) that, while formerly a patient suffering from epigastric pain, chronic jaundice and loss of flesh was thought to have either cancer or gall-stone obstruction, we must now include chronic pancreatitis. (2) To show that, if at operation a hard and enlarged pancreas is discovered, it need not be necessarily cancer. (3) To show that the history, symptoms and signs of cancer, gall-stone obstruction and chronic pancreatitis are so similar that it is only by a thorough and painstaking refinement of symptoms that we can hope to differentiate between them. The **diagnosis of chronic pancreatitis** must be based on the **jaundice, the paroxysmal epigastric pain, the midepigastric tenderness** and resistance, the **rapid loss of flesh and strength with the absence of marked anemia and leukocytosis**, the presence of an excess **of undigested muscle fiber in the** stools and the **peculiar reaction of the urine to the phenyl-hydrazin test.** In many cases diagnosis can be made only by exploratory operation which should be done unhesitatingly in all doubtful cases. [T. L. C.]

2.—Elliott reports the result of the treatment of **474 cases of pulmonary tuberculosis** at the Muskoka Cottage Sanatorium. He believes there is no need of sending every patient to the west or south as soon as the diagnosis of tuberculosis is made; fully as good results can be secured at home. It is not climate that cures, it is the careful supervision of the patient by his physician which is of most importance, climate being entirely secondary. Rather than have your patient go away from home among strangers, where he will not have proper attention, treat him at home if you can devote the necessary time to ground him thoroughly in the essentials of cold sponging, life out of doors, care of the sputum, the use of the clinical thermometer, regularity at his meals, in the hours of sleep, rest and exercise, and see him at frequent intervals that his daily program may be changed according to indications. Elliott wants the profession to realize fully the curability of tuberculosis and the necessity of an early diagnosis to secure the best results. For those who cannot leave home for treatment the phyician must make it his duty to give them the necessary time and attention and see that his instructions are faithfully carried out. If the physician would do this conscientiously and not treat his patient as a chronic with little hope of cure, there would be more cures and the public would be less apt to take so readily to proprietary nostrums. [T. L. C.]

3.—Crothers discourses upon the **dangers arising from the indiscriminate use of morphine.** He concedes it to be a most valuable remedy, but an exceedingly dangerous one which should be used with the greatest caution and never continued long, except for special reason and under special conditions. He emphasizes that morphine given to neurotics and psychopaths is almost certain to increase the brain and nerve degeneration, and, even if it does not produce an addiction, it will increase the instability of control and the hypersensitiveness of the nerve centers. Morphine, while it relieves pain incident to the common disorders of the functional activities of the body, actually increases the disturbances of metabolism and favors the growth of toxins. [T. L. C.]

5.—Lydston believes the present trend of medical thought is toward drug nihilism, not therapeutic nihilism. Physical training has the advantage that it is not only a very important department of preventive medicine, but it can enter largely into curative therapeutics. When it is understood that the physiological training of muscles invariably results in an improvement of circulation and visceral conditions, general nutrition and all the bodily functions, permanently profiting by proper exercise, the importance of the subject will be much better understood. [T. L. C.]

DEUTSCHE MEDICINISCHE WOCHENSCHRIFT.

January 8, 1903.

1. Spontaneous Tuberculosis of the Lungs, with a Large Cavity, in a Tortoise. (Chelone corticata.) Preliminary Contribution. F. FRIEDMANN.
2. Soluble Poisonous Substances Obtained by Aseptic Autolysis from Dysentery and Typhoid Bacilli. H. CONRADI.
3. Syphilitic Affections of the Heart. Conclusion. J. W. RUNEBERG.
4. On the Pathology and Therapy of Scleroderma in Childhood. (Conclusion.) EBSTEIN.

1.—The chief interest of the case is exhibited in the title. Spontaneous tuberculosis of the lungs in cold-blooded animals has apparently never before been noted. This tortoise exhibited tuberculous nodules and, in one place, a mass as large as a hen's egg. There was also a cavity that would contain 8 to 10 cc. There were large numbers of submiliary tubercles. Microscopical examination showed an enormous number of acid-fast bacilli; tubercle bacilli, indeed, seem to have comprised the greater part of the pneumonic exudate. There were many typical giant cells. [D. L. E.]

2.—Conradi's article was excited by a paper published by Levy and Pfersdorff in a recent number of the same journal. The author states that he has avoided the use of antiseptics in carrying out autolysis of the bodies of bacteria, and that by aseptic autolysis he has been able to show the presence in typhoid bacilli and in dysentery bacilli of poisonous substances soluble in water. These substances are so poisonous that as small a quantity as 1 mg. from a 24-hour culture will kill a rabbit within 3 days. The author believes that the reason why he has been successful in isolating a much more toxic substance than did Levy and Pfersdorff is that he used an aseptic autolysis and allowed the autolysis to go on for only 24 or, at most, for 48 hours. He has found that the results are less satisfactory if the autolysis goes on for a longer time than this. [D. L. E.]

3.—Runeberg, in discussing syphilitic heart disease, refers to the fact that in recent years it has become clearly recognized that syphilis of the central nervous system is extremely common. He believes that it will soon become equally well recognized that cardiac syphilis is also common. The forms that the author considers to be common are sclerogummous arteritis of the coronaries which produces the picture of typical angina pectoris with the signs of fibroid change of the myocardium; and, next in frequency to this, the most common syphilitic disorders of the heart or vessels are aortitis and aortic aneurysm. Circumscribed gummata of the heart muscle are uncommon. Runeberg believes that, when persons under 50 years of age exhibit the picture of angina pectoris, or of fibroid change of the heart, with anginoid symptoms, in the absence of renal disease or of any other clear cause for the cardiac signs, one should consider that the disease is syphilitic. Persons of more advanced years, particularly those that have general arteriosclerosis, do not, as a rule, belong to this class. The author also believes that aortic aneurysm should usually be considered syphilitic in cases in which other causes are not clearly present, particularly if the subjects are less than 50 years of age. He states that these opinions have been reached principally on the basis of clinical observation, as he has had no wide pathological experience. [D. L. E.]

4.—Ebstein reports the case of a boy, 8 years old, who was brought to the clinic in the early stage of scleroderma. After 3 months' treatment the condition was practically cured. The treatment consisted in the use of massage with an ointment composed of 1 part sodium salicylate in 100 parts of boric acid ointment; in the internal use of sodium salicylate; and in baths, the most important point, in the author's opinion, being the use of well-directed massage. He also reports the case of another patient who was brought to the clinic in an advanced stage, with a good deal of contraction. He refers to the fact that in such a case the disease cannot be cured, and that it is usually very difficult to produce even an arrest of the condition. [D. L. E.]

January 15, 1903.

1. The Etiology and Symptomatology of Abnormally Movable Heart. RUMPF.
2. A Case of Anatomically Demonstrated Spontaneous Cure of Tuberculous Peritonitis. O. BORCHGREVINK.
3. Erythromelalgia in Syringomyelia of the Cervical Cord. TAUBERT.
4. A New Method of Managing the After-coming Head. STEFFECK.
5. Bloodserum Therapy in Dysentery. (Conclusion.) KRUSE.

1.—Rumpf's article is chiefly a repetition of his previous views concerning the importance of abnormal movability of the heart in the production of symptoms, and is principally an answer to the objections that have been made to his theories by Romberg and Braun. [D. L. E.]

2.—The case occurred in a girl, who, when seen in 1897, was 16 years old. She had a large abdominal effusion, and 11 liters of fluid were drawn off at one sitting; but the fluid rapidly reaccumulated. It was suspected that the condition might be a cirrhosis of the liver, as there were no definite signs of tuberculous peritonitis; but the injection of the fluid into 2 guinea-pigs caused the death of both from tuberculosis. The patient entirely recovered from the peritonitis, but suddenly died after a short illness. The post mortem examination showed that there was an old pericarditis, evidently due to infection from a neighboring tuberculous gland; and the infection of the peritoneum had evidently taken place from this pericarditis and mediastinitis. The tubercular peritonitis had been entirely cured. There was an old fibrous peritonitis, but both gross and microscopical examination showed the absence of tubercles. [D. L. E.]

3.—The patient exhibited vasomotor, trophic and secretory disturbances, as well as disturbances of sensation, which were apparently characteristic of syringomyelia. The erythromelalgia that existed in this patient was evidently merely a symptom complex of the disease of the cervical cord. [D. L. E.]

4.—The chief point of Steffeck's method of treating the after-coming head is to pay no attention to the position of the head or to the respiration of the child; but as soon as the child's arms are free, to press with both fists. slowly and at short intervals, directly downward and backward upon the head of the child. As soon as the head is well in the pelvis, the Veit-Smellie method is used. [D. L. E.]

5.—Kruse has made a serum for the treatment of dysentery. He finds that animals infected with what is normally a toxic dose of dysentery bacilli may be saved by instituting serum-therapy as late as the third day. He determined that the 1/80000th part of a gram of serum is sufficient to prevent death from an otherwise fatal dose in a guinea-pig. He also finds that, when dysentery bacilli are added to normal human bloodserum and a minute portion of dysentery antiserum is added, the bacilli do not grow. They change their form, are partially dissolved, and ultimately nothing is left but a few granules. The author has used his serum in 100 cases of dysentery in human beings. The mortality was 8%, while ordinarily the mortality is from 10 to 11%. He believes, also, that 3 of the cases should properly have been excluded, because of their condition when the treatment was begun. This would have reduced the mortality to about 5%. He insists upon the fact that 19 of these patients were less than 10 years of age, and that only one of these died. As a rule, the mortality in such young subjects is much higher. [D. L. E.]

MUENCHENER MEDICINISCHE WOCHENSCHRIFT.

December 30, 1902. (No. 52.)

1. A Contribution to the Knowledge of the Relations Between Tonsillitis and Inflammation of the Appendix. H. WEBER.
2. The Innervation of Digestion. O. COHNHEIM.
3. A Case of Spindle-Form Dilatation of the Esophagus. P. ZINSSER.
4. The Extirpation of the Puerperal Septic Uterus. R. GRADENWITZ.

1.—Weber reports the following interesting case. A girl of 17 years developed pain in the throat, difficulty in swallowing, headache, loss of appetite and some pain in the submaxillary glands. There was a slight herpetic eruption on the lower lip. There was considerable exudate upon the tonsils, albumin and casts were found in the urine, and streptococci were found in the exudate in the throat. Sixteen days later the patient developed vomiting, pain in the abdomen and some tenderness in the region of the stomach. The next day there were severe pains in the ileocecal region, and an area of dulness over the appendix. There was leukocytosis, but under careful treatment with opium the patient recovered. He also mentions briefly 2 somewhat similar cases in girls of 20 and 18 years of age. He believes that the relation of tonsillitis to appendicitis has been proven by the cases of Kretz and Schnitzler, in which the same micro-organism was found in both situations. The connection, however, has not yet been explained. [J. S.]

2.—Cohnheim describes some of the experiments of Pawlow, who found that, if a dog was prepared so that there was an esophageal fistula and the stomach mucous membranes exposed, the latter could not be stimulated to secrete gastric juice, although, when the animal was allowed to eat and the material passed out through the fistula, the secretion of gastric juice was established. Another experiment consisted in the formation of a blind cavity from the fundus of the stomach which remained in connection with the organ only by the nervous mechanism. It was found that the gastric juice differed according to the different substances employed. Even more interesting were Pawlow's studies upon the pancreatic secretion, in which he found that the different ferments were apparently secreted in different quantities according to the fat ingested. His investigations upon the secretion of bile showed that only peptone and fat stimulated it. The mucous membrane of the duodenum appears to have certain sensory nerves that form part of a reflex arc that may inhibit the gastric digestion. The results that Pawlow has obtained are due largely to his perfect surgical technique and his capacity for imagining experiments. [J. S.]

3.—Zinsser reports the case of a man, 39 years of age, who had suffered from gastric disturbances. Usually, immediately after eating, he felt disagreeable in the region of the stomach and was obliged to vomit. He found, however, that if he drank a considerable quantity of liquid—¾ of a liter—this vomiting could be prevented. He devised a diet in which ¾ of a liter of liquid was taken at each meal. Finally he developed pulmonary tuberculosis and died. The esophagus was found to be a thick-walled sac 10 cm. in breadth; the cardia was contracted and adherent to the surrounding structures. The stomach was not enlarged and contained an acid liquid. The case is a further illustration of the effect of cardiospasm upon dilatation of the esophagus. [J. S.]

4.—Bradenwitz reports 5 additional cases of puerperal sepsis for which extirpation of the uterus was performed. Of the total of 7 cases 5 of the patients recovered and 2 died. In 4 of those that recovered there were distinct local processes; in one there was a lymphatic form of pyemia. In the 2 fatal cases there was pure septicemia without local manifestations. Gradenwitz believes that extirpation of the uterus is indicated when there is severe infection localized to that organ; when there are suppurative processes either in the uterus itself or in its immediate neighborhood or in the adnexa; or when there is inflammatory disease of the bloodvessels or the lymphvessels. When, however, the infection has involved the circulatory system and local lesions can no longer be recognized, the case is probably incurable. [J. S.]

January 6, 1903. (No. 1.)

1. The Extraction of Bullets from the Cranial Cavity. O. von ANGERER.
2. Primary Actinomycosis of the Bones of the Tarsus. O. BOLLINGER.
3. Two Types of Bavarian Physicians from the Middle of the Nineteenth Century. G. MERKEL.
4. Tuberculosis of the Optic Nerve. V. MICHEL.
5. The Amount of Exercise in the Treatment of Pulmonary Tuberculosis. PENZOLDT.
6. Old and New Contributions to the Pathological Anatomy of Noma. V. RANKE.
7. Narcosis with Schleich's Mixture. V. WINCKEL.
8. Experiences upon the Practical Application of the Determination of the Freezing-Point in Blood and Urine in Renal Disease. O. RUMPEL.
9. Carl von Kupffer.
10. The Present Commerce in Medicaments ,and its Influence upon the Treatment of Invalids. O. SCHWARTZ.

1.—A man, 22 years of age, while intoxicated, fired two bullets into his head just above the glabella. For 5 days he was entirely unconscious, for 4 weeks he was paralyzed on the right side and had motor aphasia. The day after the injury a bullet was spontaneously discharged through the left nostril. The paralysis gradually improved, although the patient continued to suffer from severe headache, worse during exertion. Ten months after the injury he began to have epileptic attacks which were repeated at intervals of 8 weeks. A year later an operation was performed, pus was found in the frontal sinus, and the course of the bullet was found passing to the left toward the roof of the orbit. Apparently it had not penetrated the pia. The bullet, however, was not found. Immediately after the operation the patient had severe epileptic convulsions, and then for 6 months there were no further attacks. They then recurred; the supra-orbital nerve was cut without benefit. Seven years after the injury the head was examined with the Röntgen rays, but no bullet was found. An operation for the purpose of loosening the scar and excising the supra-orbital nerve was performed without benefit. Another examination with the X-rays showed the presence of 2 bullets, one in the frontal sinus, and the other in the base of the left frontal lobe. Their position was determined exactly, and an operation was performed. This was complicated by many technical difficulties, not the least of which was the encysting of the bullets. The bullet near the sella turcica in the frontal sinus was removed, and later the other was also removed under local anesthesia. The patient recovered completely and had no further epileptic attacks. The second patient, a man of 20 years, shot himself in the right temporal region with a revolver. He appeared to suffer only slightly from the immediate effects of the wound. There was no disturbance of motion, sensation or vision. The pulse was irregular. Ten days later he developed headache, had pain in the right eye which then showed distinct papillitis. The bullet was seen by the X-rays to be directly above the orbit. It was readily removed, and the patient made a complete recovery, even the papillitis disappearing. In both instances the osteoplastic method of Wagner was employed with great success. [J. S.]

2.—Bollinger reports the case of a man, 64 years of age, who, 53 years before, when but 11 years of age, had received a blow upon the back of the left foot. This healed apparently in 3 weeks. At the age of 48, that is 37 years afterward, he was exposed and obliged to make long marches. The left foot then swelled, became painful, and finally it was almost impossible for him to walk. The swelling was found to be edematous, and a diagnosis of chronic suppurative osteitis and necrosis of the bones of the metatarsus was made. The **foot** was amputated and a careful examination showed that the suppuration was due to **actinomyces.** It seems that this case must have begun 53 years before the amputation, that the infection had then remained latent and only developed after the severe exertion. Bollinger has been unable to find a similar case reported in the literature. [J. S.]

3.—Merkel pays a warm tribute to the services of 2 Bavarian physicians for the improvement of medicine in Bavaria and Munich. The first, **Dr. Lorenz Melchior Geist,** was born in 1807 in Nürnberg. He was educated in the gymnasium and at the University of Erlangen. He was interested in all sorts of studies, and in 1833, after various journeys, settled as a practitioner in his native city. At first he was unsuccessful, but was subsequently appointed surgeon in the Nürnberg Hospital. Subsequently he was transferred to the medical side. His chief service to medicine was his "Klinik der Greisenkrankheiten," a work of 650 pages, on the diseases of old age. He was the president of the Bavarian Medical Union, and as such was of the greatest service in establishing that union upon a permanent basis. Second, **Johann Simon Dietz,** who was born in 1803. He was always interested in natural history and studied medicine in Erlangen, Göttingen and Würzburg. He was a member of the German Burschenschaft, and for this reason had difficulty in securing permission to pass his final examinations. He made extensive journeys in France, Great Britain, Ireland and Holland, and then settled as a surgeon and finally was made professor of surgery in Erlangen. This, as a result of some political machinations, he enjoyed only for a short time; he was obliged to return to Nürnberg and enter into general practice. He also took an active part in the formation of the Bavarian Medical Union, and Merkel believes that he was the *spiritus rector* of the whole movement. He believed that medicine was to be most advanced by the union and co-operation of medical men, and not by books and articles. [J. S.]

4.—Von Michel reports a rare case of **tuberculosis of the optic nerve** occurring in a child, 10 years of age. A diagnosis of retinal tumor had been made, because there was chronic intra-ocular increase of pressure, diminution of vision without contraction of the visual field, and a brownish-red, turbid liquid in the vitreous, which was supposed to be due to a hemorrhage into this structure. When the eye was enucleated, hemorrhage was actually found in the immediate path of the vitreous, and the inner surface of the eye had a peculiar dirty color. There were no nodules but a considerable amount of granular tissue on the inner surface of the retina which appeared to proceed directly from the optive nerve. In the retina itself, usually close to the bloodvessels, were some miliary tubercles. The diagnosis was, therefore, altered to tubercular granulation tissue proceeding from the papilla. The usual situation of tuberculosis of the optic nerve is, of course, in the meninges, secondary to tuberculous meningitis of the basilar meninges. It may also pass through the foramen opticum and involve the intra-ocular portion of the nerve. [J. S.]

5.—See editorial.

6.—Von Ranke, after discussing the literature concerning the **pathological anatomy of noma,** and speaking of the micro-organisms found in the tissue which are of the most varied character and among which a **filiform bacterium** is very constantly found, mentions a case of noma of the vulva in which he was able to discover this same filiform bacterium. He believes that it is exceedingly likely that this bacterium is the etiological factor that causes the gangrene. [J. S.]

7.—Von Winckel, after mentioning a fatal case of chloroform narcosis in which there was failure of the respiration apparently promoted by slight disease of the left lung, discusses the mixture suggested by Schleich, which consists of ethyl chloride, chloroform and sulphurous ether. In one of the first cases in which he employed it the patient became cyanosed, but by means of artificial respiration and electricity was finally gradually restored. On the same day another patient, upon whom the same mixture was used, vomited during and after the operation. Therefore, he made a series of observations with various anesthetics: Pure ether, ether with morphine, and the **Schleich's mixture.** The results show that, when morphine was used, less ether was required to produce narcosis, but about the same amount throughout the operation. The temperature usually fell slightly after the operation. Vomiting was more common when ether and morphine were used than when ether alone was employed. In 2 of the patients there was asphyxia and in 7 of 60 bronchitis. In 20% of the cases there was some albumin after the operation. With Schleich's mixture narcosis occurred more promptly, less of the mixture was required to produce narcosis and for the entire period of the operation. In 67% of the cases there was vomiting; in 2% salivation. Apnea occurred twice before and 5 times during the operation, and collapse 3 times during operations. Cyanosis occurred altogether in 3 cases. Albumin occurred in 29% of the cases and bronchitis in only 2%. The temperature was usually slightly lowered. The advantages of Schleich's mixture are: That narcosis occurs more rapidly, the amount required is considerably less, and there appears to be less frequently lowering of the temperature and less bronchitis. It must be noted, however, that in the 100 cases in which Schleich's mixture was used it was necessary to abandon this mixture and resort to other anesthetics on account of the unfavorable symptoms that developed. He gives the histories of these 10 cases and for another case, a woman, 24 years of age, who was operated upon for sarcoma of the ovary. She went into a state of collapse and died a few hours later. Von Winckel concludes that Schleich's mixture has no advantage over ether, and that dangerous conditions more frequently appear when it is employed, even although the average quantity is less. [J. S.]

8.—Rumpel discusses **the value of cryoscopy.** This, of course, depends upon the principle that the greater the concentration of a solution, the lower is its freezing-point, although the concentration is to be understood as the molecular concentration in the osmotic sense. He speaks of certain technical difficulties in the investigation, and then discusses the statistics of 300 cases that he investigated. These cases are all carefully tabulated. There were 61 patients in whom the kidneys were healthy, although in many of them other diseases were present; 47 in whom there was unilateral disease of the kidneys and in whom catheterization of the kidneys was employed. In all these cases the freezing-point of the blood was also determined, and it was found that it was not affected, but remained constant at about -0.56, occasionally being slightly altered to -0.57 or -0.55. In fact, the regulation of the freezing-point of the blood, that is to say the osmotic pressure, is very delicate and prompt, so that, 4 hours after the intravenous infusion of 200 cc. of artificial serum, it was found the same as before operation. The concentration of the urine varies considerably. The freezing-point is reduced from -0.9° to

-2.3°. When both kidneys were involved, the freezing-point of the blood was usually considerably altered, sometimes being as low as 0.81 below that of distilled water. At the same time there was usually diminution in the molecular concentration of the urine. It was nearly always true that the freezing-point of the blood was greatly altered in case of uremia. (The paper is still unfinished). [J. S.]

9.—See editorial.

10.—Schwartz calls attention to the great danger of some proprietary preparations, inasmuch as they fail to provide for the individualization of cases of disease now demanded by scientific medicine. He further speaks of the great danger of some of these preparations, analyses having shown him that they contain substances that may be distinctly injurious. [J. S.]

BERLINER KLINISCHE WOCHENSCHRIFT.

January 19, 1903. (40 Jahrgang, No. 3.)

1. Alcohol as a Drug. C. BING.
2. The Familial Occurrence of Congenital Heart Disease. DE LA CAMP.
3. Mercury in the Urine. AUGUST LAQUEUR.
4. Urethral Fistulæ and Cancer. L. LIPMAN-WULF.
5. The Active Substance in Cobra Poison. PRESTON KYES and HANS SACHS.

1.—Will be abstracted when concluded.

2.—De la Camp relates 6 **case-histories of congenital heart disease occurring in brothers and sisters of one family,** ranging in age from 5 to 15 years. In all cases there seems no doubt that a persistent ductus arteriosus Botalli was present. No cause for the condition could be found in the family history anywhere. The symptoms of each child are fully described. [M. O.]

3.—As the result of a series of investigations to show the condition of **mercury** when **excreted in the urine** after administration, Laqueur concludes that it is generally **combined with acids and acid salts** (uric acid, hippuric acid and acid phosphates, etc.), often being excreted with creatinin. [M. O.]

4.—Cancer originating in the urethra or urethral fistulæ is rare. Lipman-Wulf reports such a case in a man of 50, with death from cachexia, following **cancer of a urethral fistula.** The disease is exceptionally difficult to diagnose early. Such cancer may originate in the epithelium of the fistula, in that of the urethra at the cicatrix following urethrotomy for stricture, or from the epithelium of Cowper's glands. The literature is fully quoted. The tumor is only correctly diagnosticated by microscopical examination, to determine its histology. [M. O.]

5.—Will be abstracted when concluded.

WIENER KLINISCHE WOCHENSCHRIFT.

January 22, 1903. (XVI. Jahrgang, No. 4.)

1. The Pathology and Treatment of Asthma. M. SIHLE.
2. Ménière's Disease With Anosmia and Ageustia. ALEXANDER STRUBELL.
3. Specific Increase in Virulence *in Vitro.* FRANZ HAMBURGER.
4. Bony Changes in Gonorrheal Arthritis and Acute Osseous Atrophy. ROBERT KIENBOECK.

1.—Sihle, who reviews the literature in full, finds that most patients with **asthma** have a tendency to relaxation of the musculature of the circulation, both of the heart and bloodvessels, causing diminished bloodpressure. Bronchial asthma is a complicated vagus neurosis, affecting respiration and circulation. Asthma is probably a reflex neurosis, with irritation of the vagus centers, vasomotor centers and respiration centers. A case is reported in a neurasthenic patient. Sihle concludes that there are always hypertonia of the smooth musculature of the respiratory tract, hypotonia of the circulatory system, nervous bronchial secretion and congestive hyperemia of the entire respiratory system, nervous bronchial secretion and congestive hyperemia of the entire respiratory mucous membrane. Asthma may be peripherigenic, hematogenic, or psychogenic or cerebral. During the attack he advises opium, digitalis, convallaria, strophanthus, iodides, etc. Atropine may be valuable. Between attacks he orders diet, hygiene and good care. A complete case-history follows. [M. O.]

2.—Strubell reports a case of **Ménière's disease** in a man of 48, **with bilateral anosmia and ageustia.** Headache, vertigo, buzzing in the ears and vomiting appeared suddenly, almost apoplectiform in nature, followed by 36 hours sleep, loss of smell and taste. Examination showed complete deafness in the right ear. All symptoms disappeared except the buzzing in the ears, some deafness and the complete loss of smell. It was not a functional condition. Yet such a combination of symptoms has never before been observed. [M. O.]

3.—Hamburger reports a series of experiments upon animals, studying the increase in virulence of the cholera vibrio as it passes through animals. He concludes that the **increase in virulence of all bacteria in vitro** depends partly on the bacterial cells becoming accustomed to the immune bodies of the animal organism. This is explained by a reactive increase in the haptophore groups. [M. O.]

4.—Kienböck, who gives an exhaustive review of the literature and many Röntgen photographs, reports a number of observations showing **the bony changes of gonorrheal arthritis and acute osseous atrophy.** He finds that acute atrophy of bone occurs with injuries and inflammatory processes of the extremities, severe gonorrheal arthritis and acute disease of the nervous system. The changes occurring can be observed in Röntgen photographs. Bony atrophy is accompanied with muscular atrophy and other changes and appears from 4 to 8 weeks after the original cause. Neighboring parts were first affected, the spongy portion showing the first changes. The Röntgen photographs show the absorption of lime salts resulting. The details of the changes are given, together with treatment. [M. O.]

ZEITSCHRIFT FUER HEILKUNDE.

October, 1902. (Volume 23. No. 10.)

1. The Pathology of the Disturbances of Motion in Pseudobulbar Paralysis. FRITZ HARTMANN.
2. Ochronosis. H. ALBRECHT.
3. The Chemical Findings in Ochronosis of the Cartilage. EMIL ZDAREK.
4. Diseases Due to the Pneumonia Bacillus of Friedländer. MILAN SACHS.
5. The Relation Between Toxin and Antitoxin. RICHARD KRETZ.
6. Cancer of the Lungs. PAUL DOEMENY.

1.—After reporting 7 case-histories in detail, Hartmann fully reviews **the disturbances of motion in pseudobulbar paralysis.** He found disturbances in voluntary motion differing in intensity and extent. Bilateral total hemiplegia was very rare. Paralysis of all 4 extremities was, however, common and typical, the lower extremities being most affected, as a rule. They resembled glossopharyngolabial pseudoparalysis and myasthenia pseudoparalytica. Muscles with widespread cerebral relations were affected most, those with single functions least. Disturbances in the upper extremities recovered somewhat, while those of the lower extremities persisted in a striking manner. When the cause is cerebral, the results are much worse than when it is cortical. Disturbances of deglutition, phonation, etc., depend on the extent of the lesions, often being bilateral, disseminated in the anterior portion of the internal capsule. The other disturbances are also explained in detail. A description of the various pathological conditions found follows. The literature is fully cited and excellent plates accompany the article. [M. O.]

2.—Albrecht reports a case of **ochronosis,** a condition in which all the cartilage is found pigmented at autopsy. Only 6 cases have been published hitherto. The first was reported in 1866, when Virchow described the condition. In this case the ears looked dark blue, and the urine was brown. Death occurred from phthisis. The heart muscle was brown, and the intima of the atheromatous vessels showed pigmentation. The cartilages of the ribs, vertebræ, sternum, shoulder and hip were jet black or brown. Macroscopically there were no changes; microscopically the pigment granules were noted, especially where the cartilage was fibrous, and deep, near the bone. Pigment was found both in the perichondrium and in normal hyaline cartilage. This undoubtedly originated in the blood. [M. O.]

3.—Zdarek undertook the **chemical examination of the urine and cartilage from the case reported by Albrecht.** Alkaptonuria and pigmented bodies like those in the cartilage were found in the urine. The chemical composition of the chondromucoid, chondroitin-sulphuric acid and pigment in the urine together just formed the total constituents of the pigment found in the cartilage. [M. O.]

4.—Sachs reports a case of **general infection with Friedländer's bacillus** in a man of 66, with mitral regurgitation, acute endocarditis, leptomeningitis of the base, cortex and cord, multiple abscesses of the kidney, prostatic abscesses, cardiac hypertrophy, bronchitis and tracheitis. Full autopsy reports follow. The infection probably began in the prostate, then entering the veins, from the abscesses of the prostate. The clinical course of the case ran to a rapidily fatal termination. [M. O.]

5.—Kretz now supports **Ehrlich's side-chain theory,** having found that it is proved by experiments. [M. O.]

6.—Dömeny reports in full 1 case-histories of **cancer of the lungs, 5 in males and 5 in females.** In 3 cases the cancer was alveolar; in 6 cases it was bronchial. Tuberculosis was also present in 4 cases. The symptomatology and pathology follow. [M. O.]

BOLNITCHNAIA GAZETA BOTKINA.

November 6, 1902. (Vol. XIII, No. 45.)

1. On the Question of the Appearance of Diphtheria Antitoxin in Animals Under Normal Conditions and as a Result of Artificial Immunization. S. K. DZERZSHGOVSKY.
2. The Present Status of the Question of the Origin of Eclampsia. L. K. LINGEN.
3. The Status of Hospital Physicians According to the Laws of 1893. N. A. IVANOFF.

1.—Will be abstracted when concluded.

2.—Will be abstracted when concluded.

November 13, 1902. (Vol. XIII, No. 46.)

1. In Commemoration of Professor Nencki. His Investigations and Views on the Coloring Matter of the Blood and the Combination of the Latter with Chlorophyl. N. O. ZIBER-SCHUMOVA.
2. On the Question of the Appearance of Diphtheria Antitoxin in Animals Under Natural Conditions and as a Result of Artificial Immunization. S. K. DZERZSHGOVSKY.
3. The Status of Hospital Physicians According to the Law of 1893. N. A. IVANOFF.

1.—Will be abstracted when concluded.

2.—Dzerzshgovsky discusses **natural and antitoxin immunity from diphtheria,** basing his statements on his own extensive investigations. He is of the opinion that natural immunity is of the same nature as that resulting from artificial immunization, only in the former the cells secrete just enough antitoxin to neutralize the toxin, while in the latter the cells secrete an oversupply of antitoxin which circulates in the blood. The fact that no diphtheria antitoxin can be discovered in the blood of rats which are immune from diphtheria he explains on the ground that, in the first place, but little free antitoxin is secreted, and, second, the serum of rats is in itself so toxic to guinea-pigs that any successful testing of the antitoxic strength is impossible. He cites as a proof the difference in the production of antitoxin by the horse and dog: While in the former considerable antitoxin appears after the first injection of toxin, the latter shows no antitoxin after the first injection, and yet the antitoxin was undoubtedly secreted by the cells to have neutralized the toxin. What he calls "poly-antitoxic" blood stands in no relation to immunity, since in some animals the cells may secrete a considerable amount of antitoxin at once and for a short time, while in others the cells are capable of secreting but little antitoxin at any one time, but the secretion goes on for a conisderable period. In the latter case the cells may succumb to the action of the toxin while considerable antitoxin may be circulating in the blood. The author was the first to point out that normal horses contain considerable antitoxin in their blood. His investigations show that this is the case in about 25% of the horses tested. The presence of antioxin he ascribes to natural infection, basing this conclusion on the reported instances of susceptibility of the horse to diphtheria and his own investigations which show that by rubbing diphtheria bacilli or their toxin on the mucous membrane of the nose of the horse antitoxin may be produced; and this mode of infection is not accompanied with any reaction. The ability to produce antitoxin does not disappear entirely with the cessation of immunization. Having discontinued immunization in a number of horses, he found that the antitoxic strength of their blood gradually diminished until it reached the strength of about 2 units; after that the antitoxic strength remained practically stationary for years. He explains this by the supposition that the cells, having become accustomed to the production of antitoxin, acquired this property as a normal function. Moreover, he found, at the expiration of 5 to 6 years after the last immunization, the horse was able to withstand a dose of toxin equal to the one administered at the last injection. To determine whether such lasting immunity may also be produced in man, the author instituted experiments on himself. He injected diphtheria toxin, commencing with 0.1 cc., diluted 150 times and gradually raising the amount during the period of 3 months and 5 days until the last dose equalled 1704 fatal doses to a guinea-pig of 250 gm. The local reaction was slight, and no constitutional symptoms appeared, except a very slight elevation of temperature. From time to time he obtained blood from the veins of the left arm and tested its antitoxic strength. He found at the end of the immunization period only one unit of antitoxin in his blood, showing that man is not capable of producing a poly-antitoxic serum. These experiments also showed that active immunization with toxin in man is not a dangerous procedure, and the belief is expressed that by means of such active immunization a lifelong immunity from diphtheria may be established. The verification of this theory will form the object of the author's future experiments. [A. R.]

AMERICAN JOURNAL OF THE MEDICAL SCIENCES.

December, 1902.

1. The Treatment of Pleurisy with Effusion. F. DELAFIELD.
2. Pancreatic Lithiasis, with Report of a Case. F. KINNICUTT.
3. Wolff's Law and the Functional Pathogenisis of Deformity. A. FREIBERG.
4. A Discussion of Wolff's Law. R. T. TAYLOR.
5. The Surgical Treatment of Cirrhosis of the Liver, with a Summary of Reported Cases. R. GREENOUGH.
6. Autopsy in a Case of Adiposis Dolorosa. F. DERCUM and McCARTHY.
7. Diphtheria with Persistent Trismus and Opisthotonos. Escherich's Pseudo-tetanus. I. SNOW.
8. Tuberculosis of the Parotid Gland; Excision of the Tumor; Recovery. No Recurrence One Year after the Operation. C. SCUDDER.
9. The Present Status of Serum-Therapy. FREDERICK PACKARD and ROBERT WILLSON.

10. Some Observations Upon Delusions, Impulsive Insanity and Moral Idiocy. B. OETTINGER.

1.—Delafield reports 200 cases of **pleurisy with effusion,** all the patients being treated chiefly by aspiration. Various drugs were used in 45, chiefly diuretics and potassium iodide, but these appeared to have very little influence upon the course of the disease. Increasing experience has led him to believe that aspiration is the only treatment needed for ordinary serous pleurisy. Of the 200 patients treated none died, and none was injured in any way by the operation, and none had infection as a result of it. The quantity of fluid was considerable in all, often over 3000 cc. being obtained. One hundred and eighty-two of the patients left the hospital entirely cured, 6, who probably recovered, within 10 days after operation; in 6 the results were uncertain, although there was distinct improvement, and in 6 no improvement at all was noticed. The average duration of the disease before the tapping was from 5 to 40 days; in 33 patients it lasted more than 40 days, and in 3 patients less. Recovery occurred in 179 patients within 6 weeks, and of these 64 had recovered in less than a week. In only 4 cases was it necessary to perform the operation 4 times. In private practice Delafield has observed that the results are much more favorable. [J. S.]

2.—Kinnicutt reports a case of **pancreatic lithiasis** diagnosed during life, and abstracts 6 other case-histories that he has found recorded His patient, a woman, 42 years of age, had had an attack commencing with pain between the shoulders extending around the right side, along the lower intercostal spaces, and accompanied with nausea and vomiting. This was uncontrollable for several hours and then subsided, after which slight diarrhea followed. Nine years later she had another attack, and the following year a third. There was no jaundice, and there were no biliary calculi in the stool. Finally, 3 years after the third attack, there was a fourth which lasted 3 days, and accompanied with constipation throughout. The sixth day after the commencement of the attack 6 small stones, each the size of a pea, were passed by the bowel. These consisted of lime carbonate and lime phosphate without a trace of cholesterin or bile pigment. In a fifth attack a small fragment of a calculus and considerable detritus were recovered from the bile, and, later, there were 2 other attacks, in one of which a considerable amount of detritus was obtained. After this the patient had a number of attacks during which calculi were obtained, and some in which they were not. After the last it was found that there was a normal proportion of fat absorbed from the intestine. The urine never showed any trace of sugar. The latter attacks were accompanied with jaundice, and the calculi recovered were 92.44% cholesterin, showing that cholelithiasis was also present. Kinnicutt discusses cholelithiasis and the differential diagnosis, and he reaches the conclusion that none of the symptoms or signs is decisive, excepting the character of the concrements found in the stools, although attacks of epigastric colic of an obscure nature followed by glycosuria, with or without jaundice, should be a reasonable basis for a diagnosis of pancreatic lithiasis. If the splitting of the ingested fats is diminished, this may be regarded as an additional sign. [J. S.]

3.—**Wolff's** law is as follows: "Every change in the function and form of the bones, or of their function alone, is followed by certain definite changes in their internal architecture and equally definite secondary changes of their external conformation in accordance with mathematical laws." Freiberg discusses this and states that the mathematical structure has never been carefully calculated, and it would be a work requiring great ability and a very large expenditure of time. Nevertheless, he believes that a comparative investigation would be of value. He has, therefore, studied the femora of a number of animals from different classes, photographed them with the X-rays and then reproduced those photographs. The animals examined were the ox, llama, sheep, South African leopard, baboon, the orang and the gibbon. He describes these in detail and concludes that the courses of the various trajectories are dependent upon the external shape of the structures and conversely, and that the number and size of the trajectories depend upon the varying factors of weight and the character of the material. His general conclusion is that the mutual independence of external conformation and internal structure is not so exact as the strictly mathematical concept would require. He has also studied a case of old unreduced dislocation of the hip, comparing the ends of the bone with the normal femur on the opposite side. It was found that the cancellous tissue was of a looser mesh than that of the other, that the tension trabeculæ proceeding from the abductor side were shorter, while the pressure trabeculæ were more numerous. The heads of the bones were distinctly flattened and concave, and in the anterior and posterior halves of the bone the cancellous tissue was more compact. As a result of these further examinations he is more firmly of the opinion that the strictly mathematical concept of Wolff's law has not yet been justified by demonstration; however, the statements of the law are fairly in agreement with the observation of the functional methods which are practical in therapeutics. [J. S.]

4.—Taylor, in the discussion of this paper, is doubtful whether all the changes occurring in the deformed bones are purely functional and none of them due to pressure. He notes that Wolff regards some of the changes as due to the static demands made upon the joint. He exhibited a number of specimens showing that the changes that would be expected in accordance with Wolff's law as a result of certain deformities have not occurred. [J. S.]

5.—Greenough collects the statistics upon the **operative treatment of cirrhosis of the liver.** In cases of biliary or Hanot's cirrhosis, 17 operations have been performed with 2 deaths and 13 recoveries. Talma's operation, or suture of the omentum for the relief of ascites, has apparently been performed altogether 122 times. Of the 105 patients of whom the accounts are satisfactory 31 died within 30 days, 44 improved or slightly improved, 29 showed no improvement and one could not be followed. Therefore, 60 patients were not benefited by the operation, of the others a careful consideration showed that permanent relief was only certain in 9. There appears some reason to believe that cases of enlarged liver are more favorable than those of small liver. No method of performing the operation seems to be definitely superior. Greenough reaches the following conclusions: That in biliary cirrhosis drainage of the bile-ducts by cholecystotomy is a proper operation after systematic treatment has failed. In 105 patients with cirrhosis and ascites 42% were improved and 50% were not improved: the mortality in 30 days was 29.5%. There was nothing peculiar in the 9 cases in which permanent relief occurred: when the omentum was sutured between the layers of the abdominal walls, the mortality was slightly less and the percentage of improvement slightly greater. Drainage apparently increased the danger of the operation. When adhesions or perihepititis existed the prognosis was better. The dangers of the operation were mainly due to the condition of the patient rather than to the procedure. Therefore, the selection of suitable cases demands great judgment. It is of no use in ascites due to other causes than cirrhosis of the liver, and is contra-indicated in the presence of renal or cardiac disease. Nevertheless, it has proved of benefit in a certain number of cases of cirrhosis, primarily for the relief of the ascites and secondarily for the relief of other symptoms of portal congestion. [J. S.]

6.—Dercum and McCarthy report the following case: A man, 39 years of age, at the age of 24 years had some febrile disease after which fat began to accumulate in masses which were exquisitely painful. He was easily fatigued and bruised easily. At the age of 34 or 35 he had an epileptic attack. This was repeated, the attacks became more numerous and finally he had 2 or 3 every week. On inspection there were numerous masses of fat over the thorax which fell over the hips in apron-like folds. The patient developed erysipelas and died. At the autopsy the nodules of fat could be readily dissected out and often showed nerve fibers passing over their surfaces. In the midst of the fat numerous hemolymph glands were found. There were abnormalities in the arrangement of the convolutions of the prefrontal lobe on the left side. The central nervous system was normal. The peripheral filaments in the nodules of the subcutaneous fat showed distension of the capillaries. In the fatty nodules small round bodies connected by delicate trabeculæ were observed. The tissue was vascular, and numerous mononuclear cells were present. The chemical analysis of the fat showed that it did not differ from ordinary human fat, with the exception that the acid value was abnormally low. There was a tumor of the pituitary body which was apparently a carcinoma of the glandular type. The other organs were carefully examined and showed nothing unusual with the exception of the fact that the testicles were undeveloped. The thyroid gland was absolutely normal. The changes in the pituitary body are interesting. This is the fifth case of **Dercum's disease** reported with autopsy. [J. S.]

7.—Snow reports the case of a boy, 7 years of age, who developed sore throat which proved to be diphtheritic tonsillitis. There was pronounced rigidity of the spine, then the jaws became stiff, and the tetanic spasm invaded the extremities. From time to time he had attacks of laryngismus accompanied with opisthotonos. Tetanus was finally diagnosed, and the patient was admitted to the hospital. The spasm was relaxed with chloroform but returned as soon as the effect wore off. The diphtheria was cured by some injections of antitoxin. Tetanus antitoxin had no effect, but 1/32 grain of morphine relaxed the spasm and enabled the boy to sleep quietly. This was repeated, and the patient gradually recovered. The case probably represents the **pseudotetanus of Escherich.** [J. S.]

8.—Scudder reports a case of **tuberculosis of the parotid gland.** A woman, 57 years of age, developed swelling below the lobule of the right ear which gradually increased in size and was finally removed. It proved to be a tuberculous parotid gland. A year and a half after the operation there was no sign of recurrence. [J. S.]

9.—Packard and Willson contribute a valuable article upon the **status of serum-therapy.** The value of antidiphtheria serum is now established; antitetanic serum appears to be of some value although it is not a specific. Antityphoid serum appears to give promise of being of value. Antistreptococcic serum only acts against the streptococcus and not against other micro-organisms which may complicate the condition. Antipneumococcic serum can hardly be considered as definitely established as a curative agent. Antiplague serum has some positive value, but we are not certain just what it is. The authors are favorably impressed with the reports of the use of antituberculosis serum. Antivenene appears to be more effective against cobra poison than other snake venoms and is apparently of some value in leprosy. Other diseases in which serum-therapy has been attempted are cholera, dysentery, yellow fever, anthrax, leprosy, glanders, whooping cough, syphilis, arteriosclerosis, and finally there is a general proteidin produced by Emmerich and Loew. [J. S.]

10.—Oettinger discusses **various mental conditions,** chiefly with reference to the medicolegal aspects. He quotes extensively from the literature in the course of his paper and cites cases illustrating his own view. He discusses delusion and hallucination and mentions various false beliefs which are held by sane persons, for example the belief in witchcraft. He speaks of the delusions or uncorrected errors regarding well-known facts held by certain persons, and so common in childhood. He recognizes 2 types of insanity: impulsive and moral. He discusses moral insanity. He concludes that there is not such a great difference between the medical and the legal aspect of insanity, the former merely attempting to classify generically insanity which involves perception, assimilation and application of ethical principles. He does not think that medical experts in insane cases should be satisfied with merely pronouncing the mental state of the accused to be one of insanity, and believes that it would be advantageous for the court to protect the medical witness, permitting him to frame all his replies to counsel as he thinks best, providing his testimony is relevant, tends to elucidate the points at issue and is not extended over too great length of time. [J. S.]

REVUE DE MEDECINE.

November 10, 1902. (22me. Année, No. 11.)

1. On a Case of Paramyoclonus Multiplex. Special Psychical State. L. E. BERTRAND.
2. On the Prognostic Importance and Therapy of Arterial Pressure. CH. JOURDIN and G. FISCHER.
3. The Convulsive Attack of Hysterical Cough. J. ABADIE and H. GRENIER DE CARDENAL.
4. The Morbid Mental Image. N. VASCHIDE and CL. VURPAS.

1.—Bertrand reports the case of a man, aged 25 years, who had movements in the lower limbs when lying down or sitting, which varied from a simple tremor to clonic contractions. When standing the patient swayed. There was some disorder in the gait. The movements in the legs ceased during sleep, but they could not be stopped by the will. The patient was emotional, hypochondriacal and had ideas of persecution, a common basis of neurasthenia bordering on hysteria. He made repeated attempts at suicide; but they were always puerile and with an appearance of simulation. These attempts were always abortive, because it seemed as though he always made them when help was near. There was an alleged traumatism advanced by the patient as an etiological factor. The case was diagnosed **paramyoclonus multiplex,** and Bertrand believes that it is a neurosis depending upon a hysteroneurasthenic basis. [J. M. S.]

2.—The most important factors about **variations in arterial pressure** are toxic causes, nervous causes and mechanical causes. While arterial pressure may be estimated clinically by auscultation of the heart or by examination of the pulse, in many cases these methods give rise to error. Some instrument is, therefore, necessary in the study of arterial pressure, and, according to Jourdin and Fischer, the sphygmomanometer of Potain is the best one to employ. **For the purpose of prognosis** it is not sufficient to **study the arterial pressure** once or twice, but regular daily examinations should be made. Functional alterations in the bloodpressure may be due to dangers in the action of the heart, in the action of the vessels and in the amount of blood, infectious diseases, anemia, pleural exudates, icterus, etc. These changes are temporary and may disappear rapidly with the return to normal conditions, and they have a great prognostic importance. The essential alterations in bloodpressure are produced by lasting causes, by unalterable anatomical conditions of the circulatory apparatus, such as arteriosclerosis, valvular lesions and interstitial nephritis. In these conditions the variations of arterial pressure serve principally to confirm the diagnosis and, by their variations, they only show the acute exacerbations of a chronic lesion. The authors discuss the variations of arterial pressure in special conditions, such as hemorrhage, abundant effusions, acute cardiac insufficiency, etc. In hypotension the remedies employed should be those that regulate the myocardium through the vasomotors, such as digitalis; but subcutaneous injection of saline solution is the method of choice. In the treatment of hypertension a vegetable and milk diet, mineral waters, gymnastics, massage and bleeding, among other things, are recommended. [J. M. S.]

3.—Abadie and Grenier de Cardenal conclude that **hysterical cough** may exist in 2 forms: (1) The monotonous repetition at regular intervals of expiratory shocks accompanied with a hoarse or piercing laryngeal bruit; (2) a piercing cough which is paroxysmal and which occurs at irregular intervals like that of whooping cough. This cough is accompanied with spasms of the diaphragm and of the glottis, with prolonged whistling inspiratory acts, with suffocation and with menace of asphyxia. The second form represents a clinical equivalent or a partially systematized variety of conclusive hysteria. It is analogous in symptomatology and identical in semeiologic value to the attack of sobbing, hiccough, sneezing, immoderate laughter, etc. [J. M. S.]

4.—Will be abstracted when finished.

December 10, 1902. (22me, Année, No. 12.)

1. Hysteria in the Form of General Paralysis. F. COLLET and J. LEPINE.
2. Typhoid Form of Malaria. A. BILLET.
3. Valgus of the Fingers. R. PAULY.
4. The Morbid Mental Image. N. VASCHIDE and CL. VURPAS.

1.—Collet and Lépine report the case of a man, aged 34 years, who, following an emotional period and a period of meditation, presented transitory loss of consciousness; extreme anarthria without mutism, aphasia and agraphia; awkwardness of the right hand with preservation of muscular force; and left glossolabial hemispasm. All the symptoms disappeared except the anarthria, which persisted to a slight extent. There were several recurrences without loss of consciousness together with transitory signs of **general paralysis**, loss of memory, tremor of the tongue, etc. After a prolonged course of treatment the patient recovered. The author believes the attack was **hysterical**. [J. M. S.]

2.—Billet reports 40 cases of **malaria** which assumed a **typhoid type**, and thinks that in the course of malaria there are frequently cases in which the symptom-complex resembles typhoid fever very closely. The symptoms are cephalalgia, epistaxis, intense lumbago, prostration and stupor, delirium or adynamia, saburral state of the digestive tract, dryness and black coating of the tongue, diarrhea and abdominal distension, pain on pressure in the right iliac fossa, enlarged spleen, etc. In malaria of a typhoid type the classical symptoms of malaria may be very much modified or entirely wanting. In order to make the diagnosis in these cases, clinical, hematological and therapeutic data must be considered. In these cases the plasmodium malariæ may be found in the blood. The blood shows also a hyperleukocytosis of the mononuclear elements with predominance of the large mononuclears, which are filled with melanin pigment. [J. M. S.]

3.—Pauly reports the case of a woman, aged 48 years, who had a congenital malformation of the fingers characterized by an irreducible flexion with total deflection toward the ulnar side. The author designates the condition as one of **valgus fingers**. [J. M. S.]

4.—Vaschide and Vurpas contribute a long dissertation on the **morbid mental image**. They advance the theory that in a subject in whom the mental image is morbid, the pathology of this image is an almost complete paralysis of inhibition. The appearance of the morbid image, aside from the question of its spontaneity, has place in the field of conscience, without the subject being able to exercise a control or a power of arrest. The normal man has in his mental life numerous morbid mental images; but he generally has conscience and the possibility of utilizing his inhibitory faculty; the mental image in this case is only a fit, so to speak, of passing expansion, the subject being able to manage, more or less voluntarily, the system of images that arise. It is possible in abnormal subjects to have, on the contrary, an inhibitory power which is too strong, but this is only a perfectly explainable appearance; and when there is, so to speak, a sufficiently prolonged arrest of the act, as in the obsessions, it is necessary to attribute the arrest principally to the intensity and the distinctness (*éclat*) of the mental image. [J. M. S.]

LA PRESSE MEDICALE.

December 17, 1902. (Volume II, No. 101.)

1. Operative Intervention in Genito-urinary Surgery. GUYON.
2. Ulmarene in Rheumatism. P. ARSENE MESNARD.

1.—In all **genito-urinary operations** there is danger of infection, in spite of asepsis and antisepsis. Catheterization alone exposes to infection. With stricture of the urethra, accompanied with fever and retention of urine, Guyon does internal urethrotomy at once, witn success. When the bladder becomes infected, intoxication soon follows, the poison being absorbed where the epithelium has been altered. The ureter and kidney may then become affected; or the infection may descend from the kidney. The bladder must be irrigated and drained by leaving a catheter in place. Operation is indicated as soon as symptoms of intoxication appear, but may only be successful when the organs have not been infected. For all genito-urinary operations are full of unexpected dangers, though both preparatory and after-treatments are carefully carried out. Care must be taken to prevent infection before, during and after operation. Experience is of great value to the surgeon in helping him determine upon the correct operation for each case. [M. O.]

2.—**Ulmarene** is a preparation of **salicylic ethers** which Mesnard has found useful in articular, muscular, acute, chronic and gonorrheal rheumatism, in doses of one half gram in capsules and in lotions and ointments applied locally. It is also of use in neuralgia, gout, myalgia, lumbago, etc. [M. O.]

Special Article.

TROPICAL DISEASES.*

SIXTH LECTURE IN A COURSE ON TROPICAL DISEASES, ETC.

ABSCESS OF THE LIVER. (Continued.)

By CAPTAIN CHARLES F. KIEFFER.

Assistant Surgeon, U. S. Army.

Gentlemen: In continuation of the subject of the last lecture I now take up the treatment of tropical abscess of the liver. Before doing so I want to answer one question in the diagnosis of this condition, which has been brought to my attention by a member of the class, rigidity of the muscles of the abdomen. We do not find rigidity of the muscles present, as a rule, in these cases. Rigidity of the right rectus, particularly of the upper portion of the muscle, has been observed in traumatic abscess when located low down in the thin edge of the liver. In the slower development of the tropical abscess, and particularly as it is more apt to develop in the deeper portions of the organ, we do not observe rigidity of the right rectus.

In the consideration of the treatment of this condition the question of prophylaxis first engages our attention. The most important step is, of course, the prompt and energetic treatment of the amebic dysentery. Very recently, in the Egyptian Medical Congress, Kartoulis has reported his results in amebic dysentery. His routine treatment has been abundant lavage, twice daily, with an aqueous solution of tannin, in strength of 0.5%. He makes the statement that with this treatment, thoroughly carried out, liver abscess need not follow amebic dysentery. He goes further, indeed, and says that, when liver abscess does occur, it is due to improper treatment of the dysentery. I am willing to admit right here, if this observation be correct, that I treat dysentery very unskilfully. But I do not believe that it is correct, I know that in a certain percentage of cases, no matter how thoroughly the dysentery is treated, even when the clinical cure is promptly obtained, abscess follows. You will recall the latent cases of dysentery in which abscess may develop, and also that post mortem observation has shown the occurrence of liver abscess from a single dysenteric ulcer in the colon. This extreme view will, however, serve to impress upon you the fact that thorough treatment will very largely diminish the percentage of abscess cases. The treatment must be directed toward the destruction of the etiological factors, the ameba coli and the other organisms, particularly the pus producers. You will remember that, in old cases, the specific infection may be quite overshadowed by the ordinary germ forms that flourish in the dysenteric lesions. When this is the case, your therapeutic effort must be directed not only at the destruction of the amebæ, but also at the diminution of the intestinal bacteria by an agent that shall be destructive to both, such as the silver salts and benzoyl acetyl peroxide. I have recently had my attention directed to references to the use of protargol in dysentery, and I speak of it now so that you may add it to your notes on the treatment of dysentery. This remedy, which, as you know, is of established value in the treatment of urethritis, has been used with excellent success in the treatment of dysentery in injections of a one per cent. solution. Of course, if there are any acute dysenteric symptoms, these should be eliminated by the use of ipecac or the salines.

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*Sixth lecture, delivered at the Jefferson Medical College, Philadelphia.

Now, the first indication in the prophylaxis being the removal of the etiological factor, the second is to relieve the chronic congestion of the liver. It is perfectly obvious that the concurrence of amebic dysentery and congestion of the liver is a very ominous partnership, and the cure of one is just as important as the removal of the other. You will combat congestion by draining the liver by purgation. A free exhibition of the saline sulphates is sometimes of the greatest service in the depletion of the portal system. The treatment at Carlsbad has had the greatest reputation in this disorder, and this famous resort always has its quota of old tropical colonists. The French Government maintains at Vichy a hospital for its tropical army, but it seems clear that, although of value, the course at Vichy is not so beneficial as that at Carlsbad. The Sprudel salt obtained from Carlsbad water by evaporation is a very efficient substitute. In all these cases alcohol must necessarily be prohibited. Meat diet should also be restricted as much as possible. When the symptoms of liver engorgement become more intense, relief may be obtained by active counterirritation applied over the surface of the organ. Instead, a large poultice may be applied or dry heat in the form of a hot water coil or the Japanese stove. When these measures are of no avail and the congestion continues, with some little fever, perhaps, and considerable pain and tenderness in the liver, indicating the imminence of abscess, hepatic phlebotomy is indicated. This procedure is of the very greatest benefit in some cases, and may disperse the inflammatory symptoms when every other means fails. I will describe the technique of this simple operation under the operative treatment. When active dysentery is present, the exhibition of ipecac in the manner described in treatment of acute dysentery may have a marked effect on the liver symptoms. So, too, when malaria is present, quinine may have a favorable effect on the inflamed liver.

I now bring before you a case of chronic amebic dysentery, that is very instructive, particularly with reference to this very question of the prophylaxis of abscess.

E. C., 24 years old, a medical student in this school. As this man comes before you, his appearance should immediately tell you that he is seriously sick. He is fairly well nourished, but he is quite anemic. His face is drawn and peculiarly sallow; his eyes sunken and dull. His history, in brief, is that in 1899, while serving as a soldier in Luzon, he had an attack of amebic dysentery. This attack was mild. It began insidiously, and its manifestations were never acute. During this initial outbreak he was incapacitated for duty for about two weeks. Since that time he has had twelve recurrences, including the one from which he is now suffering. During the last six months the symptoms have been more or less continuous with two sharp recurrences. He is weak, listless, says he has lost ambition and strength. He finds it difficult to concentrate his mind on his studies, and his memory is impaired. His appetite is poor and capricious; sleep is diminished and fitful. The present attack began four days ago with some pain and tenderness, which is referred particularly to the cecum. He has twelve to fifteen bowel movements daily, voided with very little straining. Indeed, he tells us that the desire to strain is present, but that he has been able to resist it. He complains of some pain and soreness in the rectum after each passage. I show you here his last movement, which, as you see, consists of about two drams of mucopus, thinly flecked and spotted with blood. It is very offensive. I call your attention to this microscopical preparation of the stool, which shows, in the particular field now in view, two sluggishly moving amebæ and a perfect riot of bacterial forms, many of which you will observe are motile. There is also some blood. There are no ova of any kind found. The temperature has been practically normal. The urine is normal; the blood count shows 3,000,000 red, no leukocytosis, and particularly no relative increase in eosinophile cells. When I examine this man I find that he not only has considerable tenderness over the cecum, but that the colon there is thickened, resisting and clearly palpable nearly to the liver margin. You also see, as I map out his liver dulness, that it is moderately increased upward to the sixth rib, and downward a full fingerbreadth or slightly more than that below the costal margin. The liver is slightly tender on pressure. The anus and lower rectum show nothing abnormal. Dr. Brick has kindly made an examination of the upper rectum and sigmoid and found, high in the rectum, numerous thickened elevated patches indicating, no doubt, healed ulcers and many patches of erosion that are beefy red. Between these patches the mucosa is much paler than normal. I should add that there is no evidence of sore mouth nor any other indication of developing sprue.

Now, here we have a recrudescence of amebic dysentery localized in the cecum with some evidence of former disease in the sigmoid and rectum. We have in addition a typical case of the affection I described to you as chronic tropical rectitis. The blood examination shows a moderate anemia, but gives no hint of uncinariasis in an increase of eosinophiles. Indeed, careful search has shown no parasites and no ova, so these factors can be eliminated. We finally have a moderate degree of passive congestion of the liver.

The treatment of this case is the following: He will be given 10 grains of sulphur with ¼ grain of powdered opium, in capsule, four times daily. Every fourth day he will receive a thorough irrigation of the colon with silver nitrate solution, beginning with three pints, in the manner already described to you. On the intervening days irrigation will be made with a 1% mixture of creolin. For the liver condition he will have six dry cups over the hepatic region, and local heat will be used by the constant application of a Japanese stove wrapped in flannel. Rest in bed will be made as complete as possible, and he will be put on restricted milk diet. You may ask if this is a case for hepatic phlebotomy. Under present conditions of the liver, I should say that it is not. But this procedure will be borne in mind in case there is any extension of the liver condition as evidenced either in an increase of dulness or tenderness or rise in temperature.

When pus has formed in the liver, the indication is for prompt and thorough evacuation just as in abscess elsewhere. This brings us to the study of the various operative measures devised for the removal of pus, with which I have grouped as well the technique of hepatic phlebotomy and exploratory puncture.

Before discussing the various plans of operative procedure, I want to refresh your memories as to several anatomical peculiarities. You must remember that the liver is by no means a fixed, firm organ. It is really a large blood-sac and all variations of bloodpressure cause quite decided changes in its size. These changes come about quite suddenly, and you may expect to find diurual variations of as much as a fingerbreadth at the lower border quite common. The normal expanse of the liver must also be firmly fixed in your mind. The lower border on the right side corresponds closely to the outline of the thorax, the lower edge being parallel to, and about one inch below, the costal margin. In the epigastric region the lower edge of the liver is marked by a line running from the ninth right to the eighth left costal cartilage and is, at this point, a handbreadth below the sternoxiphoid articulation. The left border of the liver is commonly one inch to the left of the sternum but may reach quite to the left nipple line in exceptional instances. The upper border varies with position and respiration, but generally corresponds to a line drawn one inch below the right nipple along the seventh rib, thence to the fifth right and the sixth left chondrosternal joints. Posteriorily, the upper border of the liver is on the level of the tenth spine.

In all needle punctures of the liver the main danger lies in wounding the inferior vena cava. I think very few of you, who have not particularly studied anatomy in transverse sections of the midepigastric region, realize just how far forward the anterior surface of the body of the vertebra lies, or realize the proximity of the vena cava to the anterior and right lateral chest wall. Cantlie, after a thorough study of this question in frozen sections, found that in a body measuring 32 inches at this level, the center of the inferior vena cava is nowhere less than four nor more than five inches from the chest wall. He consequently advises that, to safeguard this vessel, the needles for intrahepatic bleeding be made with a maximum length of 3¾ inches.

Hepatic Phlebotomy is a very valuable means of reducing congestion of the liver. It is of the greatest value when the congestion has become so intense that the formation of pus seems imminent. Indeed, very competent observers have reported cases in which puncture of the liver has produced a cure even when pus had formed, although the needle did not enter the abscess. The operation is quite simple and free from danger, bearing always in mind the proximity of the inferior vena cava. The needle should be 3¾ inches in length and very coarse. The point of insertion should be in the seventh or eighth intercostal space in the midaxillary line. Local anesthesia with the ethyl chloride spray will be sufficient for this slight operation, although the patient may complain bitterly of the pain when the capsule of the liver is punctured, or he may complain of severe pain in the right shoulder when the needle traverses the diaphragm. The needle is thrust directly into the liver and the exhaust turned on. It is then very slowly withdrawn, until blood flows freely into the aspirator bottle. This would indicate that one of the larger hepatic veins was being tapped. If blood does not flow freely the needle is withdrawn until the point is near the liver surface, when it should be given a different radial direction and the same manœuver repeated. From two to three ounces of blood should be abstracted. The needle is then quickly withdrawn and the puncture sealed with collodion. It may be necessary in any case to make a second puncture, trying in another intercostal space, but this is uncommon. I am rather inclined to think that two or three radial thrusts into the liver through the same skin puncture are possibly more effective than a single one. You must remember that the liver wounds will ooze for some little time after the puncture, and increase the effect. Manson calls attention to the fact, that fatal intraperitoneal hemorrhage has followed the puncture of an enlarged liver, mistaken for abscess, in leukocythemia, pernicious anemia or scurvy. The microscopical examination of the blood with careful differential counting of the leukocytes should prevent such an error.

Exploration of the liver for suspected pus must be thorough and searching. Further, when such exploration is made you should be prepared to do immediate operation for the evacuation of the abscess should it be discovered. It is quite an important point that your patient should thoroughly understand that the demonstration of pus must be instantly followed by its removal. The wounds made by your needle will exude pus just as they do blood in the puncture for bleeding, and, unless the operation be completed, they may be starting points for a fatal peritonitis. I remember, in my own experience, one such case in a native Filipino. He had so far overcome the inborne dread, so common to them, of all surgical procedure as to consent to the exploration and operation. When the needle struck the abscess his courage failed him, and he absolutely refused to submit to further measures. Indeed, he plucked out the needle with his own hands, returned to his home and died in a few days of a diffuse peritonitis. That case taught me another lesson, and that was to do all these explorations under general anesthesia. I began by doing the complete operation by infiltration anesthesia and many times was obliged to add general anesthesia in the midst of the procedure. General anesthesia permits you to make these punctures with more deliberation, particularly when it becomes necessary to make a number of them. The capsule of the liver is sometimes very sensitive, and the infiltration can never modify this pain.

For exploratory puncture of the liver you will require an aspirating needle at least eight inches or preferably, ten inches, long. Of course, all these punctures must be made under the strictest antiseptic precautions. If there be any localizing symptoms, such as bulging, local pain or tenderness, you will naturally select such a point for your first puncture, running the needle in slowly, with a strong vacuum in the aspirator bottle, since you will need a strong pull to force the dense pus through the needle. If there be no localizing symptoms, then the point of election is the eighth or ninth interspace in the axillary line or near the costal margin. Keeping well below the pleura, the needle should be carried in various directions through the left lobe. Then the liver should be systematically explored from in front and just below the costal margin. You can pretty thoroughly examine the whole organ with five or six different skin punctures, and you will need to make at least that many before you desist from your search. I think you will agree that it would require rare fortitude in a patient to submit to such a tedious and painful examination without a general anesthetic. These punctures are not dangerous and, as I have already explained, may be of distinct value to the patient even if the abscess be not tapped. The point of the matter is that, if you are going to make an exploration of the liver, you must do it thoroughly, and this huge organ will require at least this much examination before you are justified, in the presence of symptoms indicating abscess, in saying that there is no pus. Pus being found, there is nothing to do but to evacuate it freely, and here you have a choice of two methods: the method with trocar and cannula, and the method by free incision. Leaving your aspirator needle in place as a guide, you proceed to the radical operation.

The method with trocar and cannula is particularly applicable to deep-seated suppuration in the liver, particularly when the pus is found posteriorly or in the dome. It is easily and rapidly done, is attended with very little shock and, in the hands of English surgeons, has given very splendid results. The instruments required are very simple and can be extemporized almost anywhere. They consist of a trocar and cannula, 6 inches long and 3/8 inch in diameter; a blunt rod or stilette of steel and a rubber drainage tube, 1/2 inch in diameter. The stilette of Manson, who devised this operation, has appropriate button ends for fastening the drainage tube. Cantlie has simplified this so that the stilette carries a lateral spine for catching into the inner end of the tubing. You can use any stout steel rod of the required length, and a large rubber drainage tube with one end tied, tightly shut. The operation is performed by thrusting the trocar and cannula in the track of the exploring needle. The trocar is removed, leaving the pus exuding through the cannula. The drainage tube is now stretched over the stilette and, as it lengthens, its diameter decreases until it can be carried through the cannula to the bottom of the abscess. The cannula is now slipped out over the tube and stilette, the tube allowed to slack away from the external end and the stilette removed. This leaves the tube firmly fixed in the puncture. Being 1/8 inch larger in diameter, it everywhere firmly presses against the track and makes an effective and tight bridge across the peritoneal cavity. It will remain snug for two or three days, and by this time, when adhesions about it are firm, its pressure has so stretched the track that it becomes loose and can be gradually removed as the cavity diminishes in size. In case a larger tube is considered necessary, the manœuver can be repeated without using, of course, the trocar. This operation is particularly applicable to deep-seated abscesses, and I should advise it as the operation of choice when the abscess is two inches or more within the liver tissue.

The operation by incision may be either through the abdominal wall or through the thoracic wall. The steps in the operation through the abdominal wall will depend on whether or not there are firm adhesions. When adhesions have formed, an incision is made three inches long, parallel to the costal border and one inch below it, cutting down on the exploring needle. When the adhesions welding the liver and parietal peritoneum are reached, the abscess is opened by thrusting a pair of closed hemostatic forceps through the liver structure along the needle into the abscess cavity. The forceps are then opened widely and withdrawn. This method of opening the liver is applicable when there is only a thin layer of tissue intervening between the surface and the abscess. If the abscess be fairly deep, the puncture may be followed by quite sharp hemorrhage. Under such circumstances it will be better to open through the liver substance with a Pacquelin cautery at a dull red heat. When the abdominal incision shows adhesions have not formed or are insecure, a different plan will be necessary. You will then have the choice of two procedures. If you will securely pack the circumference of the incision between the liver and the parietal peritoneum with iodoform gauze, in thirty-six hours you will find adhesions sufficiently firm to permit of the opening of the abscess. This is the operation in two stages. Some operators prefer to finish the operation in one stage by suturing the capsule of the liver to the parietal peritoneum. The sutures should be closely placed in two rows to insure complete occlusion of the peritoneal cavity. After suturing, the operation is completed with sinus forceps or cautery as before. Sometimes, when this procedure is attempted, the abscess will be found so near the surface that the suturing needle may penetrate it. Under such circumstances you will be obliged to make the best of a bad bargain and immediately open the abscess without securing occlusion of the peritoneum. Indeed, some surgeons make no particular attempt at shutting off the cavity and practically disregard this step. I do not believe that this is sound surgery and, therefore, insist that, to the most complete extent possible, adhesions should be obtained either by the two-stage or by the single-stage operation. When ascites is present, adhesions, as a rule, cannot be obtained, and you will be forced to open the liver directly.

The transthoracic operation is done by making an incision over the seventh or eighth rib. About three inches of the rib is then resected. The diaphragm is then stitched to the skin wound and incised. The next step in the operation is the suturing of the liver capsule to the diaphragm. This is most difficult and very frequently cannot be accomplished. But a trial had better be made, as in some cases it can be perfectly done. The abscess is then opened in the manner described in the abdominal route. The great disadvantage of this operation is the danger of opening the pleura. When this accident occurs, the tear must be immediately sutured, I have described this operation to you, but I must say that I cannot recommend it. Among American and English surgeons it is not in repute. It is only indicated, in my opinion, when there is localization and bulging in an intercostal space. Under such circumstances the operation is feasible and proper, because obliteration of the pleural cavity and adhesion between the diaphragm and liver have taken place.

Of course, all these operations must be carried out with rigid asepsis. As soon as the pus is reached, the anesthetic is discontinued and a large caliber drainage tube carried to the bottom of the abscess. When the pus has ceased to flow, a large dressing is applied and a firm binder applied over the chest. For the first few days the wound will require frequent redressing, particularly because the dressing material absorbs the liver pus very poorly, and it will ooze out and lie in a heavy, sticky mass between the gauze and the skin. Improvement is usually rapid with evacuation of the abscess, and the tube is gradually shortened as the cavity closes up.

Right here two important questions come up. Will you curette the cavity or not? Some surgeons in the tropics recommend opening of the abscess from end to end, mopping out the cavity and packing with iodoform gauze. Other surgeons advise even more active scraping of the abscess wall. I believe this practice is unwise, particularly because of the vessels that may span the abscess cavity. I never curette the abscess wall. Similarly with the question of irrigation. Will you wash out the abscess cavity or not? This question has been threshed over as thoroughly pro and con as the same question has been sifted in the treatment of empyema. Ordinarily you will not wash out the abscess. If the sac be very large, making a counter opening necessasry, then washing of the sac is safe.

When, after an operation, the amelioration of the symptoms is not pronounced or if such amelioration be followed by increase of septic phenomena, the conclusion is forced upon you that another focus has formed that must be searched for as before. Similarly, in cases in which rupture has taken place into the lung or bowel, when the symptoms continue, an attempt must be made to evacuate the cavity through the skin.

IL POLICLINICO (SEZIONE PRATICA).

December 27, 1903. (Year IX, fasc. 9.)

1. A New Method of Excision of the Head of the Femur.
F. PADULA.

1.—Padula has adopted a method of excision which is not injurious to the muscular attachments and devoid of danger to the great vessels, which he describes as follows: An incision along the anterior margin of the tensor vaginæ femoris serves as a guide to the interstice bounded externally and posteriorly by that tensor and the gluteus minimus, and internally by the rectus femoris, psoas and iliacus. The finger is thrust through the interstice, and the capsule of the joint is readily reached by simply pushing these muscles to either side. An ample incision is made in the capsule, exposing the neck and head of the femur. The bone is then dislocated by extension and external rotation, and the neck cut through and the head extracted. [R. D. F.]

Original Articles.

SURGICAL AFFECTIONS OF THE BILIARY TRACTS.*

By JOHN B. DEAVER, M. D.,
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To join with you in honoring the brilliant patron of your Society, Professor James C. Wilson, my colleague and friend, is a great pleasure and a compliment I highly appreciate.

I have seen fit to choose a practical surgical subject upon which to speak to you this evening, the surgical affections of the biliary tracts. This subject has been selected because of a comparatively large personal experience with, and of the interest which has been aroused by, the recent writings of well-known surgeons upon these diseases. It is but twelve or fifteen years since, that affections of the liver and biliary passages were the nearly exclusive province of the internist.

With the improvement of surgical technique and surgical methods these cases were referred more and more frequently to the surgeon for treatment and the results attained proved the wisdom of such a course. This has been particularly true of cholelithiasis, because it has been observed that no medicine administered internally exerts any solvent action upon gall-stones; they either remain in the gall-bladder or pass out with the stream of bile, sometimes to obstruct the ducts with disastrous consequences.

The anatomy of the bile-passages must be recalled before the surgery is discussed, because the majority of lesions are predisposed by the peculiar anatomical arrangement of these structures. Bile is secreted by the hepatic cells and passes into the bile capillaries between these cells; at the periphery of a lobule these channels become bile-ducts and pass into the interlobular connective tissue, the hepatic cells between which the capillaries have passed becoming replaced by epithelium. By repeated union two ducts are finally formed, issuing from the transverse fissure of the liver, one from the right and the other from the left lobe. These unite at an obtuse angle to form the hepatic duct which is about two inches in length and, descending within the gastro-hepatic omentum, is joined by the cystic duct at an acute angle to form the common bile-duct.

The gall-bladder is pear-like in shape, about three inches in length, and lies beneath the right lobe of the liver. The fundus normally projects slightly beyond the edge of the liver, but cannot be palpated through the abdominal wall. The gall-bladder is in relation with the hepatic flexure of the colon, the pylorus, the duodenum, the anterior abdominal wall and sometimes the great omentum. It is lined by a mucous membrane richly secreting mucus, and which is thrown into minute folds, giving it a reticulated surface. The bloodvessels, lymphatics and the nerves form networks within the mucosa. The neck of the gall-bladder curves and turns down, becoming the cystic duct near the right extremity of the transverse fissure of the liver, then, passing backward and slightly downward to the left for about one and one-fifth inches, joins the hepatic duct at an acute angle.

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*Oration delivered before the James C. Wilson Medical Society, February 24, 1903, at the Jefferson Medical College, Philadelphia.

The cystic duct is narrow, and its mucous membrane is arranged in a spiral form, acting as a valve and tending to favor the lodgement of a stone attempting to pass through it. The common duct is about three inches in length and passes between the layers of the gastrohepatic or lesser omentum, in front and to the right of the portal vein and to the right of the hepatic artery and behind the first part of the duodenum, or the pyloric end of the stomach, in front of the inferior vena cava; passing along the left side of the second portion of the duodenum and behind the head of the pancreas, it finally turns to the right, descending between the second portion of the duodenum and the head of the pancreas. It is then joined by the duct of the pancreas, the duct of Wirsung, and together they dilate to form the ampulla of Vater. This common duct then pierces the wall of the left side of the second portion of the duodenum, running obliquely through the muscular layer for a distance of three-quarters of an inch, and empties into the duodenum about 4 inches from the stomach by an opening barely admitting a probe. The bile passes through the ducts into the duodenum under low pressure.

Bearing these anatomical facts in mind and noting that the duct of the biliary system empties directly into a portion of the intestinal canal, which normally always contains numerous more or less virulent bacteria, it will be readily comprehended that an ascending infection can easily take place.

Under normal conditions, the bile flowing constantly, micro-organisms do not gain access to the bile-ducts and the bile is sterile, but without the antiseptic power usually attributed to it, though not a good culture media owing to the absence of nutrient material.

Gastroduodenitis with extension of the inflammatory reaction to the common duct, exposure to cold, acute infectious fevers and various other conditions may induce a catarrhal inflammation of the bile-ducts with swelling of the mucous membrane and jaundice. Inflamed tissues are peculiarly susceptible to rapid invasion by bacteria, and the low tension under which the bile is secreted renders easy its arrest by slight backward pressure. Under such favorable influences the infecting micro-organisms gain access to the gall-bladder and upper bile-ducts with a resulting cholecystitis or cholangitis.

It is interesting in this connection to dwell upon the forms of jaundice arising independently of the presence of stones. I have mentioned that, as a result of gastroduodenitis, the mucous membrane of the bile-ducts becomes swollen, hindering the passage of bile and causing jaundice. This is the so-called Riedel's inflammatory jaundice.

But jaundice may occur with complete patency of the bile-ducts from a disturbance in the function of the liver cells or their infection by bacteria.

Kehr quotes Pick as distinguishing the following forms of functional jaundice:

"1. A nervous paracholia, a reflex from the nerves of the gall-bladder to the secretory nerves of the liver. The icterus of gall-stone colic, lead colic and emotional jaundice are examples.

"2. A toxic paracholia such as is caused by phosphorus, chloroform, animal poisons.

"3. An auto-intoxication paracholia occasioned by intestinal toxins, including icterus neonatorum.

"4. Infection paracholia, such as Weil's disease or acute yellow atrophy. The so-called 'catarrhal jaundice' is included by Pick under this heading, believing it to be due to toxins carried to the liver from an intestine, the seat of infection."

In accord with these observations may be placed the condition termed "subinfection by Adami, in which it has been proved that bacteria are normally picked up from the digestive tract, may be cultivated from the liver and other organs and that, in even the milder grades of enteritis, especially with constipation, the number of such bacteria taken up is increased and may be assumed to gain entrance into the blood- and lymphvessels.

The colon bacillus is the most frequent organism causing infections of the biliary tracts. This bacillus, which is present in health in every part of the alimentary canal, attains an extraordinary virulence under favorable conditions, inducing marked lesions in the gall-bladder and ducts. The typhoid bacillus has been frequently found in cases of post-typhoidal cholecystitis and in common with the colon bacillus may remain alive for some time in the gall-bladder until some reaction causes agglutination with clumping of the bacteria about which cholesterin and bile salts may deposit and form a gall-stone.

The presence of bacteria in the gall-bladder and ducts does not necessarily result in the formation of calculi, but their multiplication within the biliary passages may be responsible for a chronic catarrh.

Acute cholecystitis, therefore, is an infectious disease of the gall-bladder accompanied in all instances with a more or less marked cholangitis, the severity of the latter deciding the presence or absence of jaundice as a symptom.

During convalescence from enteric fever, pneumonia or with the history of a previous cholecystitis, a patient may be seized with severe paroxysmal pain in the right upper quadrant of the abdomen in the region of the liver and sometimes referred to the right shoulder. Nausea and vomiting follow with a rise of temperature and an increased frequency in the pulse-rate. The abdomen is rigid, more so on the right side than on the left, and sometimes distended, with general tenderness becoming localized to the region of the gall-bladder. Jaundice is not often present.

The rigidity and tenderness will rarely permit the distended gall-bladder to be palpated, but when felt it appears as a rounded, smooth swelling moving with respiration.

The diagnosis of a case presenting such symptoms is comparatively easy and treatment with hot fomentations, digestive repose and emptying the bowels by an enema will frequently relieve the patient of all symptoms.

Sometimes, however, cholecystitis is present without any known pre-existing disease, and the onset is characterized by pain low down, in the region of the appendix. When it is remembered that the appendix frequently occupies a position behind the cecum and extending upward toward the gall-bladder, it can readily be conceived how difficult a diagnosis might be, or when the terminal part of the appendix lies in close proximity or is apposed to the gall-bladder, as the speaker has observed. Very frequently, indeed, is cholecystitis diagnosed as appendicitis and vice versa. The differentiation between the two affections calls for great care, and the previous history with the location of the point of maximum tenderness must be accurately determined. In the gall-bladder affection this will most frequntly be found at the junction of the upper two-thirds with the lower third of a line drawn from the end of the ninth rib to the umbilicus, while in appendicitis, in the majority of instances, the most marked tenderness will be near McBurney's point.

Again in other instances of cholecystitis, as, for example, when the gall-bladder occupies a more median position, the pain may commence in the epigastrium and be mistaken for pancreatitis or gastric ulcer. Acute gastritis, of course, presents the history of dietary indiscretion and should not cause much, if any, difficulty in the diagnosis.

In pancreatitis there is severe, intense, epigastric pain followed by nausea, vomiting and distension of the epigastrium. Rigidity, if present, is bilateral, and there is usually severe prostration and frequent collapse. The temperature, early, is often subnormal.

A leaking gastric ulcer presents a history of gastric symptoms after eating, with pain localized to the epigastrium or left hypochrondrium and frequently described as boring through to the back, followed by sudden pain, tenderness and distension of the epigastrium with evidences of peritonitis.

During the course of acute cholecystitis a portion of the right lobe of the liver over the gall-bladder may elongate into a tongue-like process, known as Riedel's lobe.

While acute noncalculous cholecystitis will subside, as a rule, under nonoperative treatment the attending dangers and complications require careful observations with the intention of instituting surgical procedures when necessary.

Suppurative cholecystitis or empyema of the gall-bladder, while usually associated with gall-stones, may arise independently of their presence from infection of the gall-bladder with pyogenic micro-organisms, such as the streptococcus, staphylococcus or virulent forms of the colon bacillus.

In addition to the symptoms previously described as marking acute cholecystitis, the presence of pus adds those of septic infection. Rigors or chills with fever, loss of appetite and loss of weight and strength will be noted, the pain over the gall-bladder becoming more continuous. In acute purulent cholecystitis palpation of the gall-bladder region is very painful and especially so if the peritoneal covering and the neighboring peritoneum are involved. Where the serous coat of the gall-bladder and the neighboring peritoneum are involved, an ileus may result from implication of the colon and the symptoms of obstruction overshadow the gall-bladder inflammation.

A pericholecystitis with local peritonitis is probably invariably associated, and there is some danger of general suppurative peritonitis from the extension of the infection through the gall-bladder walls and not necessarily from perforation. Such a result has frequently been observed in acute appendicitis. Jaundice is usually absent, and its presence denotes an obstruction of the common duct, or associated cholangitis. Its appearance may be suggestive of grave importance as with an obstruction to the drainage of the hepatic ducts, the infection may extend to the liver producing suppurative cholangitis, an extremely fatal disease unless prompt operative measures with hepatic drainage are instituted.

If the gall-bladder ruptures, the pus usually travels along the course of the suspensory ligament of the liver to the umbilicus. It may point down alongside the colon toward the right iliac fossa, or form a mass over the gall-bladder and ulcerate through the abdominal wall. In rare cases evacuation takes place by ulceration into the duodenum, colon, stomach, portal vein, vena cava, etc.

Ulceration of the gall-bladder follows simple empyema in the majority of instances, especially when associated with enteric fever, carcinoma and gall-stones. The fever is higher and the chills more marked in this form of the disease. Stricture, fistulæ, perforation or hemorrhages may result, and in all cases an adhesive pericholecystitis is produced.

Acute phlegmonous cholecystitis is a rare and very fatal condition, due to infection with highly pyogenic micro-organisms. Gall-stones are usually present, though not necessarily so. The symptoms are those of a rapidly advancing peritonitis, like that in fulminating appendicitis, with great depression amounting almost to shock. The gall-stones, like fecal calculi in the appendix, may arrest the drainage of the organ and give the bacteria a full sweep. The pulse is rapid and feeble, there is fever, rapid thoracic respiration, tympanites and persistent vomiting. The region of the gall-bladder is markedly tender and general peritonitis rapidly follows with a fatal result, though in some cases the disease becomes subacute, with a localized abscess around the gall-bladder. A circumscribed peritonitis may cause the same symptoms as are observed in general peritonitis, making it impossible to tell which of the two is present.

Gangrene of the gall-bladder from the action of the bacteria, thrombosis of the bloodvessels and sometimes from overdistension presents the same symptoms of suppurative cholecystitis with less pain and more marked rigors, it frequently results in the phlegmonous form.

When acute cholecystitis has become suppurative in character, prompt operative measures must be inaugurated, for the same reason as is advanced in appnediceal surgery; we cannot foretell the consequences of the purulent infection. The operation to be performed is cholecystostomy, i. e., opening the gall-bladder and suturing it to the abdominal wall with the establishment of drainage. The technique of this operation will be described later. In all cases in which the tumefaction of the gall-bladder is subsiding, indicating a restoration of drainage, operation is not necessary, and the patient will recover with absolute rest and supportive treatment.

Acute phlegmonous cholecystitis and gangrene of the gall-bladder require immediate operation as soon as the diagnosis is made. The former condition should be treated as an empyema, that is, opened and drained. If general peritonitis ensues before a diagnosis is made, operation should be deferred until the acute symptoms have abated. Gangrene of the bladder requires excision as urgently as a gangrenous appendix necessitates appendectomy. In the presence of acute general peritonitis, operation is contra-indicated owing to the danger of spreading the infection.

Infectious cholangitis, while usually a most serious disease, holds out some hope for recovery by the early establishment of hepatic drainage. Abscess of the liver, diffuse hepatitis and acute cirrhosis may follow those cases which escape a fatal ending from pain, cholemia and exhaustion.

The symptoms of cholangitis are variable, but, as a rule, a previous history indicating the presence of a stone in the common duct will be obtained, or else there will be an existing infectious cholecystitis. Jaundice is variable in its degree but usually intense, the liver is tender over its area and gradually increases in size, the temperature is elevated and intermittent in character, there may be rigors or chills. With the presence in the common duct of gall-stones exerting a ball-valve action, the symptoms are more irregular and are frequently known as Charcot's intermittent hepatic fever.

Hydatid disease, ascarides lumbricoides, tuberculosis and malignancy may, in rare instances, induce a cholangitis. During the course of infectious fevers, enteric, influenza and pneumonia, cholangitis may occur as a complication. This concludes a brief description of the acute infections of the biliary system and leaves us impressed with the fact that surgical treatment is required to relieve these infections, with the exception of catarrhal jaundice, the stage of acute cholecystitis at which suppuration has not taken place when the enlargement of the gall-bladder is diminishing or in those cases with attacks of cholecystitis at infrequent intervals and of mild severity, irrespective of the presence of jaundice. The surgical treatment of a suppurative lesion in any part of the body has for its cardinal treatment the establishment of drainage, and thorough, careful drainage forms the foundation for the treatment of these biliary duct infections.

Following any severe inflammation of the gall-bladder a pericholecystitis develops from the extension of the inflammatory reactions with the formation of adhesions embarrassing the functions of the contiguous organs involved by the adhesions. In the suppurative form of cholecystitis such adhesions are apt to be more extensive from the extension of the infection to the surrounding viscera and peritoneum. The anatomical relation of the gall-bladder to the hepatic flexure of the colon, to the duodenum, pylorus of the stomach, pancreas and great omentum is so intimate that these structures are rendered very liable to involvement in this adhesive peritonitis.

Intestinal obstruction has frequently been diagnosed in a case of suppurating cholecystitis with a local peritonitis involving and paralyzing the large bowel. After the subsidence of the acute symptoms severe pain may persist from the peristaltic action of an adherent duodenum or great omentum, or dilation of the stomach may ensue from the obstruction, by constricting bands, involving the pylorus or duodenum.

Chronic cholecystitis frequently follows the acute form and may be due to the presence of gall-stones or to the retention of stagnant bile from contraction of the gall-bladder and its fixation by adhesions. It is characterized by mild attacks of colicky pain, absence of jaundice, as a rule, which, when present, is very slight, and the absence of tenderness. Following a number of attacks of cholecystitis a purulent inflammation may occur without enlargement of the gall-bladder owing to the contracted condition of the thickened walls.

The treatment consists in the regulation of habits, diet and bowels. It is in this class of cases particularly that the Carlsbad treatment proves beneficial. Failing to obtain relief by these measures, the gall-bladder should be opened and drained, thereby securing physiological rest. Cholangitis may also exhibit a chronic form, but, as this is invariably due to a gall-stone in the common duct, its discussion will be considered later.

We now come to the subject of cholelithiasis or stones in the gall-bladder and its ducts.

This disease has been found, as a result of a study of elaborate statistics, to be much more frequent than is commonly supposed. It is obvious that such statistics must be gathered from post mortem sources, as cholelithiasis is not only uncertain in its diagnosis, but may never furnish a single symptom to attract the patient's attention to the lesion within his gall-bladder.

Schröder found that gall-stones were present in 12% of 1150 bodies examined at the Strassburg Hospital, and Kehr states that almost every tenth adult body exhibits them. This may seem an exaggeration if we do not analyze Schröder's table still further. Thus, in patients under 30 years of age gall-stones were present in only 3% of the bodies examined, in those between 30 and 60 years, in 11%, while in patients of 60 years and over 25% had calculi in their gall-bladders. Schröder further found that of male bodies examined gall-stones were present in 4.4%, while in females the percentage was 20.6.

The greater prevalence in women has been ascribed to various causes, all of which predispose to defective drainage of the biliary system. Pregnancy, corset wearing, lack of exercise and a greater tendency of the sex toward a relaxed condition of the organs may be the etiological factors.

The immediate cause for the formation of calculi in the gall-bladder or ducts is somewhat obscure. Bile contains from one to two per cent. of bile acids, which hold in solution considerable quantities of cholesterin, a monatomic alcohol, probably eliminated by the epithelium of the bile-ducts and gall-bladder, as there is no proof that it is a product of hepatic metabolism. It is probable that an infecfection of the biliary tracts or canals with catarrhal inflammation and swelling of the mucous membrane induces stagnation of the bile in the gall-bladder with the formation of the albuminous constituent from degenerated mucus and epithelial cells, with the precipitation of the cholesterin and the production of bile salts, particularly calcium bilirubinate. This debris may form the nidus for the stone, or a clump of the bacilli themselves may be the starting point around which the cholesterin deposits.

Bacteria have not only been demonstrated within the gall-stones, but injections of the bacillus coli communis and of the typhoid bacillus into the gall-bladder, experimentally, have been followed some months later by gall-stone formation. Last fall, in one of my cases, with stones 2 cm. (3/4 inch) in diameter, the colon bacillus in pure culture was obtained from the interior of the stone.

But bacteria may remain in the bile for some time without causing gall-stones, and we are led to believe that, after all, stagnation of the bile from deficient drainage is always necessary for the production of calculi. Among the etiological factors usually described as inducing such stasis may be mentioned heredity, a sedentary habit, tension on the cystic duct from floating kidney, floating liver, the liver of tight lacing and old age.

The greater frequency with which gall-stones are encountered in those over 60 is probably due to the atonic condition of the muscular tissue in the walls of the ducts or to increased formation of cholesterin and bile salts in common with the atheromatous process which takes place generally in the bodies of those in the latter period of life. It is also possible that with each added year of life more opportunity is given for the formation of gall-stones, just as healed tuberculous lesions are met with more frequently as age increases.

The number of stones met with in the gall-bladder may vary from one to several thousand, and in size they may be barely perceptible or as large as a lemon. When the stones are numerous they are polygonal in shape with smooth facets at their junction with each other, and they are about the same size. At times five or six well-formed concretions may be found, quite round and with a mulberry appearance. In consistency they may be soft and putty-like, crumbling under the touch, or firm and, when fractured, presenting a crystalline appearance. In some instances they are as hard as the lithic acid vesical stone. The usual color is a dirty brown. The greater portion of the stone, about 75%, consists of cholesterin, but bile pigments, inspissated mucus and epithelium may enter into its composition. The outer layer of the stone is usually harder and contains more lime salts. Sometimes a pure cholesterin stone is found.

Stones may be present in the gall-bladder without causing any annoyance to the patient when the cystic duct is patent and the gall-bladder walls are but little diseased. Kehr states that not more than one in twenty of those having gall-stones suffers any inconvenience from their presence. Frequently the first symptoms appear when the stones become impacted in the bile-ducts, forced into them by the inflammatory process in the gall-bladder. The attack may often come on without any marked evidence of an exciting cause, though careful questioning (again notice the importance of a carefully elicited history) may find previous, ill-defined symptoms, such as slight transitory jaundice, or pain over the gall-bladder region which indicates the time of the infection of the gall-bladder. In other cases the acute infectious diseases, such as typhoid fever, may be followed by a period of quiescence, and months later the gall-stone attack is suddenly manifested. An infection of the gall-bladder may subside, leaving the means for gall-stone formation behind it, and, should a reinfection take place with the colon bacillus, for instance, an acute cholecystitis with gall-stones results.

It should be observed that, though gall-stones may form in the gall-bladder, they cannot be expelled except by considerable force exerted by the unstriated muscle fibers of the gall-bladder; and, indeed, they may remain latent in the latter. Kehr emphasizes the point that "something else must be added if the cholelithiasis is to be changed from a latent to an active condition, and that this change is caused in the great majority of cases by the outbreak of an inflammatory process in the gall-bladder itself; in a very few by the mechanical obstruction of the cystic duct by a stone, without an inflammation preceding or being associated with it."

The symptoms of cholelithiasis depend upon the degree of infection in the gall-bladder and ducts and upon the site of the impacted stone.

(To be continued.)

RUPTURE OF THE URETHRA; PYOSALPINX; EXCISION OF TUMORS OF THE NECK.

SURGICAL CLINIC DELIVERED AT THE HARLEM HOSPITAL, NEW YORK.

By THOMAS H. MANLEY, Ph. D., M. D.,

of New York.

Gentlemen, this afternoon among other patients to be operated upon, there are three to which I will venture to call your special attention, because they belong to a comparatively common class of surgical lesions.

The first is a case of urinary extravasation into the perineum and scrotum, succeeding a rupture of the urethra posterior to a stricture.

You will note that the patient's scrotum is enormously distended, and that on the left side its surface is of a livid-red color and pointing. His general condition is very bad; pulse 124, temperature 103°. He has been in great pain and has had no sleep for the past two nights. He has been a heavy drinker. He has had this stricture treated by internal urethrotomy some fifteen months ago, once before it was divided. He now passes only a dribble of urine through the urinary meatus. Now what shall we do for this man? I am sure that you will say the thing to do is an aseptic urethrotomy, but asepsis will not help us to spare blood, nor prevent shock, moreover, it will sometimes leave a perineal fistula, which is often difficult to close, but, worst of all, it will not always effect a permanent cure.

Hence, I will treat this case on conservative lines. I will first cocainize the part and make a free opening into the scrotum, with a view of permitting free evacuation of pus, and the escape of sloughs, which always occur in these cases, and then treat the stricture by gradual dilatation, commencing with filiform bougies and then, day by day, cautiously and gradually dilating until a No. 20 English steel sound can be easily passed.

If you have experience and skill in manipulation you will find no description of urethral stricture which will not yield to this simple and always effective procedure. It should totally displace the scalpel in all but very rare cases; indeed, I may say that I have never seen a single case that resisted gradual dilatation, whether the stricture was complicated or not. We begin with the smallest whalebone bougie or "whip" after the urethra is well irrigated with a 1 to 50 carbolic solution. After the first bougie is passed, it is allowed to remain in over night. The greatest difficulty is the passage of the first one, after that there is smooth sailing.

I beg to caution you to avoid rudeness or force; tact, caution and perseverance are demanded here. We should never give our patient pain; however, if the urethra is highly sensitive, we should overcome this with a cocaine solution before we begin.

Our next case is one of gonorrheal pyosalpinx. The patient is a young, single woman, a servant girl, 27 years of age, who denies venery, but we find no trace of a hymen left; moreover, she has a mucopurulent discharge from the vagina which the miscroscope shows teems with gonococci. She has gone through all the acute stages of pelvic peritonitis and now there remains a large, tense, painful mass in her left groin, pressing well down behind the uterus.

In the days of Tait the most of these masses were operated upon by enucleation through a laparotomy wound, the general peritoneal cavity being opened, but this procedure always involves grave risks, both immediate and remote.

Sometimes these pus formations can only be removed with laceration or possible perforation of the viscera, this being followed by a dangerous type of peritonitis. Again, in any event, postoperative ventral hernia was not an infrequent and very troublesome sequela.

Pean first demonstrated that in the greater number of these cases the distended and deformed Fallopian tubes tend to gravitate into Douglas's cul-de-sac and there acquire firm adhesions to the bladder, rectum and broad ligaments, becoming so sequestered and lodged as to be quite outside the peritoneal cavity. Hence an operation for their relief was extraperitoneal when they were attacked *per vaginam.*

This will be our line of attack this afternoon. In operating through the vaginal passage great caution must be observed not to lacerate the bladder or rectum. The bladder will be first emptied, and care must be taken that the rectum, sigmoid and colon are well emptied by copious enemata.

The parts having been duly prepared, we begin by firmly securing and drawing the cervix well downward and forward. The first incision divides the mucous membrane, the next divides the cellular tissues; keeping the point of the scissors well up toward the uterine body we pass it forward, and now we know the abscess is opened by the free discharge of pus. The scissors are widely opened to make a free vent. The pus pocket having been well squeezed out, we then irrigate its cavity with a solution of corrosive sublimate 1 to 3,000, then introduce a sterile tampon. I have seen so many cases of iodoform poisoning from surgical dressings that I now rarely use those impregnated with iodoform at any time, a fashionable medicament which, in most cases, is worse than useless.

We leave the tampon in for 48 hours. The period of convalescence will largely depend on the character of the infection and the constitution of the patient, extending from a week to three months.

The next patient is a little girl, six years of age, who has suppurating nodes in the submaxillary triangle of the right side of the neck. There is, as you observe, a large mass of irregularly scattered tumors extending from the suboccipital triangle, under the sternomastoid muscle, as far forward as the chin. All the tentative remedies have been patiently tried in this case for more than a year, and now her physican sends her to the hospital to have a surgical operation done.

I may say that I am averse to operating on these cases until local and constitutional remedies have failed; because, first, *per se*, they never endanger life, and all the talk about their being the centers for the diffusion of sepsis is purely visionary; secondly, because in most cases they tend toward spontaneous dispersion, and thirdly, except in an experienced hand, their operative removal is a highly perilous procedure.

Now that we have to operate, what is the technique? First, always make a large incision if you have decided to operate and give no heed to cosmetic effects in this direction, as we are here in deep water and hence must do no cutting in the dark. Do a radical operation and clear out the superficial and deep chains, or leave the case to nature.

Remember that these glands are found in varying degrees of degeneration, from solid induration to mere bags of pus, that their superficial characters are often most deceptive, that they often have wide and firm adhesions to the carotid sheath and internal jugular vein.

With a large incision and a pair of good retractors the deeper parts are laid widely open, with good light and a cautious dissection the whole mass can be readily cleared out, as the sternomastoid muscle is always readily movable, I have never found it necessary to divide it.

The skin being divided, the platysma, superficial and deep fasciæ are then split, we clamp off all the small spurting vessels, and one by one decorticate the infected glands; a large one, as you observe here, is firmly adherent to the internal jugular vein and the superior cervical ganglion of the sympathetic, but you see by keeping close to its capsule we readily turn it out.

Now the whole mass is out and a vast hiatus remains. All the bleeding points are securely ligatured and parts wiped dry; no irrigation is employed. The wound is evenly sutured. A small wick of gauze drainage is placed in either end after this; plenty of absorbent dressing is applied.

After 48 hours the drains are removed, the dressings are not further disturbed for a week, when the wound is found soundly healed, and the sutures are then removed.

It is surprising how excellent the results are after an operation involving so much mutilation; the subcutaneous tissues fill in rapidly and the long linear scar in a short time fades out, and scarcely any trace of the operation remains

If possible, it is desirable, before one undertakes this operation for the first time, to make a careful dissection on both sides of the neck of a cadaver, as by this means he revives his knowledge of anatomy and so fixes the structural relations in his mind, that he is supported by a confidence which knowledge always brings, and his operation is something more than an experiment, with lessened dangers and every prospect of good results.

IS NEPHROPTOSIS HEREDITARY?

By JOHN G. SHELDON, M. D.,
of Telluride, Colorado.

From reading and observing I have come to look upon nephroptosis as an hereditary condition. I believe that heredity is the most important factor in the etiology of floating kidney, and that an abnormally movable, or a floating, kidney never occurs unless the patient is congenitally predisposed to the condition. The opinions, stated in the foregoing, have been the outgrowth of facts derived from two sources: (1) The experiences and writings of students of the subject and (2) personal observations.

M. L. Harris, in the *Journal of the American Medical Association*, June 1, 1901, contributes what I consider a most important article on the etiology and treatment of floating kidney. His conclusions are as follows:

(1) The essential cause of movable kidney lies in a particular body-form.

(2) The chief characteristics of this body-form are a marked contraction of the lower end of the middle zone of the body with a diminution of the capacity of this portion of the body cavity.

(3) This diminution of the capacity of the middle zone depresses the kidney so that the constricted outlet of the zone comes above the center of the organ and all acts, such as coughing, straining, lifting, flexions of the body, etc., which tend to adduct the lower ribs, press on the upper pole of the kidney and crowd it still further downward.

(4) It is the long-continued repetition, in a suitable body-form of these influences, which collectively may be called internal traumata, that gradually produces a movable kidney.

(5) A distinctly movable kidney is never the immediate result of a single injury or external trauma.

Although I had not made the measurements named by Harris before reading his paper, my experience since that time, however, has been in accord with his, and I cannot remember having seen a case of nephroptosis that has not been in accordance with the conclusions that he has given us.

Guillet, of Caen, in discussing the influence of heredity upon the occurrence of movable kidney, in the *Bulletin Médical* of February 25, 1902, quotes Albarran as believing that the condition is the result of a congenital predisposition—in other words, that it is an hereditary affection. Albarran also believes that nephroptosis is a sign of degeneracy. Guillet does not agree with Albarran. He believes that movable kidney is very rarely hereditary, almost always being acquired, and that it is not a sign of degeneracy. He states that if movable kidney is hereditary many more cases would be reported occurring in children. However, he agrees with Albarran's statement that many cases have been found in members of one family.

The absence of reports of many cases in children may be partially explained in two ways: (1) The condition not being suspected as occurring in children is frequently overlooked as the cause of the symptoms of which the patient complains; (2) children congenitally predisposed to nephroptosis and suffering from a moderate degree of the condition, may not have lived long enough to have been subjected to a sufficient number of exciting causes to render the condition sufficiently prominent to be readily recognized.

From the foregoing it might be assumed that the so-called exciting causes were the most important factors in the production of movable kidney I do not believe this to be the case. Multiple pregnancies, lax abdominal walls, corset, wearing and traumata may assist in making manifest a floating kidney in a congenitally predisposed patient; but I do not believe that they ever would produce nephroptosis unless the necessary hereditary conditions were present. The work of Watson (*Boston Medical and Surgical Journal*, Vol. CXIV, No. 12) is important in this connection. He has shown that the structures that are of importance in maintaing the kidney in its proper position are behind and above the organ, and that the factors in front of the kidney attachments and intra-abdominal pressure are not so important, in keeping the kidney in position, as Keller (*Monath. f. Geb. u. Gynack.*, January, 1898) would have us believe. Gerota, in his work, has arrived at the same conclusions as has Watson.

M. Einhorn (*Medical Record*, August 13, 1898), in discussing movable kidney, makes the statement that he believes that there is an individual predisposition which is active in producing nephroptosis in most cases. Drummond is practically of the same opinion.

From Guillet's statements it might be supposed that cases of movable kidney in children are extremely rare. Such is not the case. Hirschsprung, Drummond, Gilford, Keppler, Steiner, Wilks, Howard, Albarran, Still, Fisher and others have reported cases. Two cases have come under my observation. (*Vid. Infra.*) Fisher's case (*Univ. Med. Mag.*, Vol. X, No. 10) was observed at post mortem in an infant, 18 months old. Still's cases (*British Medical Journal*, No. 1972, 1898) were also in infants, one observed at post mortem, the other in a healthy baby.

From my personal observations on nephroptosis I shall simply mention 5 cases that occurred in one family, and shall report two cases occurring in children.

About one year ago I was called to see a woman who was suffering from symptoms suggesting an abdominal lesion. On examination I found that the right kidney was freely movable. Nephropexy was done which relieved the symptoms. Her sister was operated upon two years previously for bilateral nephroptosis. Her mother and one aunt also complained of abdominal trouble and, on examination, the right kidney of each of them was found to be freely movable. Her daughter, a girl of 18, was examined and a right-sided nephroptosis found. She complained of no symptoms. None of the other members of the family was examined.

While serving as interne in Cook County Hospital, Chicago, I examined a girl of 7 years who was suffering from diphtheria, and found the right kidney displaced and movable. The child complained of no symptoms that could be referred to the kidney; neither could she give any explanation for the occurrence of the condition. I did not have the opportunity to examine her mother.

In September, 1901, Mrs. T. brought her son, a boy of 8 years, to me stating that he was subject to "spells of sickness in his stomach, pain in the right side, nausea and headache." He rarely vomited. These attacks sometimes lasted 6 or 8 hours and occurred, on an average, once in two weeks. Excitement or violent exercise seemed to precipitate them. The boy was well developed and well nourished and appeared perfectly normal. On examination, the right kidney was found to be displaced downward and was freely movable.

When the child was two years old he was hit on the head by a falling brick; and, as he had complained of his "stomach and head" since he was four years old, his symptoms were attributed, by his relatives, to the injury. External examination of the head was negative. By some who had treated him, appendicitis was considered as the cause of his trouble on account of his stating that the right side of the abdomen gave him much more trouble than did the left.

No condition could be found to explain the displacement of the right kidney. Examination of the mother, who said that she was perfectly healthy, showed the right kidney to be easily palpable.

Nephropexy was advised and performed and entirely relieved the symptoms.

A CASE OF TRIGEMINAL NEURALGIA COMPLICATING TYPHOID FEVER.

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of Cleveland, Ohio.
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Cases of neuralgia complicating or following acute disease and seemingly dependent upon a disturbance of the neural nutrition are sufficiently rare to merit study and report.

The following case of severe and persistent trigeminal neuralgia, which developed in the convalescent period of a typical attack of typhoid fever and which has continued for three years, was observed by the writer through the courtesy of Dr. C. E. Schilling, of Canton, Ohio, who referred the case for examination and advice:

M. R., a white servant girl, aged 20 years, has a good family history. The patient has had the usual diseases of childhood, but never experienced any severe illness until three years ago, when she suffered from a severe attack of typhoid fever, for which she was treated by Dr. E. O. Morrow, of Canton. During the sixth week of her illness, while yet in bed, she began to suffer violent pain in the left side of the face. This pain grew worse until it was so severe as to cause the jaw to "lock" so that the mouth could not be opened. The left side of the face was swollen, and a point of marked tenderness was noted just in front of the left ear. Since that time, she states, she has never been completely free from pain; there are times, however, when she is comparatively easy, and others when she suffers paroxysms of excruciating neuralgic pain, which keep her from sleep and render her existence most miserable. Notwithstanding the fact that her teeth were sound, nearly all of them have been drawn with the mistaken hope of affording her some relief.

Examination: The patient is a strong-looking young woman, of good color and certainly not at all anemic. It is observed that when looking upward the left eye turns outward. This, she says, has existed since having typhoid fever. The hearing in the left ear is considerably dulled, which is undoubtedly due to the fact that the Eustachian tube of that side is closed, since the auditory nerve conduction seems to be normal. Sensation over the lower jaw is slightly obtunded, and the skin is sore and painful to touch. In mapping out the area of pain we find that it is strictly delimited to the distribution of the sensory portion of the third branch of the trigeminus. Inspection of the ear and nasal and postnasal cavities fails to reveal any cause for the neuralgia. The pupils are equal, react to light and accommodation and consensually. There is no nystagmus; the palpebral apertures are equal, and the disks are clear. The patient suffers from no headache or dizziness, and her station is perfect. All her reflexes are normal, and, except for the slight ocular paralysis, the deafness and the neuralgia, she is a healthy young woman. Whether this neuralgia is due to changes which took place in the nerve itself, due to nutritional disturbances or to toxic agents, or whether it is a pressure neuralgia from some swelling and tumefaction of the periosteum or other tissues along its course, it is impossible to ascertain.

THE TOXEMIA OF PREGNANCY.*

By WILLIAM H. WELLS, M. D.,
of Philadelphia.
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(Concluded).

Diagnosis.—The diagnosis of the toxemia of pregnancy is made from the symptoms, and from the amount of solids and urea excreted. I repeat that it should never be made from the presence or absence of albumin alone. I believe that, notwithstanding the modern teaching on the subject, many physicians still found their diagnosis on the same condition of the urine that would be found in an ordinary case of nephritis. The symptoms of the toxemia of pregnancy may somewhat resemble those of hysteria, and here let me say that hysteria may be caused by toxemia. In one instance I saw a patient with hysteria, and her symptoms so nearly resembled those of a mild attack of eclampsia that it really required some study to discover the true nature of the case. Infrequently the symptoms of the toxemia may somewhat resemble those of threatened miscarriage, and no doubt constant irritation of the uterine muscle by the toxins may produce a premature emptying of that organ. If, however, the cause be the uterine cramp of a toxemia, the patient will have no bloody discharge, the cervix will not soften nor the os dilate, and, if internal hemorrhage should be suspected, the rapidly increasing size of the uterus, with the symptoms of shock and hemorrhage, aid in the diagnosis. In the form of toxemia in which vomiting is a prominent symptom, we should always bear in mind that this is not the only cause of nausea, although it is one of the undoubted causes of pernicious nausea. If due to malposition, adhesion of the fetal membranes or other recognized causes of nausea, an examination would settle the question as to whether or not a misplacement of the uterus or some other cause was producing the nausea. Occasionally the symptoms of toxemia may resemble those of an ordinary acute indigestion, produced by indiscretion in diet. The history, its short duration and a brisk purge will settle the question. Acute indigestion, itself, may cause a transient toxemia. In all forms, the continuance of the condition, the fact that the symptoms increase from day to day, and, above all, the examination of the urine will settle the diagnosis.

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*Read before the North Branch of the Philadelphia County Medical Society, May 5, 1902.

When the convulsions of toxemia or eclampsia present themselves, the differential diagnosis is often more difficult. But as I do not intend to take up the question of eclampsia at this time, we will not discuss the subject further.

Prognosis.—In the majority of cases the prognosis of the toxemia of pregnancy, if not complicated by a pre-existing or coincident nephritis, is good, providing the patient is under the careful observation of a competent physician. Wtihout this care the tendency is toward the most rapid fatal condition of eclampsia. When diseases of the liver and kidney are present, the prognosis is by no means so favorable. Undoubtedly nephritis is one of the most, if not the most, dangerous disease with which the pregnant woman may be afflicted, yet even in this case with very great care it is possible to have the woman go through the period of gestation without much additional damage to the kidneys. I would say that the prognosis for a pregnant woman whose excretions were faulty, was only good in so far as she followed out the advice of the attending physicians.

Treatment.—The important indication in the treatment of toxemia is to increase elimination by the bowels, kidneys, liver and skin. This can be accomplished by giving the patient such food as will be entirely assimilated, leaving as little waste as possible to be excreted. As a rule, the foods best adapted to toxemic patients should contain a low percentage of nitrogenous principles. Most patients will do best if not entirely cut off from the meats. I usually allow them the white of chicken, lamb or similar meats in a moderate quantity, once or twice daily. Both milk, or what is much better, foods composed of milk such as junket, cornstarch, puddings in which milk enters into the composition, oatmeal, rice pudding, etc., are excellent. The vegetables containing starch and those rich in mineral salts, such as lettuce, spinach, etc., should be freely allowed. Wild game should be prohibited. Nearly all fruits, either raw or stewed, are beneficial; and oranges, melons, prunes, apples and peaches are especially valuable. Care should be taken that sufficient nutrition be given to preserve the strength of the patient. The frequent eating of sandwiches, delicacies and what may be called racy articles of diet, such as potted meats, cheeses, etc., must be strictly prohibited. Coffee and tea may be allowed in rare instances only. In my experience the malt liquors produce nothing but harm; in several cases I have tried beer and porter in women accustomed to their use when not pregnant, and their use was invariably followed by toxemic symptoms. When patients insist upon some alcoholic beverage during pregnancy, the least harmful are the dry Rhine wines. In nauseated patients frequent feedings of small quantities of food give good results. The patient should not see the food prepared, and the amount given should not fully satisfy her. The retention of food will be greatly aided by the administration of five grains of strontium bromide and 1-10 of a grain of cocaine hydrochlorate one half hour before meals. In many cases predigested foods, peptonized milk, liquid peptonoids, etc., will be required. The patients must be placed under the observation of a competent nurse, so that the amount of food taken and retained may be definitely ascertained. In the cases in which kidney action is impaired, the urine examinations showing a large amount of albumin and casts, the diet must be such as would be given to a nephritic patient.

The clothing must be such as to increase elimination by the skin. There should be no restriction around the waist, and the weight must be suspended from the shoulders. Bathing must be a daily part of the routine of the patient's life. Tepid or hot sponge baths followed by friction, preferably given by a nurse, are highly beneficial. Salt water baths will often do good.

A suitable amount of out-door exercise must be taken to a point short of fatigue. Fresh air and sunlight are necessary. In severe cases the hot pack will secure such a relief of the symptoms that patients will go to the normal termination of gestation, who would otherwise be seized with eclamptic convulsions.

The action of the kidneys may be increased by giving the patient a fairly large quantity of water regularly during the 24 hours. The carbonated waters:—Buffalo lithia, Londonderry lithia, or Apollinaris answer the purpose very well. The majority of women will take them in preference to ordinary drinking water, although the latter, properly sterilized and filtered, will suffice. The patient should take at least a full glass before every meal, at bed time and on rising in the morning. The laxative waters, such as Hunyadi Janos, etc., answer a double purpose but their taste is objectionable to many patients. Renal action can also be stimulated by the use of sweet spirits of niter, either given in plain water or in lemonade. It is said that its diuretic action is increased when given with hot lemonade. Patients often complain of attacks of syncope or cardiac irritability, in these cases the tincture of digitalis, either alone or combined with small doses of nitroglycerine will give good results. The nervous irritability may be relieved by small doses of chloral, say two to five grains every two, three or four hours. In severe cases of toxemia, when the pulse tension is high and veratrum viride is indicated, it is best given hypodermically. The preparations of opium, of which morphine stands at the head, are contra-indicated except during an eclamptic convulsion, at which time some authors advise their use. Caffeine may sometimes be used, and in cases of nervous depression small doses of strychnine may be beneficial.

We will now speak of a class of remedies which are of the utmost importance, namely those which increase elimination by the liver and intestines, and of these we may estimate calomel as by far the most important. I cannot agree with those who say that it should always be given in small doses; my experience has taught me that better results are obtained when calomel is given in a fair dose, say of 5 to 10 grains, than when the amount is smaller. Sodium phosphate combined with calomel has proven of great use. I am in the habit of beginning the use of calomel by giving five grains combined with a dram of sodium phosphate divided into four or five powders or capsules, one being taken every hour, the last one at bed time. Calomel should always be followed by one of the salines, and here I think magnesium sulphate is the best, although in patients, in whom nausea is a marked symptom, calcined magnesia, or citrate of magnesia will be more readily retained. Magnesium sulphate when used as a laxative for those patients should be given for some time. It is almost impossible to empty the bowels entirely by the administration of one or two doses of a laxative. The purging must be kept up for a time before any effect is produced. It has been shown that a large portion of the mucous membrane of the large intestine becomes coated with a sand-like fecal deposit, and this is exceedingly hard to remove. The contents of the intestinal lumen may be again and again evacuated without this deposit being materially reduced.

It seems possible that the peristaltic action of the inestines is reduced during pregnancy, and it is quite possible that, as the uterus increases in size, the inestines are more and more pressed upon and their movements lessened; this decreased peristaltic action being one of the most active causes of the deposit. Frequently doses of castor oil do good; when constipation is very obstinate, croton oil may be necessary. Such remedies as aloes may in some cases start up the uterine contractions, when this organ remains in an irritable condition. The compound cathartic pill and the compound colocynth pills of the pharmacopeia have been recommended by some authors. Colocynth undoubtedly does good by producing free watery movements. Podophyllum is of some use in certain cases; I do not know that any of these last mentioned drugs have any advantage over the salines. Whatever laxative is used, it must be kept up for a number of days until the patient has from six to eight profuse watery stools within 24 hours. Irrigations of the bowels are of the greatest possible value; but it is useless or almost useless to give these with an ordinary rectal nozzle attached to a fountain syringe. When rectal irrigations are used the fluid should be injected through a regular rectal tube with the opening in the end and not on the side. A return flow rectal catheter will probably be a neater way of administering it. I have found again and again that high rectal irrigations have produced the greatest reduction of toxemic symptoms in those on the verge of eclampsia. Not only is the bowel flushed out by these irrigations, but a certain portion of the injected fluid is absorbed and the poison diluted thereby. As to the composition of the enema various substances may be used; as good as any is a sterilized normal salt solution. When the constipation is marked, magnesium sulphate or inspissated ox gall, turpentine or soap suds may be used. The quantity should average not less than two quarts. It is probably best given through a fountain syringe held about three feet above the bed on which the patient lies. The fluid should be allowed to flow in slowly, and, when the distension becomes unbearable, the bowels may be emptied in a bed pan; or, if a return catheter is used, the fluid will return through the second tube. I think these irrigations are followed by the greatest benefit when the bowels have been previously emptied by a laxative given by the mouth. It is important that the tube be passed up as far as it will go, as a rule it is well oiled or covered with soft soap, and is used with the patient lying on her left side; it gives but little inconvenience, and I have never seen uterine contractions produced by its use.

Two or three irrigations will be required each day for five or six days. When there is nausea, pyrosis or hyperacidity, marked relief will often follow lavage of the stomach, using a 50 per cent. boracic acid solution or a solution of sodium bicarbonate followed by the introduction of 5 or 10 grains of calomel.

The same method of lavage of the stomach is highly beneficial in the convulsions of eclampsia; as a means of cleansing the stomach, and probably diluting the poisons, besides it affords a convenient way of introducing calomel or other laxatives into the stomach. When nausea is a marked and constant symptom, it is best to depend entirely upon enemata to move the bowels, leaving the stomach free for nourishment.

When toxemia is properly treated, by far the greater number of cases will either entirely recover or show such marked amelioration of the symptoms that eclampsia is not to be feared.

The subject of the treatment of eclampsia has not, for lack of time, been included in this paper. I have especially endeavored to call your attention to those symptoms and points of diagnosis which are frequently overlooked by the physician in his study of this dangerous condition.

In closing this article I desire to say that my thanks are due to Dr. Rosalie Blitzstein for her assistance in abstracting the literature of the subject. To my friend, Dr. George Ulrich, I am especially indebted for editing this article during my late serious illness and for kindly offering to read it before your society.

BIBLIOGRAPHY.

Eclampsia, Andrews-Groves: Transactions Obstetrical Society of London, March, April and May, 1901.

Eclampsia, Cesarean section for, Ohlshausen: Centralblatt für Gynäkologie, No. 2, 1900.

Eclampsia, treatment of, Stroganoff: Centralblatt für Gynäkologie, No. 48, 1901.

Eclampsia, symposium on, Davis, Edgar, King, Reynolds, Norris: Therapeutic Gazette.

Eclampsia, 50 cases of, Bayer: Monatsschrift für Geburtshülfe und Gynäkologie, Band 10, Heft 1, 1899.

La théorie foetale sur la cause de l'éclampsie, Van der Hoeven: L'Obstétrique, September, 1899, page 454.

Eclampsia, treatment of, Jardine: Scottish Medical and Surgical Journal, October, 1899.

Eclampsia, Savery: Transactions Obstetrical Society of London, page 284, 1899.

Eclampsia, five weeks, description of ovum, Griffith and Eden: Transactions Obstetrical Society of London, Vol. 4, p. 151, 1899.

Eclampsia, blood in. Levinowitsch: Centralblatt für Gynäkologie, No. 46, 1899.

Hepatic toxemia of pregnancy, Fothergill: British Medical Journal, p. 515, 1900.

Albuminuria in pregnancy, Ritchie: British Medical Journal, January 20, 1900.

Metabolism during pregnancy, cause of eclampsia, Schrader: Archiv für Gynäkologie, Band 60, Heft 3, 1900.

Hepatic toxemia during pregnancy, Fothergill: Medical Chronicle, June 1900.

Toxemia, theory, criticism, Eden: Journal of Obstetrics of British Empire, February, 1902.

Toxemia, experiments in, Schumacher: Centralblatt für Gynäkologie, No. 6, 1902.

Urine in eclampsia, ammonia in, Zangemeister: Centralblatt für Gynäkologie, No. 6, 1902.

Urine, toxicity of, Goenner: Centralblatt für Gynäkologie, No. 29, 1901.

Urine, toxicity of last month of pregnancy, Stewart: Reprints, Vol. IV.

Prophylaxis and treatment of eclampsia, Ahlfeld: Monatsschrift für Geburtshülfe und Gynäkologie, Band 15, Heft 2, 1902.

Labor of eclamptic patient, Boissard and Rozzatt: L'Obstétrique, No. 1, 1902.

Cause of eclampsia, Dienst: Centralblatt für Gynäkologie, No. 19, 1901.

Studies in the causation of eclampsia, Blumreich: Archiv für Gynäkologie, Band 65, Heft 3, 1902.

New studies in the cause of eclampsia, Stroganoff: Monatsschrift für Geburtshülfe und Gynäkologie, Band 13, Heft 5, 1901.

Treatment of eclampsia, Gloeckner, and Discussion: Centralblatt für Gynäkologie, No. 31, 1901.

Eclampsia, Herzfeld: Centralblatt für Gynäkologie, No. 40, 1901

Eclampsia, 400 cases of, Goedecke: Centralblatt für Gynäcologie, No. 29, 1901.

Eclampsia, history of, Knapp: Monatsschrift für Geburtshülfe und Gynäkologie, Band 14, Heft 1, 1901.

Eclampsia Discussion and papers: German Society of Gynecology, May. 1901. Centralblatt für Gynäkologie, No. 25, 1901.

Eclampsia and thyroid disease, Berry Hart; Discussion: Scottish Medical and Surgical Journal, July, 1901.

Eclampsia and thyroid gland, Nicholson: Scottish Medical and Surgical Journal, June, 1901.

Eclampsia, arrest of breathing for some time with recovery, Bidone: Annali di Ostetricia, February, 1901.

Eclampsia followed by mental derangement, MacElroy: British Medical Journal, No. 2101, 1901.

Eclampsia, clinical reports, Goedecke: Zeitschrift für Geburtshülfe, Band 45, Heft 1, 1901

Eclampsia, treatment of; discussion: British Medical Journal, May 11, 1901.

Eclampsia, treatment of, and stastistics, Gloeckner: Archiv für Gynäkology, Band 63, Heft 1 und 2, 1901.

Eclampsia, treatment by saline infusion, Groves: British Medical Journal, April 20, 1901.

Eclampsia, sphygmographic tracing in, Tridondani: Annali di Ostetricia, No. 1, 1901.

Eclampsia treatment of, by saline infusion, Jardine: British Medical Journal, No. 2096, 1901.

Eclampsia, treatment of, by morphine, Elder: British Medical Journal, No. 2096, 1901.

Eclampsia, pathology of, Alfieri: Annali di Ostetricia, December, 1900.

Eclampsia, Bolle: Zeitschrift für Geburtshülfe und Gynäkologie, Band 44, Heft 2, 1901.

Eclampsia, 58 cases without mortality, Stroganoff: Monatsschrift für Geburtshülfe und Gynäkologie, No. 12, 1900.

Eclampsia, treatment of, Lyle: British Med. Journal, January 19, 1901.

Eclampsia at six months, recovery, labor at term, De War: Scottish Medical Journal, February, 1901.

Eclampsia, morphine treatment of, Fitzgerald. British Medical Journal, No. 2082, p. 1496, 1900.

Eclampsia, treatment of, by veratrum viride, Mangiagali: Annali di Ostetricia No. 7, 1900.

Eclampsia, treatment of, Everke: Centralblatt für Gynäkologie, No. 36, 1900.

Eclampsia, cause of, Stroganoff: Centralblatt für Gynäkologie, No. 31, 1900.

Eclampsia, cause of, Gessner: Centralblatt für Gynäkologie, No. 35, 1900.

Eclampsia at six months, saline infusion, veratrum viride, Ballantyne: Scottish Medical and Surgical Journal, July 1900.

Eclampsia, premature delivery, Marx: Medical News, p. 1030, 1900.

Eclampsia, treatment of, by diuretic infusions, Jardine: British Med. Journal, 1900, p. 1279.

Eclampsia, treatment of, by saline infusions Jardine: British Mecical Journal, p. 767, 1900.

Eclampsia Cesarean section for. Sippel: Monatsschrift für Geburtshülfe und Gynäkologie, Band 14, Heft 2, 1901.

Eclampsia, history of word, Kossmann: Monatsschrift für Geburtshülfe und Gynäkologie, Band 14, Heft 2, 1901.

Eclampsia, vaginal Cesarean section, Dührssen: Archiv für Gynäkologie, Band 61, Heft 3, 1900.

Eclampsia, Cesarean section for, Hillmann: Monatsschrift für Geburtshülfe und Gynäkologie, Band 10, Heft 2, 1899.

Health Reports.

Health Reports: The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon-General, U. S. Public Health and Marine-Hospital Service, during the week ending February 20, 1903:

SMALLPOX—United States.

			C.	D.
CALIFORNIA:	Fresno	Jan. 1-31	15	
	Los Angeles	Jan. 31-Feb. 7	2	
	Sacramento	Jan. 31-Feb. 7	1	
	San Francisco	Jan. 24-Feb. 8	13	
COLORADO:	Colorado Springs	Jan. 31-Feb. 7	1	
	Denver	Jan. 31-Feb. 7	8	
ILLINOIS:	Belleville	Jan. 31-Feb. 7	8	1
	Galesburg	Jan. 31-Feb. 14.	7	
INDIANA:	Elwood	Feb. 8-15	3	
	Evansville	Jan. 31-Feb. 14.	9	1
	Indianapolis	Jan. 31-Feb. 14	121	24
IOWA:	Davenport	Jan. 31-Feb. 14.	12	
	Ottumwa	Jan. 3-10	1	
KENTUCKY:	Lexington	Jan. 31-Feb. 14	4	
	Newport	Jan. 31-Feb. 14	2	
LOUISIANA:	New Orleans	Jan. 31-Feb. 12	3	
		Two cases imported		
MAINE:	Biddeford	Feb. 7-14	12	
	Eastport	Feb. 7	8	
	Eastport	Feb. 10	5	
	Portland	Jan. 31-Feb. 7	1	
MARYLAND:	Baltimore	Feb. 7-14	1	
MASSACHUSETTS:	Boston	Feb. 7-14	4	2
	Haverhill	Feb. 7-14	1	
	Lynn	Jan. 31-Feb. 7	1	
	Detroit	Feb. 7-14	38	1
MICHIGAN:	Flint	Jan. 31-Feb. 14	4	
	Grand Rapids	Feb. 7-14	10	
	Port Huron	Feb. 7-14	12	
NEBRASKA:	Omaha	Jan. 31-Feb. 7	7	
NEW HAMPSHIRE	Manchester	Jan. 31-Feb. 7	10	
NEW JERSEY:	Camden	Feb. 7-14	1	
	Jersey City	Feb. 8-15	3	1
	Newark	Feb. 7-14	1	
NEW YORK:	New York	Feb. 7-14	3	
OHIO:	Chillicothe	Jan. 24-31	8	
	Chillicothe	Feb. 7-14	3	
	Cincinnati	Feb. 6-13	7	
	Cleveland	Jan. 31-Feb. 14.	16	4
	Dayton	Feb. 7-14		1
	Hamilton	Jan. 31-Feb. 14	2	
	Toledo	Jan. 31-Feb. 14	15	1
PENNSYLVANIA:	Butler	Jan. 17-Feb. 7	2	
	Erie	Jan. 31-Feb. 7		4
	Johnstown	Jan. 31-Feb. 14	5	
		Three cases imported		
	Philadelphia	Feb. 7-14	30	2
	Pittsburg	Jan. 31-Feb. 7	18	3
	York	Jan. 1-31	1	
SOUTH CAROLINA	Charleston	Jan. 31-Feb. 7	14	1
UTAH:	Ogden	Jan. 1-31	17	
	Salt Lake City	Jan. 31-Feb. 7	21	
WISCONSIN;	Milwaukee	Jan. 31-Feb. 14	1	

SMALLPOX—Foreign.

AUSTRIA:	Prague	Jan. 17-24	7	
BARBADOES:		Jan. 16-30	8	
BELGIUM:	Antwerp	Jan. 17-24	4	2
	Brussels	Jan. 17-24		1
CANADA:	Amherstburg	Jan. 24-31	1	
CANARY ISLANDS	Las Palmas	Jan. 17-24	33	2
ECUADOR:	Guayaquil	Jan. 24-31		1
GERMANY:	Hamburg	Jan. 24-31	1	
	Leipsic	Jan. 17-24		1
GREAT BRITAIN:	Dublin	Jan. 17-31	1	1
	Leeds	Jan. 24-31	4	
	London	Jan. 24-31	6	
	Manchester	Jan. 17-31	27	1
	Nottingham	Jan. 17-31	14	
INDIA:	Bombay	Jan. 6-20	61	
	Calcutta	Dec. 13-Jan. 17	2	
	Madras	Dec. 20-26		2
ITALY:	Palermo	Jan. 10-31	15	5
MEXICO:	City of Mexico	Jan. 26-Feb. 1	4	4
RUSSIA:	Moscow	Jan. 10-24	7	4
	Odessa	Jan. 17-24	2	
	St. Petersburg	Jan. 10-24	71	21

SMALLPOX—Insular.

PHILIPPINES:	Manila	Dec. 13-27	2	

YELLOW FEVER.

COLOMBIA:	Panama	Jan. 26-Feb. 9	5	2
ECUADOR:	Guayaquil	Jan. 17-24		20
MEXICO:	Vera Cruz	Jan. 31-Feb. 7	2	2

CHOLERA—Insular.

PHILIPPINES:	Manila	Dec. 13-27	16	10
	Provinces	Dec. 13-27	1130	813

CHOLERA—Foreign.

INDIA:	Bombay	Jan. 9-20		1
	Calcutta	Dec. 13		152

PLAGUE—Insular.

HAWAII:	Honolulu	Feb. 5		1
PHILIPPINES;	Manila	Dec. 13-27		1

PLAGUE—Foreign.

INDIA:	Bombay	Jan. 6-20		818
	Calcutta	Dec. 13-Jan. 17		85
	Karachi	Dec. 28-Jan. 11	53	52
	Madras	Dec. 20-26		1
MEXICO:	Mazatlan	Feb. 4-12	11 new cases, 13 deaths.	

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VOL. XI. NO. 10 MARCH 7, 1903 $5.00 PER ANNUM

The Typhoid Epidemic at Ithaca.—Our sympathies are strongly enlisted for the authorities of Cornell University in the terrible visitation of typhoid fever with which that institution and the city of Ithaca are being afflicted. As is natural, a cry has gone out to find a scapegoat, if such there be, and it is only too likely that some injustice may be done in the effort of outsiders to fix the responsibility. There is plenty of newspaper comment on the subject, but all of it is not well-considered.

The city of Ithaca is suffering from conditions that prevail almost universally; i. e., the use of surface water. But surface water will not give typhoid fever unless it is contaminated with the germs of that disease, and the problem is to discover where that contamination occurred. Much significance is being attached to the fact that a band of "foreign" laborers had encamped near one of the streams of supply—but "foreigners" are no more dangerous than natives under such circumstances, and an Italian workman will not give typhoid fever any more than an American will, if he does not have it to give. It is quite as likely that some case in an isolated farmhouse was the source of the disease.

There is need at Ithaca at present of the best expert advice in order to find out the true source, and there is still greater need of expert services to guard the city's water-supply in the future. The epidemic is an object-lesson to the whole country, and it will not do for other communities living in glass houses to throw many stones. The thing that has happened at Ithaca may be about to happen somewhere else at almost any time. Reports seem to indicate that the streams supplying Ithaca were absolutely unguarded. The epidemic is also a warning to people to boil their drinking-water.

The authorities of Cornell University are apparently thoroughly alive to their responsibility, and are doing their best to meet a grave crisis. It is no easy matter to meet such a crisis, in spite of the wisdom of the newspapers to the contrary. We sympathize deeply with Cornell, and trust that the authorities will display such energy and intelligence in this emergency that no lasting injury will result to the prosperity and fair fame of the university.

The Functions of the Ductless Glands.—In our present issue it is our privilege to place before our readers Dr. Sajous' paper on the functions of the ductless glands, which includes a consideration of their relationship to disease and therapeutics. Dr. Sajous' investigations have extended over fourteen years of active, painstaking research, and the conclusions at which he arrives are at once bold and ingenious and declared in no halting words. The questions involved embody the most intricate subjects of physiology, and the importance of this monumental endeavor must be apparent to even the casual reader. According to Sajous the physiological functions of the internal secretions of the adrenals is loosely to combine with the atmospheric oxygen in the lungs and to endow the bloodplasma with its oxidizing properties. It is his theory that the bloodplasma takes up the oxygen and that the red corpuscles play but a secondary part as oxygen-carriers. He further states that all general symptoms of disorders in which the blood is invaded by a poison of any kind are manifestations of overactivity, insufficiency or inactivity of the adrenals. He has concluded that the thyroid gland, the anterior pituitary body and the adrenals are functionally interdependent and constitute an "adrenal system" which has for its purpose the sustaining of physiological oxidation and the metabolic activity of all tissues. He presents a most novel and interesting theory of the functions of the leukocytes, the mitome of which he believes to be not mere protoplasmic threads but canaliculi for bloodplasma and granules. In his consideration of the splenopancreatic internal secretion Sajous has concluded that the greater part of the trypsin of the organism is formed in the splenic vein, and that its function is to protect the organism from the effects of bacteria, vegetable poisons and venoms. He regards the posterior pituitary body as the general center of the nervous system. Brief editorial comment cannot essay to do justice to a series of studies of this importance. Time must be allowed for the critical examination of the ingenious facts presented, and, as Dr. Sajous himself candidly concedes, corroboration is necessary.

How Much Exercise Shall We Permit Our Tuberculous Patients?—The best method of treating tuberculosis is becoming pretty well established when physicians begin to quarrel over the quantity of any particular procedure that may be employed. As to the quantity of fresh air, there seems to be no dispute; the more the better. If it is possible to give the patient twenty-four hours a day of fresh air, less should not be employed. The advantages of food are also well understood. All that the patient will assimilate is the proper amount. It is only when we come to the question of exercise that there is much difference of opinion, and on this subject the difference is very great. A few years ago it was the fashion to send patients west with directions to walk or ride or do something in the open air all day long. But it was soon found that these patients did badly, and that others who went west, possibly worse in the beginning, but who were kept quiet in a hammock or on a cot in the open air, in the end did very much better. The pendulum then swung in the other direction; all patients with pulmonary tuberculosis were put on cots or beds in the open air, or at least in pavilions with no sides.

Recently Dettweiler (*Zeitschrift für Tuberculose und Heilstättenwesen*) has suggested that perhaps we are too careful; that more harm may be done by too much rest than by too much exercise. There is no doubt that resting may be overdone, but Penzoldt (*Münchener medicinische Wochenschrift*, 1903, No. 1) takes issue with him very sharply upon this question. He believes that there is probably more danger in excessive exercise than in excessive rest in the majority of cases. The arguments used in favor of exercise are that it increases the depth of respiration, but there is no proof that shallow respirations act injuriously upon the tuberculous process or upon the patient's general nutrition. In many cases one of the earliest symptoms is slight dyspnea, and we may therefore suppose that there is overstimulation instead of understimulation of the respiratory centers. It is said that exercise stimulates the appetite and the activity of the intestines, but Penzoldt has found that patients on absolute rest, if they have fever, can usually assimilate much more than those who attempt to take exercise.

Finally it is said that if the patients are allowed to rest too much they become spoilt, so than when recovery ensues they have a disinclination to return to their work. Of course, this cannot apply to those who have sedentary occupations, but even in the other patients it is far more important to cure them, if it can be accomplished, than to keep them eager to work, and surely the formation of connective tissue proceeds more satisfactorily when the patient is resting than when he is exercising his body vigorously. Of course, Penzoldt would not advocate discarding exercise entirely; the question is, have we any method of determining when it is doing good and when it is injurious. He does not believe that we can use the pulse as a sure index, nor that the increase or decrease in the rapidity of the respirations is of any value as a sign.

He places great faith, however, in the temperature, particularly if it is carefully measured, and he believes that deep rectal measurements give us the most accurate results. His rule is that, if after the prescribed exercise the temperature does not go up more than 0.5° C., no harm has been done. If it reaches 0.8° or 0.9°, suspicion should be aroused that the patient has overexerted himself; if over 38° C., it is certain that the exercise was too severe. Exercise, moreover, should only be employed in those cases in which the evening temperature does not exceed 37.5° C. There may be some dispute regarding the limits that Penzoldt sets, but we think there will be general agreement with him in his belief that exercise may do far more harm than rest can, and that moderate elevations of temperature in the evening or after moderate exercise are strong indications for rest.

Fruits and Fruit Juices.—A bulletin of analyses of commercial fruit juices, jams and jellies has been recently issued by the U. S. Department of Agriculture. While the analyses are numerous and exact, the results do not embody anything new or startling. It has long been known that apple pulp and glucose syrup are largely employed as diluents and substitutes for the expensive fruits, and that coal-tar colors and preservatives are apt to be present. The bulletin does not enter upon the question of wholesomeness of products, except some moderate allusions to the possibility of coal-tar colors containing metallic impurities. It is, indeed, a question whether these fruit preparations, even when absolutely pure, are wholesome. They are usually eaten on account of their acceptable flavor or taste, and there is great liability to excessive consumption of them, particularly among children. Strictly speaking, they have food value, but this can only be as carbohydrates, and they are much more expensive than the common starch and sugar foods. The danger from the coloring matters has been much overrated. It is true that some coal-tar colors contain poisonous metals in appreciable amounts, but colors free from such ingredients are now readily obtainable. The amount of color is so small that its physiological action can hardly be regarded. For instance, one color much used is so powerful that one grain will color 4 pounds of candy. The preservative most used in jams, jellies and marmalades is in this country sodium benzoate. Salicylic acid, is however, still in use, though it is being discarded. Addition of gelatine, starch and agar-agar has been suspected, but the analyses do not show the use of these, and manufacturers state that, in spite of the fact that these bodies produce strong jellies, they are not suitable for commercial use. Tin is almost always present in goods put up in tin cans, and the quantity in canned fruits is larger than in canned meats, because the acid of the fruit and the contact of the syrup give facilities for solution of the metal. Carelessness in the use of zinc chloride as a soldering fluid leads to a contamination with zinc. On the whole, while the bulletin shows a good deal of substitution and imitation, it does not show serious sanitary peril.

Age and Its Possibilities.—We speak of this as the age of young men. It is the custom in the English army to get rid of the older officers and promote the young men rapidly, because it is supposed that they are more efficient. It not infrequently happens in medical schools that the younger man is given preference over the older one whose work has entitled him to the position, simply because the younger man is supposed to be worth more to the institution, on account of the greater amount of original work that he is likely to perform. Indeed, it has been said that unless a man makes his mark before thirty-five years of age, he is unlikely to achieve much afterward. Age, however, is merely a relative term. It has been said often and is often forgotten, that one man is young at eighty, whilst another is old at thirty. There are so many illustrations than can be cited of green old men that it seems useless to lay stress upon this point. And yet, when we think of Kölliker and the enormous amount of original work that has appeared in his Gewebelehre, we must pause before vaunting too enthusiastically the advantages of youth. Another remarkable illustration has recently been furnished by von Kupffer. O. Hertwig requested him to write the article upon the development of the central nervous system for his new Handbuch der Entwicklungsgeschichte des Zentralnervensystems. Von Kupffer undertook it, providing he was permitted to write the article as a result of his own original and independent observations. He was then 70 years old. In order the better to carry on his work, he resigned his teaching position at the University, spent 5 hours every day in the Anatomical Institute, and then devoted all his afternoons and evenings until midnight to his library and desk. He took no summer holidays, and was unremitting in his efforts. In two years the work was completed. It contained nothing old, nothing previously used, and discussed authoritatively all the questions then of the greatest interest to science. There are few young men who could have accomplished nearly as much; few young men would have had the moral courage to neglect all other things for the one piece of work that they had undertaken. Let us not, therefore, speak too slightingly of the abilities of many years.

San Francisco's Plague. — Surgeon-General Wyman, under date of February 22, sent a letter to Governor Pardee, of California, stating that the government authorities, acting with the state and city authorities, had found no case of plague in San Francisco since December 11. This very satisfactory report has led the newspapers of San Francisco to brand anew as "lies" the statements, that plague had existed in that city at all. We fail to see the connection. The fact that there is no plague now (provided there really is none) does not prove that there never was any. It is gratifying to note that the newspapers of San Francisco begin to appreciate what it is to have really a clean bill of health, and they are now clamoring to have the quarantine against their city, established by Mexico, Ecuador, and the International Union of American Republics, abolished. They were fortunate that they were not more extensively quarantined than they were.

Current Comment.

ANOTHER USE FOR THE X-RAYS.

In Japan the X-rays are now turned upon employees in the government who are suspected of having swallowed gold coins. A number of X-ray machines have been ordered in Philadelphia for this purpose.

—*The Medical Examiner.*

Correspondence.

FUNCTIONS OF THE DUCTLESS GLANDS.

By C. E. de M. SAJOUS, M. D., of Philadelphia.

To the Editor of the **Philadelphia Medical Journal**:

I found it impossible to give, in the paper on the "Ductless Glands, etc.," published in this issue of the **Philadelphia Medical Journal**, more than a mere outline of some of the subjects treated in the first volume of my work, and a few of those that are to appear in the second. The first part of the article, for instance, contains in less than four pages what in the work is treated in over 350. The data given in the paper, therefore, are in no way intended to portray the evidence submitted in support of the conclusions reached.

When the paper was read before the Philadelphia

County Medical Society, the discussion was omitted owing to the lateness of the hour reached. I was unable, therefore, to refer to a feature of considerable importance, viz.: the spirit with which I would receive adverse criticism should my labors prove sufficiently interesting to merit the attention of other investigators.

The main object of the labors referred to has been to contribute to the elimination of the multitude of theories which now befog medicine. A large number of experimental, pathological and clinical *facts* having imposed upon me, so to say, the recognition of the newer functions described, they are not submitted as hypothetical propositions, but as solutions of various problems the factors of which were deemed scientifically sound. Still, though concordant,—a good omen—they may prove to be erroneous. Close scrutiny of each question by many investigators can alone decide whether they are or not. Having no theory to defend, I can only hail with satisfaction any contribution which, supported by *facts*, will point to flaws and eradicate them, since this can only contribute to the welfare of our common purpose: The elevation of medicine to the high rank it must eventually occupy in science and the enhancement of its usefulness in the mitigation of suffering.

SPASMODIC ASTHMA AS TREATED BY THE AUSTRALIAN (FRANCIS) METHOD.

By J. R. Clemens, M. R. C. S., (Eng.), of St. Louis.

To the Editor of the **Philadelphia Medical Journal:**

When I was a medical student we were taught that among the causes responsible for spasmodic asthma polypi of the nasopharynx were to be enumerated, at least for examination purposes—but no greater faith was placed in this relationship of cause and effect than is accorded to the Hughlings-Jackson theory of chorea. It was an academic theory, and, therefore, desirable for examination purposes. Pathologists, in studying the phenomena of bronchial spasm, were able to describe minutely the effects, but as to the causation, in looking farther than their own noses, they missed the object of their search.

It remained for a general practitioner in Australia (Dr. Francis), when at the end of his resources in the treatment of spasmodic asthma, to turn in sheer despair to give trial to treatment as based on the nasopharangeal doctrine (long since discredited) of cause and effect in spasmodic asthma. The result of his empiricism is the subject of this letter. He blindly stumbled, as he tells us, on the specific for spasmodic asthma and, modestly disclaimed any credit to himself but, "palmam ferat qui meruit." It is easy to be wise after the event, and it is surprising how suggestive of results was treatment followed out on lines adopted by Francis.

The nervous mechanism of the nasopharynx is more intimately connected with the respiratory center in the bulb than is the pulmonary relationship itself.

Peripheral stimuli coursing along the afferent tracts are being constantly conveyed to the respiratory center from the nose, and reflex responses subconsciously made. It is when overaction or prolonged action results from these peripheral stimuli that spasm is brought about. When we take into consideration the exposure and sudden changes which the nasal mucosa is subject to with sudden catarrh and surface pressures between mucosa and mucosa of contiguous nasal structures being brought about, it is surprising that spasmodic asthma is not more common. The connection between nasal stenosis ad spasmodic asthma is one of virtual catarrh, because on inspiration a negative pressure is produced with resulting hyperemia of the nasal mucosa. In his treatment the essential point as aimed at by Francis is the restoration of the relationships between pressure points of the nasal mucosa as obtains in health. His object is achieved by cauterization with the galvanocautery of the nasal septum. The same result may be achieved by removal of a turbinate or scarification, but Francis' method is to be preferred for obvious reasons. Such brilliant results have followed the cauterization of the nasal septum in spasmodic asthma after the Francis method that the English medical world have become converted to this new method of treatment. It holds good for all forms of spasmodic asthma proceeding from any cause whatsoever.

Reviews.

Mont Pelée and The Tragedy of Martinique. A Study of the Great Catastrophes of 1902, With Observations and Experiences in the Field. By Angelo Heilprin, President of the Geographical Society of Philadelphia, etc. Illustrated with Photographs largely taken by the Author. Philadelphia and London. J. B. Lippincott Co. 1903.

The eruption of Mont Pelée in 1902 was of such dire import to many thousands of human beings that the story of the catastrophe will always remain one of absorbing interest to all classes of readers. There was such an intensely tragic element in those displays, with such extensive loss of life, that the story, it seems to us, must have rather a special interest for members of the medical profession. Professor Heilprin was pre-eminently qualified to write this story. He had not only the scientific training, but he had the enthusiasm and conspicuous courage to investigate the phenomena at such a close range that his bravery seems to us now almost like temerity.

We do not doubt that this book will remain always an authority on the eruption of Mont Pelée. Future generations will refer to it as an authority of the first source. Everything in it is at first hand. It is from beginning to end both scientific and dramatic; in fact, it is such a happy blending of these two elements that it both instructs and entertains. What would not the world have given all these centuries for such a description of the eruption of Vesuvius and the destruction of Pompeii?

Professor Heilprin's conclusions as to the cause of death at St. Pierre are of special interest to us here, and we have already referred to them in a preceding number. He believes that the agent of death was a superheated steam, charged with an incandescent or very hot sand. The temperature of this stream may have been as high as 1000°; and this gas must have caused almost instant death as soon as it was inspired. He concludes—it seems to us rather too dogmatically—that death was not due to inflammable gases. He had excellent opportunity, however, to form this opinion, for he was almost an eye-witness of the scene at Morne Rouge, where the heroic priest, Père Mary, met his death.

The ascent by Heilprin and his companions to the very rim of the spouting and seething crater, was an act of great difficulty and danger; and the description of it is admirably adapted to get unto the nerves of the reader. The illustrations in the book are particularly impressive. They are mostly from original photographs, and they give an idea of how a volcano looks in full swing that could not be conveyed in a thousand printed pages. We advise medical readers not to neglect an opportunity to read this book. It is intensely human and tragic, but withal full of the healthful interest that comes from a contemplation of one of the most sublime of nature's masterpieces. [J.H.L.]

Obstetrical Nursing, for Nurses and Students. By Henry Enos Tuley, A. B., M. D., Professor of Obstetrics, Kentucky University, etc. Chicago, G. B. Engelhard & Co., 1902. Pages 202.

In this small volume we find a safe guide for the obstetrical nurse and a book that may also be of service to the junior student of medicine. Instruction is given in the care of the pregnant woman, in the management of labor, and in the care of the newborn child. In addition, all such duties as may fall to a nurse during the performance of the various obstetrical operations and in the treatment of the accidents of pregnancy, are carefully described. The teaching throughout is the proper one, namely, that all responsibility should be thrown upon the attendant obstetrician. The book is a valuable one of its kind and can be heartily recommended. [W. A. N. D.]

News and Notes.

AMERICAN

PHILADELPHIA AND PENNSYLVANIA.

College of Physicians, Philadelphia.—Subscriptions to the amount of $50,000 have been received by the committee on funds, in charge of that work, and the additional gift of $50,000, promised by Mr. Andrew Carnegie, of New York, is now assured. The question as to whether a new site will be purchased for the erection of a new building, or whether the present building will be remodeled or rebuilt, will probably not be definitely settled until the April meeting of the College of Physicians. Should it be decided to rebuild, it is probable that more than $100,000 will be required for carrying out the present plans. The erection of a modern building will probably cost at least $250,000. In fact, more than this was expended 10 years ago, in erecting the new building of the New York Academy of Medicine.

New Hospital at Frankford.—The Frankford Hospital, an institution with temporary quarters at 4431 Frankford avenue, has applied for a charter. The nearest hospital to Frankford is the Episcopal, 3 miles away. On account of this distance and because of the lack of any institution for the treatment of emergency cases, this new hospital has been opened, with accommodations for 40 patients. The Board of Directors consists of Drs. J. P. Ball, B. F. Walters, Jr., C. C. Brady, C. M. Stiles and J. W. Wilkins. Of these only Dr. Ball lives in Frankford.

Medico-Chirurgical Hospital.—It seems that the statement, made in the **Philadelphia Medical Journal,** of February 21, page 327, that the damage caused by the explosion which occurred February 12 amounted to between $100 and $200, was incorrect. The chairman of the Finance Committee of the hospital states that the hospital building was seriously damaged, and that the exact amount of damage cannot be expressed in figures. To repair what can be seen would require an expenditure of not far from $5000, after which the building will still remain patched and shaken. Subscriptions for repairing this damage are now being collected.—The Baldwin Locomotive Works recently contributed the sum of $5000 for endowing a bed in the hospital. Mr. W. P. Henszey has also given $1000 to the institution.

Society Meetings Next Week.—The following societies meet next week at the College of Physicians, Philadelphia, at 8.15 P. M.: Monday evening, March 9, Section on Medicine, College of Physicians; Tuesday evening, March 10, Pediatric Society; Wednesday evening, March 11, Philadelphia County Medical Society, and Thursday evening, March 12, Pathological Society.

Health of Philadelphia.—During the week ending February 28, 255 cases of typhoid fever were reported, with 22 deaths, as compared with 248 cases, with 27 deaths, in the preceding week. The only wards in which no new cases occurred were the thirty-fifth and forty-first wards, both of which are in the Frankford suburbs. The greatest number of cases occurred in the thirty-third and thirty-fourth wards. It is said that there are now 524 cases of typhoid fever in 28 hospitals in Philadelphia, the Pennsylvania Hospital having 115 cases. There has also been an increase in the number of smallpox cases reported, 37 as compared with 25 during the week previous. There was also an increase in the number of cases of scarlet fever reported, 86 as against 71, while the number of cases of diphtheria was practically the same.

The New Death Certificates.—Since the first of March a new form of death certificate has been adopted by the Board of Health of Philadelphia, in conformation with the Federal Bureau of Statistics in Washington. Under the new regulation the exact cause of death must be plainly stated. In 18 diseases which are specified, the origin of the disease must be added upon the death certificate. Physicians are requested to give full details in such cases. All deaths must be reported within 24 hours, except those from contagious diseases, which must be reported within 12 hours after death. No certificate will be accepted that is altered or imperfect. The nationality of Indians, Chinese and Japanese must also appear on the certificate.

NEW YORK.

The Typhoid Epidemic in Ithaca.—Thirty-six deaths have occurred in Ithaca, from typhoid fever, between January 23 and March 1, more than half of them in students of Cornell University. The president of the University has announced that the new water-supply will be completed by September next. Then a recurrence of typhoid fever will hardly be probable. Of over 600 cases of the disease which have occurred in Ithaca, it is believed that less than 100 have affected students of the University. Some of these, however, are now ill at their homes. The hospitals are still crowded with patients with typhoid fever.

Columbus Hospital, New York City.—This institution, under control of the Sisters of the Order of the Sacred Heart, has recently purchased 3 properties on East Nineteenth street, upon which an addition is to be erected.—Dr. Farquhar Ferguson has been appointed consulting physician, Dr. F. C. Keller, visiting physician, and Dr. Henry Hazen, attending physician in diseases of children.

Smallpox on the Steamship Palatia.—A case of smallpox was discovered among the steerage passengers, on the arrival of the steamship *Palatia* from Hamburg, February 26. The patient was sent to North Brother Island and the ship disinfected.

A Course in Examination of the Insane.—A course consisting of 2 weeks' instruction in the methods of examining patients with nervous and mental diseases and a review of the present state of our knowledge of psychiatry, was completed, February 28, at the Pathological Institute of the New York State Hospital, Ward's Island. Twenty-one assistant physicians from the State Insane Hospitals attended these lectures and demonstrations given by the director of the institute, Dr. Adolf Meyer. A similar course is to be given later on.

Diphtheria in Morristown, N. Y.—An epidemic of diphtheria is reported in this little village on the banks of the St. Lawrence, at a point where many travelers cross to and from Canada. Twenty deaths have occurred and new cases are reported daily. Large quantities of antitoxin have been sent to Morristown and every suspected case receives this treatment. Physicians and nurses have been imported from Ogdensburg, N. Y. and Brockville, Canada.

Death of Dr. Thomas.—Dr. Theodore Gaillard Thomas, for many years professor of obstetrics and gynecology at the College of Physicians and Surgeons, New York City, died suddenly at Thomasville, Ga., February 28, aged 71 years. Born at Charleston, S. C., November 21, 1831, Dr. Thomas was graduated from the Charleston Medical College in 1852. After studying abroad, he settled in New York City, where he was resident physician at Bellevue Hospital, and at the hospital on Ward's Island. His work on the diseases of women has been translated into a dozen languages, including the Chinese. He was a member of many of the prominent medical societies of Europe and America and was considered an authority in gynecology and obstetrics. He stopped operating several years ago, when he resigned his position at the College of Physicians and Surgeons. He has, however, retained his position as consulting physician to several hospitals in New York City and had a large consulting practice.

Death of Dr. Gatling.—Dr. Richard Gatling, well known as the inventor of the Gatling gun, died suddenly in New York City, February 26, aged 84 years. Although he was graduated from the Ohio Medical College in 1850, he never practised medicine. He had also invented many agricultural devices. It is said that he was led to study medicine on account of an attack of smallpox from which he almost died, having been left 13 days without medical attendance.

WESTERN STATES.

No More Plague in California.—Governor Pardee, of California, informed the California State Senate, February 23, that the United States authorities now believe the health conditions in San Francisco to be satisfactory, and they have proceeded to communicate a knowledge of the actual situation to the government of countries which had established quarantine against ships sailing from San Francisco. He transmitted to the Senate the following statement from Surgeon-General Wyman, U. S. P. H. and M.-H. S: "No case of plague has been discovered in San Francisco since December 11 last, two months and a half ago, and then there was only one case. Official reports show that the national, State and city authorities are now working in thorough harmony under the leadership of the federal officers; that searching inspections are being made daily in Chinatown and proper sanitary measures are being rigidly enforced, including radical measures for the destruction of rats. Bacteriological examinations of captured rats are made daily, and the last infected rat was found December 8, since which time bacteriological examinations have been made of 324 dead rats and none found infected. The State Department was requested last week to notify the Government of Mexico and Ecuador of the satisfactory conditions now prevailing, and the above facts have been communicated to the International Union of American Republics."

American Congress on Tuberculosis.—The next meeting will be held at St. Louis, Mo., July 18 to 23, 1904. A charter has been granted to the congress, greatly facilitating the work of reorganization on the lines mapped out last year. An advisory committee, consisting of 28 prominent physicians, has been appointed to assist the council in perfecting plans for the meeting. The officers of the congress are the following: Honorary president, Dr. H. D. Holton, Brattleboro, Vt.; president, Dr. Daniel Lewis, New York; vice-presidents, Drs. J. A. Egan, Springfield, Ill., Frank Paschal, San Antonio, Tex., E. J. Barrack, Toronto, Can., I. A. Watson, Concord, N. H., and C. W. Fassett, St. Joseph, Mo.; secretary, Dr. George Brown, Atlanta, Ga., and treasurer, Dr. P. H. Bryce, Toronto, Can.

SOUTHERN STATES.

Columbian University, Washington, D. C.—The new buildings of Columbian University, consisting of a new medical school and a new university hospital, were opened February 28 last. The medical school building, which is 5 stories high, is well equipped with all modern improvements. The new hospital has private rooms, extensive wards, a maternity pavilion, 3 operating rooms, and a dispensary. There is also a complete X-ray apparatus. Dr. E. A. de Schweinitz is dean of the medical school.

Death of Dr. Davis.—Dr. W. E. B. Davis, a graduate of the University of Alabama and of Bellevue Hospital Medical College, Birmingham, in 1884, was run over by a passenger train at Birmingham, Ala., February 24, being instantly killed. In 1887 he went abroad for 2 years to study, and on his return to America, practised medicine for some time in Rome, Ga. He then returned to Birmingham, where he has resided since. He devoted his attention chiefly to gynecology and was well known as an operator. He was vice-president of the American Medical Association in 1891, secretary of the surgical section in 1890, and chairman of the section of obstetrics and diseases of women in 1899; president of the Southern Surgical and Gynecological Association in 1890-1902, vice-president of the American Association of Obstetricians and Gynecologists in 1895 and president in 1901; honorary president of the section of gynecology and abdominal surgery at the First Pan-American Medical Congress in 1893, at Washington, honorary member of the British Gynecological Society, founder of the Alabama Surgical and Gynecological Association, president of the Tri-State Medical Society of Alabama, Georgia and Tennessee, in 1892, honorary member of the Medical Society of the State of New York, member of the Alabama State Medical Association, Jefferson County Medical Society, and Birmingham Medical Society. He established a gynecological department in the Birmingham Hospital, and was elected professor of gynecology, obstetrics and abdominal surgery in the Birmingham Medical College in 1894. He was one of the editors of the *Alabama Medical and Surgical Journal*, the first medical journal published in Alabama, editor of the gynecological department of the *Alabama Medical and Surgical Age*, and associate editor of the *American Gynecological Journal*. He was a well-known abdominal surgeon, having written many valuable contributions upon that subject.

CANADA.

(From Our Special Correspondent.)

The Health of Montreal.—The report of the Health Department of Montreal for 1902 shows that the total number of deaths was far below that of 1901. The greatest number of deaths occurred in July, 735; the lowest, in October, 421. The total number of deaths amounted to 6271, as compared with 6915 for 1901. This result is attributed to the exceedingly cool weather of last summer. Consumption caused 664 deaths, pneumonia 544, typhoid fever 86, measles 76, scarlet fever 64, diphtheria 57, cholera infantum 105 and diarrhea 347 deaths. The lowest death-rate in Canada is said to have been in Hamilton, Ontario; the highest in Three Rivers, Quebec.

League for the Prevention and Treatment of Tuberculosis.--This league has recently been formed in Montreal, with Senator Drummond as president and Dr. A. J. Richer, secretary. The aims of the association are to stimulate and increase the knowledge of what tuberculosis is, its dangers and how they may be combated, and to afford assistance to those suffering from the disease. An active campaign has already been inaugurated. Dr. Lachapelle, of the Provincial Board of Health, will assist in distributing literature, and lectures will be given in French and English upon the subject. The Health Department of Montreal has recommended an appropriation by the City Council. Membership in the league may be obtained by paying an annual fee of one dollar.

Institute of Hygiene, London, Ont.—A deputation, consisting of Drs. Robert Ferguson and H. A. McCallum, was recently in Toronto to request the Government to assist in the erection of an institute of hygiene at London, Ont., for the scientific study of infectious and epidemic diseases. Such institutes have already been erected at the University of Toronto and Queen's University, Kingston, with the aid of the Government. It is probable that nothing will be done at present in this matter.

Death of Lieutenant-Colonel Maclean.—Lieutenant-Colonel Caird Ryerson Maclean, who was graduated from Queen's University, Kingston, in 1859, after having received his medical degree from the University of New York in the previous year, died at Meaford, Ontario, February 17, aged 66 years. He was surgeon in the Union Army during the American Civil War, at the close of which he returned to Meaford, where he practised until the time of his death.

MISCELLANY.

Bubonic Plague in Mexico.—Up to February 13, 284 cases with 240 deaths had been reported at Mazatlan. Under date of February 24, the plague situation at Mazatlan was said to be improving. One death occurred February 23 and one February 24, and there were 9 new cases reported during those 2 days. Ensenada, where 15 cases with 14 deaths were reported between December 25 and January 9 last, was officially declared free from the plague, February 7, over a month having passed since the last case had appeared. The State Department has received word that a case of bubonic plague appeared at La Paz, February 27, causing great consternation.

Cholera Among the British Troops.—It has been reported, under date of February 24, that several cases of cholera have appeared among the English members of the Somaliland expedition which Great Britain has despatched against the Mad Mullah.

Not Bubonic Plague on the Iris.—In our issue of February 21, page 328, we announced that the Italian bark *Iris*, from Pensacola, Florida, November 18, had reached the Island of Majorca February 17, with several cases of what was supposed to be bubonic plague on board. Later reports state that the disease was malarial fever. The United States Consul-General at Barcelona, Spain, says that the vessel has proceeded to Marseilles without communicating with Majorca.

Obituary.—Dr. W. E. B. Davis, at Birmingham, Ala., February 24.—Dr. Martin R. Gage, at Sparta, Wis., February 25, aged 78 years.—Dr. S. B. Lawson, at Camden, W. Va., February 24, aged 25 years.—Dr. Lemuel G. Goode, at Jersey City, N. J., February 24, aged 39 years.—Captain Franklin M. Kemp, Assistant Surgeon, U. S. A., at Nueva Caceres, Philippine Islands, February 23, aged 30 years.—Dr. R. J. Gatling, at New York City, February 26, aged 84 years.—Dr. Theodore Gaillard Thomas, at Thomasville, Ga., February 28, ager 71 years.—Dr. Alexander Stanley Hancock, at New York City, March 1, aged 65 years.

The Latest Literature.

BRITISH MEDICAL JOURNAL.

February 14, 1903.

1. A Clinical Lecture on My Unsuccessful Operations for Cancer of the Tongue and on the Early Diagnosis of the Disease. H. T. BUTLIN.
2. A Contribution to the Study of Cancer Mortality. C. TEMPLEMAN.
3. Two Cases of Carcinoma of the Liver Presenting Several Points of Clinical and Pathological Interest. H. R. VACHELL and M. W. STEVENS.
4. A Case of Primary Carcinoma of the Ovary. MAY THORNE.
5. A Case of Primary Sarcoma of the Lung Simulating Empyema. H. D. ROLLESTON and R. S. TREVOR.
6. Scirrhous Carcinoma of the Male Breast. W. B. BELL.
7. An Unusually Large Angioma of the Liver. A. MANTLE.
8. A Case of Prolapse of the Bowel With Loss of Control. S. PAGET.

1.—Butlin has collected the results of all his operations for **cancer of the tongue** performed up to 3 years ago. Of 129, 32 are absolute successes. Twelve patients died of some other disease within 3 years after operation; if these be excluded, the proportion of success is over 27%. One patient is well after 19 years, and another is well 3 years after removal of the tongue and metastases of the lymph-glands of the neck. Fourteen died of operation, 29 died with recurrence in the mouth, and 41 died from recurrence in the lymphatic glands without recurrence in the mouth. There is no portion of the body in which operation is so urgently called for as in the mouth; and there is no portion of the body in which early operation gives such good results. Chronic superficial glossitis and leukoplakia, the result of irritation, strongly predispose to the formation of cancer. Lumps and nodules in the substance of the tongue and old chronic ulcerations rarely become cancerous. Warty growths, thickened areas of leukoplakia and a progressing indolent ulcer may be regarded as precancerous conditions, and should be removed at once. Butlin advises patients suffering from bad superficial glossitis to have that portion of the tongue removed even when there is no sign of cancer. [F. T. S.]

2.—Templeman concludes his paper on the study of the **cancer mortality** in the city of Dundee as follows: The death-rate from cancer, as a whole during the 25 years under review, has more than doubled, having increased from 7.27 to 16.92 per 10,000 of the population over the age of 20. This increase is greatest at ages over 45, is common to both sexes, but more marked in the male sex, though the actual mortality is higher among females. In females this is chiefly due to an increase in malignant affections of the abdominal viscera. Uterine cancer and cancer of the breast in females have increased, though not in any marked degree. Cancer of the rectum also shows a slight increase in both sexes. In males the highest mortality is from cancer of the abdominal viscera, and in males cancer of the mouth and upper digestive tract has also greatly increased. Cancer of regions which may be described as accessible has increased, as well as that of parts which are not so accessible and in which the diagnosis is more difficult, but the increase in the latter is out of all proportion to that in the former class. During the same period there has been a great improvement both in clinical and pathological diagnosis, as well as in death certification, and consequently a considerable diminution in returns from such indefinite conditions as "old age" and "disease" of the various organs without any specification of its nature. This must to a considerable extent have helped to swell the returns of death from cancer. [F. T. S.]

3.—Vachell and Stevens report a case of **primary carcinoma of the liver** in which the organ weighed over 17 pounds, and a case of extensive nodular cancer of the liver which was secondary to a small primary growth of the pylorus and in which the clinical features pointed to alcoholic cirrhosis. [F. T. S.]

4.—Thorne reports a case of **primary carcinoma of the ovary** associated with intense localized pain due to salpingitis and an absence of fluid in the pelvis or abdomen—two unusual points. After operation the patient made an uneventful recovery, and for a couple of months was relieved. At the expiration of that time, however, there was a recurrence of the cancerous growth in the lower angle of the abdominal scar where a gauze drain had been placed for 24 hours. She died 4½ months after the operation. [W. A. N. D.]

5.—Rolleston and Trevor report a case of **primary sarcoma of the lung** which strongly resembled empyema. From a study of the literature they conclude that primary malignant disease of the lung proper, whether of the body or root, is of the nature of sarcoma; that primary sarcoma of the body of the lung is of the spindle-cell variety; that primary sarcoma of the root is of the nature of endothelioma. The very close morphological resemblances between endothelial and epithelial cells, and the similarity in the amount and disposition of the stroma, account for the confusion between endothelioma and carcinoma. [F. T. S.]

6.—Bell reports a case of **scirrhous carcinoma of the breast** occurring in a man, aged 56 years. [F. T. S.]

7.—Mantle reports a case of large **cavernous angioma of the right lobe of the liver.** The patient died of internal hemorrhage following an exploratory incision. [F. T. S.]

8.—Paget reports a case of **prolapse of the bowel** following excision of the rectum which was successfully **treated with injections of paraffin.** Paraffin must be injected immediately under the mucous membrane of the prolapse, not outside the bowel, but into the fold of everted mucous membrane: numerous punctures must not be made, but only one or two, lest a vein should be wounded. The prolapse, with the nodules of paraffin in its submucous layer, must be put back at once, and kept back. The bowels must be kept inactive for several days after the operation, and the patient must be kept in bed for 10 or more days till the tissues are thoroughly contracted. [F. T. S.]

LANCET.

February 14, 1903.

1. Harveian Lectures of Fibroids of the Uterus and its Ligaments Considered from a Clinical and Surgical Standpoint. (Lecture II.) ALBAN H. G. DORAN.
2. An Address on Certain Principles and Methods in the Surgery of the Paralyses of Children. ROBERT JONES.
3. Lunacy and Law; the Care and Treatment of Persons of Unsound Mind in Private Houses and Nursing Homes. ERNEST W. WHITE.
4. Notes upon a Case in which Symptoms of Early General Paralysis of the Insane Followed a Head Injury; Trephining; Removal of Depressed Bone; Disappearance of the Symptoms. A. MARMADUKE SHIELD.
5. A Method of Examining the Pulmonary Apex. A. G. AULD.
6. A Rare Form of Purpura. H. LAING GORDON.
7. A Case of Appendicitis with General Peritonitis. W. GREENWOOD SUTCLIFFE.
8. Hemorrhage in Pregnancy; a Case of Central Placenta Prævia. H. T. M. WHITLING.
9. Note on "Relapse" in Scarlet Fever. A. BANKIER SLOAN.
10. A Case of an Unusual Number of Gall-stones; Cholecystotomy; Recovery. C. S. RIDOUT.
11. A Case of Compound Comminuted Fracture of the Skull with Hernia Cerebri; Operation; Recovery. LLEWELYN LEWIS.

1.—In his second lecture on **fibroid tumors of the uterus,** Doran speaks first of the treatment of the ovaries in the operation for hysterectomy. He remarks that suppression of the menses after the operation with removal of the ovaries is not always immediate and absolute, for cervical menstruation continues in some cases. In the second place, removal of both ovaries does not necessarily cause very bad menopausal symptoms. He does not believe that retention of the ovaries is a matter of supreme importance. He is not altogether in accord with the practice of leaving large uterine flaps attached to the cervix. Such flaps may slough. The most serious objection to leaving the ovaries is the possibilty of their becoming the seat of tumor. A family history of fibroids is more interesting than important; it is not a sound guide to prognosis or treatment. Clinical experience has taught and proved that menorrhagia and intermenstrual hemorrhage associated with a uterine tumor are strong evidence that the new growth is a fibroid. For some reason ascites is rarely found in association with any form of uterine fibroid. Its cause in exceptional cases is obscure. As to the absorption of fibroids, the rapid disappearance of the tumor is doubtful, but there can be no doubt that many fibroids gradually vanish. The progress which brings about this result is probably necrosis, or, more strictly speaking, the aseptic necrobiosis which is not rare in fibroid tumors. Necrosis of a uterine fibroid is a change of great clinical interest. It may readily cause the death of the patient. Any form of disease of the appendages may exist in association with uterine fibroid myoma. [W. A. N. D.]

2.—Jones discusses **certain principles and methods** in the **surgery** of the **paralyses** of **children.** Operations, in order to be successful, must be followed by prolonged, intelligent and carefully carried out after-treatment. No half-hearted surgeon with want of faith in the treatment can accomplish much. To operate upon these patients and neglect their after-treatment would be comparable to a physician making a diagnosis and leaving the treatment to the druggist. The mechanical treatment is inseparable from the operative treatment, and the surgeon who is not a mechanic is little better than the old orthopedic surgeons who worked entirely with mechanical appliances. Jones lays stress upon the prevention of deformity in acute infantile paralysis. The deformity which results in these cases is as much due to posture as to the antagonistic and unparalyzed muscles. Too much attention has been paid to the pathological and not enough to the clinical aspect of this condition. Because certain groups of muscles have barely responded to stimulation and have remained inactive, it is too often assumed that this is due to cell destruction in the motor area: if this were true, whatever the surgeon might do would be futile. Cell destruction is not so extensive as would appear and in the majority of cases is transient. Two cases are rehearsed which show the error of mistaking muscles which were powerless from desuetude for muscles paralyzed from cell destruction. For instance, the whole arm was at first paralyzed. The flexors first recovered and later the extensors. The flexors, having first regained their function, overpowered the extensors and, aided by gravity, became shortened or contracted, while the extensors became lengthened. The muscles thus placed at a disadvantage had become practically impotent from desuetude. The method of testing whether or not treatment will be of avail in these cases is to make the supposedly paralyzed muscles as tense as possible and then ask the patient to move them. If he succeeds ever so little, a favorable prognosis may be given. If he fails the treatment is of no avail. The treatment consists in slowly stretching and lengthening the flexors and placing the extensors in such a position that their structural shortening will ensue. We should not attempt to treat a weakened set of muscles without first rescuing them from being overstretched. Restoration to action of elongated muscles takes place by maintaining them in a slackened posture. Jones lays great stress upon the importance of not confusing muscles which have for years been useless, with muscles which are positively paralyzed. It is this confusion which has hindered both physician and surgeon from accurately gauging in these cases the potentialities of recovery. Jones next speaks of tendon transplantation and refers to excellent results which he has obtained in an experience of over 50 operations of this character. Arthrodesis is recommended in paralytic joints which are either hopelessly flail-like or sufficiently so to demand unceasing mechanical attention. In this operation the part is put in the most useful position, the articular cartilages are removed and the point allowed to become permanently ankylosed. In discussing cerebroparalysis of the spastic type, Jones states that cerebral diplegia is far the most serious condition met with. The treatment of spastic paralysis has been too solely in the hands of the physician, since many of these patients may be improved in both body and mind by surgical efforts, and frequently enabled to walk with comparatively little difficulty. Beyond remedial art are to be placed the idiot, the microcephalic, and that violently irritable type of diplegic subject to fits and active athetotic moments who has generally lost all control over his secretions. In most cases the treatment may be required for 2 years, and if the patient cannot be under observation for that length of time the treatment will accomplish little, since it divides itself into operative and postoperative. If the paralysis is complete, that is, if the patient is never known to relax his spasm, the treatment is futile. Tenotomy in these cases is of great value, but unassociated with careful after-treatment is disappointing. [J. H. G.]

3.—White contributes an article entitled **lunacy and law; the care and treatment of persons of unsound mind in private houses and nursing homes.** This article deals with the English laws, and a plea is made for the treatment of the insane in private hospitals. [F. J. K.]

4.—Shield and Shaw report an interesting case of **linear fracture** of the **skull in which symptoms of early general paralysis** of the **insane developed.** The patient was a healthy man, 30 years of age, who, 3 months after sustaining a scalp wound in the left frontal region, developed a peculiar mental condition. At the time of the injury no fracture was found, and he was confined to bed for only a short time for concussion. The patient was perfectly well for some weeks, but, about a month after the injury, commenced to suffer from pain in the head, loss of memory and sudden and violent outbursts of passion. These symptoms continued until the patient reached a mental condition of dementia. There being no history of alcoholic excess or of syphilis, the symptoms appeared to be directly attributable to the injury. Sheild trephined the skull at the point of injury and found a healed linear fracture with a depression of the inner plate. Immediately after the operation there was a most marked improvement in the patient's condition. Whereas before the operation he could not write or sign his name, a short time after the operation he could write as well as ever and walk without difficulty. Ultimately he made a very satisfactory recovery. [J. H. G.]

5.—Auld has devised **a method of examining the pulmonary apex,** which he thinks yields trustworthy results in the very earliest stage of phthisis. This method is based on the results of a large number of clinical examinations and also on a number of observations on the cadaver. He points out that the apices of the lungs extend on an average from 1 inch to 1½ inches above the clavicles and in some cases 2 inches, the right apex being a shade higher than the left. The method consists in outlining the resonant area above the clavicles. Finger-to-finger percussion may be used, but he favors a vulcanite rod pleximeter, the chest piece of which is about one-half an inch in diameter. Gentle percussion is begun at the clavicular attachment of the outer head of the sternomastoid muscle and continued upward along the border of the muscle; then percussion is made along the inner border of the trapezius, in an upward direction. Next the upper line of dulness is obtained; then the area of resonance should be outlined posteriorly. He points out that the key to the detection of incipient diseases in the apex is familiarity with the physical signs yielded in health. With deep inspiration, the upper area of resonance is a quarter of an inch higher than during forcible expiration. He also mentions that, if the pulmonary apices be examined in this comparative manner, any deviation from the normal standard, any evident disproportion, either in respect of characters common to both sides, may be justly regarded as a ground for suspicion. The early indications of abnormalities are (1) failure of the upper line of resonance on one or the other side to ascend during a deep inspiration; (2) a lowering of the upper line of resonance in whole or in part as compared with that of the opposite side; and (3) indistinct definition of the upper or outer line of resonance. He also enumerates the physical signs obtained on palpation and auscultation in early disease of the apices. [F. J. K.]

6.—Gordon reports **a rare case of purpura** which occurred in a boy, 14 years of age. He was taken ill on February 27, 1901, complaining of pain and stiffness in the limbs and a rash on the legs. The patient complained of pain and tenderness in the knees, ankles, elbows and wrists, but there was no heat or swelling; the temperature and pulse were normal. A thickly dotted, purpuric rash existed on the extensor surfaces of both legs, the inner surface of the thighs and the outer aspects of the elbows. The patient developed colic and hemorrhages from the bowels. The purpura disappeared in several days and, on March 3, a mass of urticaria showed itself on the anterior aspect of each ankle. Joint pains shifted constantly. Later abdominal pain of a colicky nature returned, nausea and vomiting developed, and the abdomen was very tender. Various skin eruptions followed; erythema and purpura, urticaria and erythema exudativum, nodular thickening, papular eruption and later edema of the upper eyelid. The purpuric rash was pronounced on March 6, and the edema shifted to the cheek. For many weeks the clinical picture changed in a manner which the author states defies description. Examination of the blood gave no information as to the nature of the illness; the urine was normal. The disease did not yield to treatment with salicylates or any of the numerous drugs selected out of recommended remedies. The patient finally recovered. The author mentions that this case of purpura differs from those described by Henoch as follows: (1) In its more continuous nature; there were no "intervals of several days or weeks or even a year;" (2) in the prominence of skin eruptions other than purpura, and of what can only be called "flying edema;" (3) in the cardiac complications; (4) in the chorea; and (5) in the diminished daily flow of urine. [F. J. K.]

8.—Whitling records a case of **central placenta prævia**, in which a dead child was extracted, but the mother was saved. After tearing through the placenta, forceps were applied and the child extracted in 3½ minutes. The bleeding ceased for the first time when traction commenced. [W. A. N. D.]

9.—Sloan contributes **a note on "relapses" in scarlet fever**. He reports 2 typical cases in which relapses occurred, and also refers briefly to another case, illustrating another class which might be called "mild scarlatinal infections" characterized by slight sore throat, transient rash, slight malaise and no desquamation. [F. J. K.]

10.—Ridout reports a case of **cholecystotomy** performed by Hatton in which **449 gall-stones** were removed from a woman, 43 years of age, who stated that until five weeks before the operation she was quite well, but at this time she was seized with an attack of hepatic colic. [J. H. G.]

MEDICAL RECORD.

February 28, 1903.

1. Remarks on Achylia Gastrica and Pernicious Anemia. MAX EINHORN.
2. Recent Researches on the Voice. E. W. SCRIPTURE.
3. Doctrine of Survivorship in Case of Two or More Deaths in a Common Disaster. THEODORE SUTRO.
4. The Etiology and Prevention of Senile Cataract. J. WILKINSON JERVEY.

1.—Einhorn contributes a further discussion of **achylia gastrica** and its relation to **pernicious anemia**. Achylia gastrica, formerly called **atrophy of the stomach**, is an obstinate affection, and until recently it was not known whether a return of the normal secretion could take place. Einhorn, however, has reported one recovery, and in the present paper he presents clinical notes of three others. At present Einhorn is not inclined to believe that pernicious anemia is caused by atrophy of the stomach for the following reasons: (1) In most cases of achylia gastrica a nearly normal condition of the blood is found. In one case of achylia gastrica, in which at autopsy a total atrophy of the stomach mucous membrane was found, pernicious anemia did not exist during life. (2) We occasionally observe the presence of gastric juice in cases of pernicious anemia, sometimes even in an increased amount, as is evident from the 3 cases reported above. If pernicious anemia were caused by an atrophy of the gastric mucous membrane, the achylia would have to be well marked, as soon as the symptoms of the blood disease are apparent. We cannot deny that achylia and pernicious anemia may occur together. These cases are, however, in the minority and would probably point to the fact that there is a common cause for both affections, or that pernicious anemia finds a ready soil in cases of achylia. We must also think of the possibility that in grave cases of anemia (pernicious anemia), in the last stages of the disease, changes may occur in the stomach and intestinal glands (atrophy), just the same as analogous changes in the spinal cord have been observed in this disease. [T. L. C.]

2.—Scripture states that the science of **experimental phonetics** comprises several main departments of investigation, such as the study of movements of the vocal organs introducing speech sounds, the association of ideas as the basis of grammar, and of language teaching, etc. In his present paper he deals only with the **study of speech curves and the deductions to be drawn from them.** The most reliable method at the present time consists in first getting a satisfactory record on a talking machine, and then tracing off the curve; the record itself and the results can be tested and verified by listening to the speech as reproduced by the machine. He noticed in studying these curves that the speech vibrations are not like those of stringed instruments or curves produced by adding a series of simple harmonic curves. The curves of the voice are such as can be produced only by a sudden blow on a cavity. The blow is that of an explosion from the vocal cords. The cords close and obstruct the air; the pressure forces them apart for an instant, and they again close. With a steady pressure this produces a series of puffs like that from a disk with holes passed before a jet of air. Such a disk—the familiar "siren" of the laboratory—gives a tone the pitch of which depends on the number of holes passing before the jet. The cords act in an exactly similar manner to emit a series of puffs which is heard as the tone of voice. **But how are the cavity tones produced?** By a blow on the cheek or the open mouth the resonance tone of the mouth cavity can be made to sound for an instant; in this way you can make the mouth say the vowels. If these blows could be repeated rapidly enough, you would hear the vowel tones added to another tone produced directly by the blows themselves. They cannot be repeated rapidly by the hand, but the puffs from the larynx can be used instead. This is what occurs in actual speech; the larynx emits a series of puffs (heard as the cord tone), each of which strikes a blow on the air of the vocal cavities and sets it in vibrations corresponding to their sizes and shapes. This view of the nature of vowels has been definitely established in regard to the male voice in the chest register for German by Professor Hermann, and for English by Scripture's results. For the female voice and for the head register the matter has not yet been settled. **This view is directly contrary to the Helmholtz theory**, according to which the cord gives out vibrations of a complex character, and the vocal cavities reinforce some of the overtones. **As the Helmholtz theory is largely used for the basis of instruction in vocal music, the need of a revision of methods is apparent.** [T. L. C.]

3.—Theodore Sutro, of the New York bar, discusses the **doctrine of survivorship in case of two or more deaths in**

a common disaster. He reviews briefly the principles of the Roman and common law, governing the subject, in their origin and development. This he embraces under the following topics: (1) The provisions of the Roman or civil law, with reference to the question of survivorship, as originally enacted and still preserved almost intact in various countries, and in two of the United States, and incidently the presumption of simultaneous death in vogue in some other countries. (2) The gradual abandonment of all rules of presumption in the jurisprudence of England. (3) The present state of the law on the subject in the United States. (4) Which of the systems is preferable, the rules of presumption of the civil law, or the presumption of simultaneous death, or the rules of the common law of no presumption whatsoever? An arbitary rule is all that can be arrived at in taking everything into consideration, the most reasonable logical rule would seem to be the one which now has been generally adopted in our law, namely, that, when it is necessary or important to ascertain or consider which of several persons survived, and there is no evidence respecting the circumstances of the calamity, no presumption whatsoever will be indulged in, but the conclusion adopted that all perished together. [T. L. C.]

4.—Jervey discusses the **etiology and prevention of senile cataract.** Many cases of cataract, especially of the senile form, are started and aggravated in their progress by the friction of a ceaselessly moving iris, which has been roughened, hardened, stiffened and thickened by disease. Many of these cases can be arrested or their advance indefinitely postponed or prolonged chiefly by the careful performance of **sphincterectomy.** [T. L. C.]

MEDICAL NEWS.

February 28, 1903. (Vol. 82, No. 9.)

1. A New Use for Thyroid Extract; A Cure or at Least a Complete Control of Hemophilia Through Its Administration; Its Effect also on Another Form of Hemorrhage. EUGENE FULLER.
2. Cortical Hemianopsia and Sector Defects of the Visual Field. EDWARD JACKSON.
3. Ossiculectomy. EDWARD B. DENCH.
4. The Discrepancy Between Clinical Manifestations and Pathological Findings in Appendicitis. NATHAN JACOBSON.
5. The Treatment of Typhoid Fever. G. WYTHE COOK.
6. Aseptic Surgery on the Niger Delta. FREDERICK GRIFFITH.
7. Remarks upon Adherent Pericardium. GEORGE MONTAGUE SWIFT.
8. Hyoscine in the Treatment of Morphinism; Its Office and Value. GEORGE E. PETTEY.
9. The Scope of Vaginal Section. EGBERT H. GRANDIN.

1.—Fuller advises the extract of thyroid in 5-grain doses in conditions of this kind and, reports 2 cases cured by it. [T. M. T.]

2.—Jackson says the symptom that is significant of **hemianopsia** is that in the two eyes the indentations and extensions of the blind area correspond to each other. They are not identical in shape, but the correspondence is sufficient to identify the portions of the retina having connection with the same part of the visual center. [T. M. T.]

3.—Dench gives the indications for the operation of **ossiculectomy** and divides them into 3 classes: (1) Those cases in which the patient is suffering from what is commonly known as a chronic nonsuppurative otitis media; in which the membrana tympani has always been intact and for which operative procedures are undertaken either for the improvement of the function of the organ or for the improvement of certain symptoms, such as subjective noises and vertigo. (2) Those cases in which an operation is undertaken primarily for the relief of chronic suppuration. Here the principal object of the operation is to remove all dead bone from the tympanic cavity and cause a cessation of the discharge. Incidentally, the surgeon may also aim, in those cases, to improve the hearing, also to relieve certain subjective symptoms. (3) We have to deal with a class of cases in which there has been previous suppuration. At the time the patient comes under observation, however, this suppuration is either so slight as to cause the patient no inconvenience and as to constitute practically no menace to life, but the results of the suppuration process remains. [T. M. T.]

4.—Jacobson concludes his paper by saying: (1) We must not depend too much upon finding the so-called classic symptoms of the disease. (2) We are not to be misled by apparently mild constitutional manifestations. (3) Local signs are to be regarded as more significant and can be relied upon to a greater degree than can constitutional manifestations. (4) The persistence, and most assuredly the aggravation of any manifestation, is to be viewed with alarm and strongly suggests progression of the disease. (5) The diagnosis of catarrhal appendicitis, because of the apparently mild symptoms presented, is often unwarranted. (6) True conservatism, if by that we mean the conservation of life, is along surgical and not medical lines in every case of progressive appendicitis. (7) The author believes that every case, in which the diagnosis of appendicitis can with positiveness be made, demands surgical rather than medical care. [T. M. T.]

8.—Pettey says that **hyoscine** not only occupies, but fills, when properly used, as important a place in the treatment of morphinism as does chloroform or ether in the practice of surgery. [T. M. T.]

9.—Grandin sums up his article as follows: (1) **As regard tumors** unassociated with inflammatory pelvic lesions, if they can enter the pelvic brim, they may be removed and should be removed through the vaginal incision. (2) **Diseases of the appendages.** Whenever readily accessible and whenever adhesions to the neighboring structure may be separated without undue force, the diseased appendages should be, by choice, removed by the vaginal section. (3) **Uterine displacement.** In the author's opinion the symptomatology of uncomplicated uterine displacement is dependent on the amount of downward sagging of the origin and not on the mere version, and he does not think that these cases fall within the scope of vaginal incision. [T. M. T.]

NEW YORK MEDICAL JOURNAL.

February 28, 1903.

1. Notes on Plague as Observed by the Health Authorities of Sydney, New South Wales. G. FRANK LYDSTON.
2. Cases of Intestinal Resection, with End-to-End Union. C. S. HAMILTON and W. D. HAMILTON.
3. The Diagnosis and Treatment of Contracted Pelvis. WARREN R. GILMAN.
4. Hypodermoclysis; Experiments, Technique and Clinical Uses. ROBRT COLEMAN KEMP.

1.—Lydston contributes a very interesting paper on **plague as observed by the health authorities of Sydney.** He first reviews the epidemic in Sydney in 1900, in order to illustrate the facilities which Sydney offers for the study of this disease. He speaks of the use of Yersin-Roux antiplague serum, and the Haffkine prophylactic serum, the value of which was found rather questionable. The conveyance of plague by fomites is utterly disproved by experience in Sydney. He found that ingestion of the germ in pure culture did not convey the disease to animals. With the probable exception of the primary pneumonic type, plague is never communicated from the sick to the well, save by the way of skin atria of infection. The septicemic form of plague, while rare in man, is found the most frequent variety in rats. In speaking of the medium of infection, he says this seems fairly well established, for, practically, all the cases in man were traced directly or indirectly to an epizootic epidemic in the rats of a certain locality along the wharves. Furthermore, experiments proved that some medium between rat and man existed, and this was found to be the rat flea. Therefore, the Hankin rat-theory of plague is supported by discoveries made in Sydney. The author then speaks of the post mortem findings in rats dead of the disease, and several illustrations are appended in this connection. The clinical history of plague is then discussed, as is also the treatment, which, of course, should be largely preventive. [P. B. B.]

2.—C. S. and W. D. Hamilton report 12 case-histories of **intestinal resection. End-to-end anastomosis** was performed upon each of the patients. The methods employed were suture, Mnrphy button, Robson bobbin and the Pagenstecher thread. The latter agent, the authors claim, offers many advantages. The results of their work were comparatively satisfactory. [P. B. B.]

3.—In the consideration of the **diagnosis and treatment of contracted pelvis,** Gilman emphasizes the importance of pelvimetry and the observance of the general condition of the patient. Deformed pelves, he says, are more common than is generally supposed, and the condition is found in from 4 to 6% of all obstetrical cases. He rightly claims that every primipara should be thoroughly examined prior to the advent of labor, preferably before the eighth month. Of the three pelvic diameters, the conjugate is, of course, the most important. He calls attention to the size and character of the child's head, which may be an important factor in determining the result of the labor. As regards treatment, in cases of moderate contraction, it is best to leave the patient alone. If the conjugate is 9 cm., forceps or version may be employed. He prefers version to high forceps delivery. When the conjugate is 7.5 cm., forceps or version may be successful, but here symphysiotomy, he thinks, is indicated. When the conjugate is 7 cm. or less, the mode of procedure should be either induced labor or Cesarean section. [P. B. B.]

4.—Kemp contributes a paper on **hypodermoclysis.** He first describes some interesting experiments bearing on this subject. The first was to show the rapidity of absorption and elimination; this he found to be complete in three and one-half minutes. The second was to determine the power of saline solution to promote renal secretion. He found that increased renal activity began 4 minutes after the introduction of the fluid. The third experiment was to show that renal congestion was overcome or counteracted by hypodermoclysis of normal salt solution. The technique of the procedure is then described, but this does not differ materially from that universally employed. The indications for the employment of hypodermoclysis are then set forth. [P. B. B.]

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

February 26, 1903. (Vol. CXLVIII, No. 9.)

1. A Few Remarks on Bloodpressure. JAMES MARSH JACKSON.
2. Intestinal Obstruction Below the Ileocecal Junction. THOMAS H. MANLEY.
3. The Treatment of Hemorrhoids. JOHN O'CONNOR.

1.—Jackson says, as an aid in diagnosis the bloodpressure is fast taking an important place. For instance, in **arteriosclerosis** the bloodpressure is high; in **chronic nephritis,** especially of the interstitial type, the pressure runs very nigh, and in a way the amount of tension is a good index to the extent of the disease. [T. M. T.]

2.—To be abstracted when concluded.

3.—O'Connor gives briefly the procedure of the operation as follows: (1) Artery forceps are applied to the 4 cardinal points of the rosette, or, if the case be nonprotrusive, the forceps are applied at the same points about one-third of an inch from skin margin. (2) The mucous membrane is next separated from underlying structures by passing the left index finger into the rectum, which acts as a most efficient guide, while, with a blunt dissector and an occasional snip of the scissors, the mucous cuff is raised and separation carried well above the pilous zone. (3) By the 4 artery forceps originally applied, the cuff of mucous membrane is drawn outward, and it is transversely divided above the pile area. (4) All hemorrhage having been effectually arrested, the part is well irrigated with warm salt solution and the mucous membrane is attached to skin by a continuous catgut suture. [T. M. T]

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

February 28, 1903.

1. The Improvement of General Anesthesia on the Basis of Schleich's Principles: With Special Reference to Anesthol. WILLY MEYER.
2. Some Notes on Aural Vertigo. B. ALEX. RANDALL.
3. Transillumination of the Nasal Accessory Sinuses During Acute Coryza. CAROLUS M. COBB.
4. An Unusual Case of Nasal Syphilis in a Child and a Consideration of Syphilitic Nasal Tumors (Syphilomata). CLEMENT F. THEISEN.
5. Perforation of the Normal Intestine by an Ascaris Lumbricoides. LOUIS C. AGER.
6. The Clinical Application of Some Thyroid Gland Experiments. L. BREISACHER.
7. The Chest-Pantograph. Its Physiological Significance and its Clinical Application. WINFIELD S. HALL.
8. Nerve Nostrums and Their Dangers. WILLIAM P. SPRATLING.
9. Hypnotics, Analgetics and Their Resultant Drug Addictions. SMITH ELY JELLIFFE.
10. A Further Study of the Influenza Bacillus. F. ELDRIDGE WYNEKOOP.
11. The Fly as a Carrier of Typhoid. An Inquiry Into the Part Played by the Common House-Fly in the Recent Epidemic of Typhoid Fever in Chicago. ALICE HAMILTON.
12. Pneumonia: The New "Captain of the Men of Death." Its Increasing Prevalence and the Necessity of Methods for its Restriction. ARTHUR R. REYNOLDS.

1.—To be abstracted when concluded.

2.—Randall contributes some notes on **aural vertigo.** During the last 10 years since the grippe epidemic, cases of labyrinthine involvement showing vertigo have not been infrequent. He briefly refers to a case of a nurse, 25 years of age, who suddenly developed, in the midst of health, marked dizziness which was so intense that she could not raise her head from her pillow without developing nausea and a sensation of rotation of everything about her. The left ear was totally deaf. After some days the condition improved, deafness, however, continued. There were no evidences of tympanic disease, the lesion was probably hemorrhagic and undoubtedly in the upper turns of the cochlea. He points out that, in labyrinthine cases, testing of hearing by tuning-forks and other methods must be complete, as tuning-forks alone may elicit valueless and contradictory responses. Only from a thorough study of the range of hearing and the relation of sound conduction by air and by bone can accurate results be had. He thinks that severe cases of aural vertigo are rare: in the last 10 years he has seen upward of 100 cases and in but a single one did he feel justified in operating for the relief of pressure on the stapes. This case, which occurred in a neurasthenic woman, did not afford an example of the brilliant results from operative treatment, and the patient would probably have been as much helped by the anchoring of a floating kidney from which she had suffered for many years. He also points out that in the large majority of cases of vertigo coming under his observation neurotic and general vasomotor influences have been totally at fault, except in a considerable group in whom the catarrhal affection of the Eustachian tubes and tympanum was clearly at fault, and in which treatment by the Eustachian catheter gave relief. He offers some suggestions in regard to a group of cases of generalized vasomotor origin: some of these closely resemble Ménière's disease, but lack one or the other of the characteristic elements of this condition. The therapeutic test, he states, well bears out their etiology, and medicaments directed to improve the vascular condition have given excellent results. He particularly directs attention to the value of adrenalin, which steadies the circulation during the premonitory phase of the trouble and prevents a recurrence or greatly abates the severity of the vertiginous attack. Cases have yielded to this treatment when they would not to any other lines of treatment. He, therefore, recommends that, in all cases of vertigo coming to the otologist, he should employ minute methods of study as to the tympanic and labyrinthine condition and also to investigate all the general aspects of the patient's case. [F. J. K.]

3.—Cobb contributes an article on **transillumination of the nasal accessory sinuses during active coryza.** He discusses the various means of transillumination and states that this is best secured with electric incandescent lamps of sufficient power. The lamps which are generally sold by instrument-dealers possess too little candle power. During the early stages of acute coryza it is rare to find the accessory sinuses dark, while, during the latter stages of a prolonged attack, it is the usual result to find one or more of them dark; it is almost the rule to find one or more of the accessory sinuses involved when the ears are affected during acute coryza, and hemicrania is often closely associated with antrum disease. [F. J. K.]

4.—Theisen reports 3 cases of **syphilitic nasal tumors.** The most interesting one occurred in a boy, 7 years of age, the tumor being the only indication of congenital syphilis. These tumors were distinct new growths without any evidence of breaking down. There were 2 tumors in the nostril, one of which had a distinct pedicle looking like a papilloma. The tumors were removed, and when examined microscopically proved to be made up of round cells with here and there cells similar to spindle cells. There was also connective tissue formation and thickening of the cells of the bloodvessels. No tubercles were present. Within 2 months after the operation both nostrils were again completely obstructed by growths. Although denied previously, it was now admitted that both parents had suffered from syphilis, and the child was put upon antisyphilitic treatment, making a prompt and excellent recovery. Theisen discusses particularly the differential diagnosis between true syphilitic tumors, gummata and tubercular ulcers. [J. H. G.]

5.—Ager reports the case of a man, 36 years of age, who entered the hospital, giving the history of diarrhea for a week, which had been checked by a cholera mixture. The night previous to admission he had taken a dose of castor oil. He rapidly grew worse after admission and developed symptoms of appendicitis. An operation was decided upon. At this time the patient's pulse was 104 and respiration 106. A congested appendix was removed and, although there was evidence of **intestinal perforation,** the patient's condition prevented further search for the cause of the trouble, and the operation was hastily completed. The patient died 12 hours later, and an autopsy revealed a general peritonitis with adherent small intestine. When the adhesions were separated, a **living lumbricoid** was found. Later a small round perforation was found in the small intestine, about 10 inches from the cecum. The mucous membrane at this point seemed healthy except for the clean-cut perforation. [J. H. G.]

7.—Hall has devised an apparatus by which chest contours can be accurately measured and recorded, and which he designates the chest pantograph. [F. J. K.]

8.—Spratling contributes an article on **nerve nostrums and their dangers.** He proposes certain measures to lessen or eradicate the nostrum evil: (1) This might be brought about by the publication in the leading medical journals of the country, of papers setting forth the dangers of advertised nostrums. These articles might afterward be published in the daily papers in order to attract the public's attention; (2) concourse of lectures on the subject of patent nostrums showing the evils of indiscriminate medication and, finally, (3) to have a national law regulating the manufacture and sale of nostrums, and the practice of quackery. [F. J. K.]

9.—Jelliffe discusses **hypnotics, analgetics and resultant drug addictions.** He draws the following conclusions: (1) Prescribe the drug which will do the work required to produce sleep or relieve pain, but let it be so graduated with reference to dosage and choice of remedy that it will be the least harmful if used steadily. (2) Keep our mouths tightly shut as to what we are using. Do not say: "Take 1 gr. phenacetine, 10 gr. of salol. ½ gr. of codeine." Give it to the patient if necessary, but do not under any circumstances permit him to know what it is. This is a medical question, and, if the information is imparted, its circle of pernicious activity radiates further than we can imagine. (3) Wage incessant warfare on the many pirates who provide all sorts of reliefs to the public, going directly to them through the lay press and the magazines. (4) In conclusion, let it be remembered that the introduction of newer drugs, rightly set forth by honest chemists and worthy clinicians, makes most desirable accessions to our armamentarium; but that false pretense and economic robbery of an unsuspecting public deserve united condemnation and opposition. [F. J. K.]

10.—Wynekoop presents a **further study of the influenza bacillus.** The paper directs attention to what may be called some of the atypical clinical manifestations of the influenza bacillus. [F. J. K.]

11.—Hamilton presents an **inquiry into the part played by the common house-fly in the recent epidemic of typhoid fever in Chicago.** She refers to the epidemic which occurred in 1902, and points out that contamination of the water-supply alone cannot account for the development of many of these cases. As a result of her investigations she draws the following conclusions: (1) The epidemic of typhoid fever in Chicago during July, August, September and October of 1902 was most severe in the Nineteenth Ward, which, with one-thirty-sixth of the city's population, had over one-seventh of all the deaths from this disease. (2) The concentration of the epidemic is this locality cannot be explained by contamination of the drinking-water, or of food, or on the ground of ignorance and poverty of the inhabitants, for the Nineteenth Ward does not differ in these respects from several other parts of the city. (3) An investigation of the sanitary condition of the region shows that many of the street sewers are too small, and that only 48% of the houses have sanitary plumbing. Of the remaining 52%, 7% have defective plumbing, 22% water closets with intermittent water-supply, 11% have privies connected with the sewer but without water-supply, and 12% have privies with no sewer connection. (4) The streets in which sanitary arrangements are worst had the largest number of cases of typhoid fever during this epidemic, irrespective of the poverty of the inhabitants. (5) Flies caught in two undrained privies, on the fences of two yards, on the walls of two houses, and in the room of a typhoid patient, were used to inoculate 18 tubes, and from 5 of these tubes the typhoid bacillus was isolated. (6) When the discharges from typhoid patients are left exposed in privies or yards, flies may be an important agent in the dissemination of the typhoid infection. [F. J. K.]

12.—Reynolds contributes an article on **pneumonia.** He first refers to the high mortality of pneumonia and points out that, since the census year, 1900, this disease has caused more than ⅛ of all the deaths in Chicago, 1/3 more than consumption and 44% more than all other contagious and infectious diseases combined, including diphtheria, erysipelas, influenza, measles, puerperal fever, scarlet fever, smallpox, typhoid fever and whooping cough. He then enters into a discussion as to the measures which should be adopted to prevent this increasing predominence of pneumonia mortality. He holds that every precaution employed in a case of diphtheria to prevent its spread should also be enforced in a pneumonia case. [F. J. K.]

AMERICAN MEDICINE.

February 28, 1903.

1. Are Antiseptics of Any Value in Hand Disinfection? EDGAR R. McGUIRE.
2. Chronic Sphenoid Abscess. LEWIS S. SOMERS.
3. Chronic Diarrhea. EDWIN ZUGSMITH.
4. Cancer Statistics in the Twelfth Census of the United States. HARRIS MOAK.
5. An Interesting Modification of Technique in Penrose's Operation for Nephropexy. FRANK DONALDSON.
6. Briefs on Physical Training. G. FRANK LYDSTON.

1.—McGuire has studied experimentally the **value of antiseptics in hand disinfection.** His conclusions are as follows: (1) Absolute sterility of the hands is impossible by any method. (2) There is no royal road to sterilizing the skin—nothing takes the place of long and vigorous mechanical scrubbing. (3) The longer the hands are scrubbed under aseptic precautions, the nearer the approach to sterility. (4) The use of antiseptics on the skin is, at least, questionable; under the usual conditions, it is distinctly harmful. (5) When the true value of antiseptics is understood, we will have cleaner hands, due to more conscientious scrubbing. (6) The use of rubber gloves, while not ideal, is the nearest approach to it. (7) The operator whose hands perspire freely ought to wear gloves in every case, regardless of all objections to them. [T. L. C.]

2.—Somers discusses **chronic sphenoid abscess.** Many cases of this condition are treated as nasopharyngeal catarrh, while in case the other sinuses are involved the symptoms are overshadowed and not recognized. Were all cases of fatal meningitis subjected to autopsy, it would undoubtedly be found that the intracranial complications of sphenoidal abscess are much more frequent than is generally supposed, as in quite a number of reported cases the meninges become infected or there is thrombosis and suppuration of the cavernous sinus with fatal hemorrhage; the most frequent fatal termination, however, being that from a consecutive meningitis. The principles of treatment embrace the free drainage of the sinus and the cleansing of the parts. [T. L. C.]

4.—Moak has studied the **cancer statistics in the twelfth census of the United States,** from which he concludes that cancer and tumor have not increased in any greater proportion than several other diseases common in adult life and old age. The geographical distribution of cancer and tumor corresponds almost exactly to the geographical distribution of people of greatest age. Cancer and tumor are, therefore, most frequent in those sections in which old people are most numerous. [T. L. C.]

MUENCHENER MEDICINISCHE WOCHENSCHRIFT.

January 13, 1903.

1. An Operation for Senile Cataract. W. MANZ.
2. Inflammation of the Pancreas With Hemorrhage and Necrosis. H. HOCHHAUS.
3. The Immunization of the Typhoid Bacillus Against Specific Agglutinins. P. MUELLER.
4. The Binding of the Hemolytic Amboceptors. J. MORGENROTH.
5. The Application of Adrenalin as a Hemostatic in Cases of Hemorrhage. O. LANGE.
6. A New Handle With Catch for Scissors and Forceps-Like Surgical Instruments. M. LIESE.
7. On the Prevention of the Formation of Hematomata After Küstner's Suprasymphysean Cesarean Section. R. v. FELLENBERG.
8. A Remark Upon the Article Concerning the Relation of the Leukocytes and Suppuration, Especially in Abscess of the Liver. F. PERUTZ.
9. Inflammation of the Lungs of the Newborn, and the Gonococcus. T. AXENFELD.
10. Practical Results With the Röntgen Instrument, the "System Dessauer," Aschaffenburg. F. DESSAUER.
11. Results of the Practical Application of the Determination of the Freezing-Point of the Blood and Urine in Renal Disease. O. RUMPEL.

1.—Manz reviews his experience of 40 years of ophthalmology with special reference to the changes that have taken place in the technique of the **operation for senile cataract.** During this period he has operated upon more than 2000 patients with this condition. In the early days there was considerable dispute as to whether extraction or reclination was preferable. The needle operation was not generally advocated, although it was not expressly condemned. It was at least less likely to be followed by disastrous results. In 3 cases in which suppuration occurred Manz sought von Graefe's counsel and received the advice to use the most painstaking cleanliness in his operations. This was long before the days of asepsis. It was this danger of infection that was one of the causes of the preference for reclination. The author then discusses some of the infections and complications of the operation, and speaks especially of diseases of the kidneys and bladder and the danger of postoperative psychoses. Great improvement has taken place in the postoperative treatment; it is not so severe and, therefore, not so injurious to the patient, and the diet is not so rigidly limited. He then discusses the changes that have taken place in the methods of anesthesia, particularly the value of cocaine, which he considers still the best local anesthetic. He speaks of the advantages of the 2 operations and shows how in the course of time this method was gradually discarded in favor of the single operation. [J. S.]

2.—Hochhaus reports some interesting cases. The first patient, a man, 50 years of age, had suffered from gastric disturbances and vomiting for many years. Finally he had a severe attack of pain in the lower portion of the abdomen, biliary vomiting and complete loss of appetite. His condition grew worse, and for 24 hours before his admission to the hospital he had passed no flatus. When admitted it was noted that his abdomen was tympanitic; the urine contained a large quantity of indican, the temperature was normal, and there were signs of collapse. The vomiting persisted and became bloody, the urine still contained no sugar and there was no leukocytosis. The patient gradually went into a state of collapse and died. At the autopsy fatty necrosis was found in the mesenteric fat; there was considerable peripancreatic hemorrhage, the pancreas itself was hard and enlarged. Numerous adhesions were found in the peripancreatic structures. The histological examination of the pancreas showed an increase in the interstitial connective tissue, with obstruction of part of the parenchyma, some cellular infiltration of its connective tissue, numerous necrotic areas and some hematoidin crystals. That is to say, there was evidently a chronic and acute **inflammation of the pancreas** with fat necrosis. The second patient, a man, 39 years of age, had always been well. He suddenly developed colic-like pains in the abdomen, nausea, vomiting and constipation. The spleen was not enlarged; the urine contained a large proportion of sugar and gave the reaction for acetone and diacetic acid. The patient rapidly grew worse and died. At the autopsy there was hemorrhage into the pancreas and necrotic areas in the peritoneal fat. The third patient, a woman of 26, had been anemic for years. She suddenly developed severe pain, chiefly in the lower part of the abdomen, nausea, vomiting and constipation. There was tympanites, a slight trace of sugar in the urine, but no fever. The patient died, but an autopsy was not performed. The cases are interesting because there was no alteration in the feces, and no leukocytosis in the first case. They all, however, presented pain, but not all of them glycosuria. Therefore, the diagnosis of this condition is still difficult. The commonest cause appeared to be inflammation, either of the gall-bladder or of the duodenum and stomach, or alcoholism, obesity, pregnancy and overexertion. It is always difficult to determine which is the primary condition. The cause of the hemorrhage is also very difficult to determine. It is not certain that it is due to either the inflammation or to the action of trypsin. Operation in the beginning of the disease is probably not advisable on account of the great prostration of the patients. [J. S.]

3.—Müller has performed a series of experiments which were essentially as follows: Cultures of **typhoid bacilli** were grown by means of daily inoculation upon ordinary bouillon and upon bouillon mixed with immune serum. After this had been done for a considerable time, various dilutions of the serum being used for a separate source of cultures, the bacilli were tested for their agglutinating power. It was then found that the micro-organisms **grown in the serum bouillon had less agglutinating power than those grown in ordinary bouillon,** and that this difference was very pronounced. Bail has found that if typhoid bacilli, rendered immune to the agglutinins by introduction into the peritoneal cavity of immune guinea-pigs, were grown in ordinary bouillon they recovered their agglutinative ability. Those grown in serum bouillon did not show this quality, but could be cultivated indefinitely on agar without losing their changed relations to the specific agglutinins. It was not possible, however, to produce complete immunity in the typhoid bacillus. It could not be determined why the receptors disappeared from these micro-organisms. The practical value of the investigations, however, is that it is impossible to exclude typhoid fever as a result of a negative agglutination test of the blood. [J. S.]

4.—If bloodcorpuscles are saturated with amboceptors, then centrifugated and separated from the blood, it is found that the amboceptors remain united. If, however, new bloodcorpuscles of the same type are added to the solution they also become saturated, and if a sufficient quantity of complement is added all the corpuscles will be completely dissolved. Morgenroth gives the details of an experiment in which this was proved to be correct. There appears to be a sort of reversible process in the union of the amboceptors, and the quantity in any solution, therefore, cannot be measured. This capacity of the amboceptors to spring from one corpuscle to another only persists as long as they are not fastened by the complement. [J. S.]

5.—Lange reports a case in which there was a slight wound in the thumb. This was followed, several days later, by a large hematoma which was incised. However, the swelling extended further up the hand, and the incision was, therefore, enlarged. There was immediately profuse hemorrhage which could not be controlled, and it was found that the patient belonged to a family of bleeders. Gelatine was given by the mouth and in the form of clysters, together with ergot hypodermically, both without effect. Some gauze strips were saturated with **adrenalin chloride**, these were packed into the wound, and the **hemorrhage immediately stopped** permanently. The same preparation has been used in various cases by Baumgarten with great success. [J. S.]

6.—Liese describes an ingenious **catch for scissors or forceps.** It has the advantage that it holds firmly and is very readily opened. The chief point in the construction is that the catch is placed at the extreme end of the handle. Instruments last considerably longer with this catch than with the old form placed above the grip. [J. S.]

7.—Von Fellenberg speaks of certain **methods for the prevention of hematomata** after the suprasymphysean transverse incision. He uses the sandbag recommended by Heil, removes the drain on the third to the sixth day and covers the wound with small strips of gauze so that it heals without deformity. He thinks there is some difference between the transverse and the semilunar incision. [J. S.]

8.—Perutz discusses the value of **leukocytosis in abscess of the liver,** and finds that not infrequently it is present and very excessive. [J. S.]

9.—Axenfeld states that he does not believe that all forms of diplococci decolorizing by Gram's stain are gonococci, and, therefore, he does not believe that they are due to the gonococcus in all cases of inflammation of the conjunctiva in which they are found. In fact, as this membrane is exposed, it is quite possible that other forms of infection occur. [J. S.]

10.—Dessauer replies to the article of von Gosen, who criticises his Röntgen apparatus. He explains that the apparatus is not so well adapted to continuous use many hours every day, but that, properly employed and in the form ordinarily supplied by him, it gives perfectly sharp and satisfactory pictures. [J. S.]

11.—Rumpel continues his article upon the **value of cryoscopy** in connection with renal disease. In this instalment he particularly discusses cases of unilateral disease of the kidneys, mentions several cases in which as a result of operation it was possible to obtain the urine separately, calls attention to the considerable alteration in the freezing-point of the blood, which in one case of uremia reached —0.71°, and tabulates 60 cases in which these investigations were carried out. He concludes that in normal kidneys the molecular concentration of the blood remains constant as a result of the prompt regulation of the kidneys. In bilateral disease there is an increase in the concentration of the blood. In unilateral disease there is no alteration in the total function that is manifested in an increase in the molecular concentration of the blood, in a diminution of the concentration of the urine. (The article is still unfinished). [J. S.]

BERLINER KLINISCHE WOCHENSCHRIFT.

January 26, 1903. (40 Jahrgang, No. 4.)

1. Atypical Typhoid Fever. C. A. EWALD.
2. The Etiology of Osteo-arthropathic Changes. WALTER BERENT.
3. Alcohol as a Drug. C. BINZ.
4. The Active Substance of Cobra Poison. PRESTON KYES and HANS SACHS.

1.—Will be abstracted when concluded.

2.—Berent reports in full the case-history of a cabman, aged 56 years, who showed **the relations between neuritic processes and osteo-arthropathic changes.** He had an **aneurysm of the left subclavian artery** which, from pressure on the brachial plexus, caused thickening and pain as well as interstitial neuritis with secondary degeneration of the nerves of the arm and hand and osteo-arthropathic changes. The fingers grew large, like drum sticks, the distal end of the forearm was much swollen, the end of the arm being but slightly enlarged. The neuritis was the probable cause of the osteo-arthropathic changes. Radiographs accompany the article, with a review of the literature. [M. O.]

3.—Binz reports the investigations of the past ten years upon the use of **alcohol as a drug.** In human beings, as in animals, small amounts excite, larger amounts paralyze. Moderate doses increase respiration a little, more if the patient is tired or sleepy, due to the direct stimulating action on the nerve centers by the alcohol in the circulation. It also increases gastric secretion. Alcohol has been shown by late experiments to be both stimulating and nourishing, in small amounts, given at the correct time. For such purposes it is a valuable drug. The entire literature is quoted. [M. O.]

4.—After describing a long series of experiments in full detail, Kyes and Sachs conclude that **the active substance of cobra poison,** as shown upon certain inactive serums, heated to 56°, depends on the presence of complements in the narrower sense. The action of blood solutions toward cobra poison depends on the lecithin in the erythrocytes. At 62° such blood solutions are inactive, since the lecithin combines with hemoglobin. Cholesterin greatly hinders hemolysis with cobra poison alone and cobra poison and lecithin; with serum complements cholesterin has but little protective action. Cholesterin does not hinder hemolysis with staphylolysin and arachnolysin, but does greatly hinder it with tetanolysin and olive oil. Quantitatively cobra poison and lecithin act as amboceptor and complement; the greater the amount of the cobra poison, the less lecithin is necessary. Almost all kinds of blood are sensitive to cobra poison alone. HCl protects cobra poison from destruction under high temperatures. Potassium permanganate, calcium chloride, sodium hydrate, etc., destroy cobra poison. Bile aids cobra poison, while goats' milk has the same effect after having been heated to 100°. Fatty acids, soaps, chloroform, etc., are hemolytic. Their hemolytic action is increased when cobra poison is added. The powerful group resulting from the poisonous combination of cobra poison and lecithin seems most probably to be the remains of the fatty acids. The article is most technical. [M. O.]

WIENER KLINISCHE WOCHENSCHRIFT.

January 29, 1903. (XVI. Jahrgang, No. 5.)

1. Agglutinins and Certain Precipitates in the Blood. ARTHUR KLEIN.
2. The Immunization of Bacteria. FRIEDRICH WECHSBERG.
3. The Symptomatology of Tubercular Lymphadenitis Resembling Pseudoleukemia. HEINRICH SCHUR.
4. The Symptoms of Tumor of the Prostate. GEORG KAPSAMMER.

1.—Will be abstracted when concluded.

2.—As the result of his preliminary experiments Wechsberg believes that, as theoretically supposed, it seems possible to bring about **the immunization of bacteria,** just as the process is accomplished in higher animals. An increased throwing off of certain atom-complexes, due to the immunization processes *in vitro.* Further investigations are, however, necessary to prove the occurrence of these reactions. [M. O.]

3.—Schur reports in full detail a case of **tubercular lymphadenitis** in a woman of 22, greatly **resembling pseudoleukemia.** After an illness of 4 years, she died from enteritis. She had a marked leukocytosis, with much increased polymorphonuclear leukocytes. The autopsy showed enlarged tubercular lymphglands throughout the entire body. There was also tuberculosis of the spleen, with many secondary conditions from the mechanical interference of the enlarged lymphnodes. This condition, described by Sternberg and Paltauf, can be differentiated from pseudoleukemia by frequent blood counts and some of the clinical symptoms. These differences are, however, only quantitative. The diagnosis is possible with careful observation and a good history of the case. It is important to discover the rôle of the tubercle bacillus in the etiology of the condition. [M. O.]

4.—Kapsammer reports the case of a man of 40, with a **sarcoma of the prostate gland.** As operation was not permitted, though the diagnosis could be made from the examination of bits of tumor tissue passed per urethram, he died 7 months after retention of urine was first noticed. Most of the tumor had passed through the urethra, in pieces. No such cases, of small-celled sarcoma containing cartilage, **enchondromatodes.** The tumor caused a great number of secondary symptoms. [M. O.]

BOLNITCHNAIA GAZETA BOTKINA.

November 20, 1902. (Vol. XIII, No. 47.)

1. The Identity of Pepsin and Chymosin. I. P. PAVLOFF and S. V. PARASCHUK.
2. The Innervation of the Prostate. L. M. PUSSEP.
3. In Commemoration of Professor Nencki. His Investigations and Views on the Coloring Matter of the Blood and the Relation of the Pigment to Chlorophyl. N. O. ZIBER-SCHUMOVA.
4. The Present Status of the Question of the Causation of Eclampsia. L. K. LINGEN.

1.—Pavloff and Paraschuk conclude from their experiments that **pepsin and labferment are one and the same substance.** [A. R.]

2.—Will be abstracted when concluded.

3.—Ziber-Schumova, who has been for years intimately associated with Prof. Nencki in his researches, gives a full account of the late scientist's investigations of the **coloring matter of the blood** which led up to the establishment of a close relationship between the bloodpigments and chlorophyl. This may be best seen from the following scheme:

Hemoglobin
|
Hemin

Hematin
$[C_{22}H_{31}O_2N_4FeOH]$
|
Hematoporphyrin
$C_{16}H_{18}N_2O_3$
|
Mesoporphyrin
$C_{16}H_{18}N_2O_2$

Chlorophyl
|
Phyllocyanin

Phyllotaonin
$[C_{40}H_{39}O_5N_6OH]$
|
Phylloporphyrin
$C_{16}H_{18}N_2O$

Hemopirrol
$C_8H_{13}N$
|
Urobilin
$C_{32}H_{40}O_7N_4$

These remarkable and far reaching investigations efface still more the line of demarcation between the animal and vegetable kingdoms. [A. R.]

4.—Lingen discusses the various theories of the **causation of eclampsia.** He does not believe in the theory of infection, as he himself failed to obtain any results from bacteriological investigation. He inclines, however, to the latest theory of Veit, who maintains that **eclampsia is caused by the cytotoxins** produced by the chorionic cells becoming detached and gaining entrance into the circulation. This theory requires further confirmation, and until then we are in the matter of eclampsia "*ignoramus et ignorabimus.*" [A. R.]

November 27, 1902. (Vol. XIII, No. 48.)

1. The Secretory Activity of the Stomach in a Dog Suffering From Plague. A. P. SOCOLOFF.
2. On the Question of the Passage of Agglutinins Into Transudates (Under Normal Conditions and in Experimental Uremia). N. K. ROSENBERG.
3. The Innervation of the Prostate. L. M. PUSSEP.

1.—Sokoloff investigated the **gastric secretion** of a dog that had undergone an operation of isolation of a portion of the stomach and subsequently developed **canine plague.** He found that only after a diet of bread did the gastric juice contain pus, and explains this by the supposition that the epithelial cells of the gastric mucosa became diseased and were irritated by the strongly acid gastric juice. On the other hand, milk produced no such irritation and consequently no formation of pus. This fact illustrates the important bearing of diet on the treatment of diseased conditions of the gastric mucosa. [A. R.]

2.—Will be abstracted when concluded.

3.—Pussep studied the **innervation of the prostate gland,** and from a series of experiments on animals draws the following conclusions: (1) The peripheral nervous apparatus of the prostate gland consists of 3 pairs of nerves, the hypogastric, erigentes and probably pudendal. (2) In the spinal cord in the lower lumbar and upper sacral portion, there is a region affecting the function of the prostate, increasing its secretion. (3) In the gray matter of the brain, at a distance of one cm. from the great longitudinal fissure and half a cm. back of the cruciform sulcus, there is a region, one cm. in diameter, the irritation of which causes an increased secretion of the gland. (4) In the anterior portion of the optic thalamus there is another small area which on irritation increases the secretion of the prostate. [A.R.]

LA RIFORMA MEDICA.

December 19 and 20, 1902.

1. Hernia of the Bladder. G. BARONI.
2. A New Method of Percussion of the Spleen in Infants. F. SARCINELLI.

1.—Vesical hernia is of much more frequent occurrence than is generally supposed, says Baroni, the infrequency with which it is reported being largely attributable to the difficulties lying in the way of its diagnosis; so that it is often overlooked or incorrectly diagnosticated. He offers some practical points bearing upon its symptomatology and treatment, and reports 8 cases which came under his care. The symptoms he classifies as objective and functional. The objective symptoms vary according as the hernia is a simple cystocele or cysto-enterocele; if the former, the tumor is soft and flaccid when empty, tense and fluctuating if full of urine; the size being variable and influenced by the horizontal or vertical position, by exertion and coughing. It is almost always reducible, and pressure upon it provokes a desire to pass the urine. In the case of cysto-enterocele, the tumor is formed of an internal and posterior part which may present all the characteristics above described, percussion over it yielding a dull note; and an anterior and external part which gives a tympanitic note, and a gurgling sound is heard when it is replaced. Not always, however, are the symptoms clearly defined; and, in case of doubt, the author has found the sound helpful. By this means a cystocele may be diagnosticated by the passage of the sound through the urethra and into the protruding portion of the bladder; or by observation of the variations in the size of the tumor after withdrawal of urine or injection of fluid. Functional symptoms are represented largely by disturbances of micturition, consisting in frequent desire, with scanty emission of urine. A symptom which has a certain value is found in the ability of the patient to pass a certain amount of urine spontaneously or with the catheter, and then void a second portion after compression of the tumor, which is then seen to empty. The author has also observed, in his cases, the occurrence of pain in the region of the kidney upon the side corresponding with the hernia and radiating downward and forward to the tumor. This was noted especially in the inguinal form. As to treatment, this may be palliative, consisting in reduction and support with a suitable bandage; or radical, by operation. The author advises against resection of the protruding part—unless the communication with the main portion of the organ be so narrowed as to render the hernal portion a mere appendix after reduction. [R. L. F.]

2.—Sarcinelli has found the usual methods of percussion of the spleen in infants open to objections. He has devised a method of his own which he describes as follows: The little patient is held up by the assistant in the horizontal position half way between the dorsal and left lateral decubitus; one arm of the assistant being passed under the left shoulder and the other beneath the pelvis. The spleen is then percussed by the operator from below. By this method the spleen, which is easily displaced by reason of the lax ligaments which support it, falls by gravity to the posterior surface of the costo-abdominal parietes, there presenting a larger area for percussion than in any other position; and being carried away from the stomach, this, if distended with gas, does not mask the percussion note of an enlarged spleen. [R. L. F.]

December 22, 1902.

1. Upon Some Questions Relating to Acetone. G. SATTA.

1.—Following up the work of others in this line, Satta has made a systematic study of the influence of fats in acetone production in 10 diabetic patients; and found that in mild cases the influence of fats upon the elimination of acetone by the urine was very slight, while in grave cases the effect was most pronounced; so that 12-15 gm. of butter sufficed to increase by a gram the amount of acetone eliminated. In both mild and severe cases, but especially in the latter, the increase of beta oxybutyric acid was marked. Other fats, such as olive oil, beef fat, etc., increased the elimination of acetone from 1/4 to 1/3 less than butter. [R. L. F.]

December 23, 1903.

1.—An Unusual Case of Strangulated Hernia.
P. GIANNANTONI and S. GUGLIUZZO.

1.—Giannantoni and Gugliuzzo report the case of a man who was affected with inguinal hernia and who had repeatedly reduced the hernia himself by taxis, and had suffered no special inconvenience from the condition till upon one occasion when, after excessive exertion, the hernial tumor again escaped through the inguinal ring; the patient at the time experienced severe pain, which radiated over the abdomen. He continued to suffer even after, with the exercise of some force, he again succeeded in reducing the tumor. Defecation became impossible from this time, and fecal vomiting ensued. A physician being finally called, operation was decided upon; but as examination showed naught but a dilated inguinal canal, without a trace of hernia, reducible or otherwise, and the history given by the patient being the only clue to the condition, a tentative diagnosis of strangulated hernia reduced *en masse* was made. Accordingly a median incision was made from the umbilicus to the symphysis pubis, and an incarcerated hernia, reduced *en masse*, was then found in the right iliac fossa. The tumor being immovable, the inguinal canal was opened by Bassini's classical incision, and the tumor thus brought out of the abdominal cavity, the condition existing prior to the reduction being reproduced and the radical operation for strangulated hernia being performed. From the successful outcome of this case the authors conclude that the median laparotomy is advisable not only in doubtful cases, but in all cases of incarcerated hernia reduced *en masse*; this operation to be followed by the procedure described by them. [R. L. F.]

Special Article.

TROPICAL DISEASES.

SEVENTH LECTURE IN A COURSE ON TROPICAL DISEASES.*

By CAPTAIN CHARLES F. KIEFFER,
Assistant Surgeon, U. S. Army.

Gentlemen: We still study today the important group of nematode worms. These parasites are common not only to the tropical but also to the temperate zone. I shall consider in this group trichuris trichuria, ascaris lumbricoides and uncinaria, these being the more common, and I shall chiefly limit this lecture to a rapid survey of uncinaria and uncinariasis. This parasite is the most important not only because the clinical symptoms produced by it are the most profound, but because it has lately been shown to be extensively distributed in the subtropical portions of the United States and also in our Northern States. The study of this parasite opens up questions of the greatest import and clears up much unknown ground in the field of verminous anemias as well as in that of the so-called pernicious anemias. I have included in our study of the uncinaria these other related worms because the question of diagnosis is so closely interwoven, that I thought the accuracy of your conception of the uncinaria would be increased by a rapid review of the other two.

Trichuris Trichuria (tricocephalus dispar), the whip worm, is of very common distribution in the tropics. In some countries a very large proportion of the population is infected. Excepting in deteriorated conditions, the parasite does not cause any clinical symptoms. Very rarely it seems to add to the intensity of the symptoms of tropical dysentery, and under such circumstances it must be reckoned with. Its normal habitat is the cecum, although it may be found in other portions of the colon or lower ileum. This parasite is not expelled by the ordinary anthelmintics, their action being, at best, very uncertain. The only reliable remedy is mechanical dislodgement of the worms by means of high enemata or their destruction by antiseptics.

Ascaris Lumbricoides, although not so commonly distributed in the tropics as the trichuris trichuria, is a vastly more common affection than in temperate climates. It is present in all classes and ages, but children are particularly prone to it. In the Philippine Islands this worm is a very common pest indeed, a very large proportion of our soldiers being, at one time or another, attacked by it. I recall being extremely puzzled, during my early service in the Archipelago, by the many cases with dyspeptic or ill-defined abdominal symptoms. So, on one occasion, I gave santonin to thirty-five men in one ward and found ascarides in thirty-three. These worms are commonly few in number, although there may be as many as sixty to one hundred. They move about with very great activity and may be found in any portion of the intestinal tract. I will not take up your time with any detailed description of the worm, as you are all already perfectly familiar with it. It presents very few problems different from what you would observe in this climate, excepting it be in the much wider distribution. I shall, however, go over some special points with you so as to make this subject of the nematodes complete. The mode of infection is through earth or water infected by night soil, so that water and vegetables may both act as carriers. The embryo develops inside the ovum in from four to six months. At this stage, if swallowed, it emerges from the egg and reaches adult form in another month. It seems quite clear that, when in the ovum, the embryo resists dessication, provided it is not at the same time submitted to any great degree of cold. Hence it is clear that, in the dry season, it may be disseminated widely in dust, and infection may be brought about in this manner. When the seasonal rains begin, these embryos are carried into the water courses infecting the water-supply.

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*Seventh lecture, delivered at the Jefferson Medical College, Philadelphia.

The symptoms are ill-defined, sometimes wanting. In adults they are more or less confined to the stomach. There may be capricious appetite; sometimes voracious, sometimes absent. The patient complains of considerable pain and distress with flatulence after eating, or there may be nausea and vomiting. In children we may have, added to these, irritative nervous symptoms, restlessness, grinding of the teeth, picking at the nose, twitchings or even convulsions. When there are many worms, there may be irregular temperature, foul breath and irregular diarrhea. Some observers have termed this condition typholumbricosis.

The ascaris lumbricoides, as said before, is a great wanderer and although it is commonly found in the upper portion of the small intestine, it may be found anywhere throughout the whole tract. It very commonly travels into the stomach and is vomited. This may be the first evidence a patient may show of the presence of the worm. In rare instances a worm has crawled out through the nostril or even through the Eustachian tube, or, in other cases, when at the level of the glottis, a worm has been aspirated into the trachea causing asphyxia or, passing lower down, gangrene of the lung. When present in large numbers, they have become impacted causing acute intestinal obstruction. Perhaps the commonest accident is obstructive jaundice from a worm in the common duct. It has also perforated the intestine at the seat of an intestinal ulcer or the stomach at the location of a gastric ulcer. It has even been known to perforate the normal bowel.

Even if the worm produced no symptoms, the liability to these accidents would indicate prompt attempts at removal. There have been a host of anthelmintics recommended, but the best remedy is santonin. The drug should be given in doses of from one-half to one grain for a child, or three or four grains for an adult. The administration of the remedy should be preceded by milk diet for two days and followed by a saline purge. Even more effective is the administration of a purgative dose of calomel in capsule with the santonin. Mercurials have of themselves a distinct effect on intestinal parasites and are markedly synergetic to many anthelmintics. Remember also the tendency to yellow urine and xanthopsia or yellow vision, after the administration of santonin. These effects of the drug, although of no ulterior moment, may be most alarming to your patients.

Uncinariasis (*ankylostomiasis*) is due to different varieties of uncinaria and occurs not only in man but in some of the lower animals. It is a parasitic disease of the small intestine, the chief symptoms of which are severe anemia, abdominal pains, asthenia without emaciation and edema. The parasite was described as uncinaria by Froelich, in 1789; Dubini in 1843 termed it ankylostoma. The disease has been known as brick-makers' anemia, Egyptian chlorosis, miners' anemia, Porto Rican anemia, miners' cachexia, St. Gothard's tunnel disease and similarly, tunnel disease and tunnel anemia, tropical chlorosis and hookworm disease, besides a perfect host of local names.

Uncinariasis occurs in all the tropical and practically all the subtropical world. In some tropical countries its distribution is very extensive. In portions of India 75% of the population are said to be affected. In Egypt, this worm is found in nearly every post mortem. It has been the most disabling of all diseases in the Egyptian army as well as the greatest cause for rejection of recruits. In Ceylon, its ravages are said to be even more serious than those of cholera. Harris has found it in Georgia and Florida, and believes it is the common cause of the severe anemias of the Southern United States that have hitherto been regarded as malarial. In Assam it is almost universal, 299 cases having been found in 300 post mortems. It has been found in nearly all our Southern States and as far north as New York. It is present in Cuba and Porto Rico. What the true rate of its incidence in this country may be, we have no means of knowing, as the subject has only lately been opened. It seems likely, however, that the disease occurs with much greater frequency than has been imagined.

The uncinaria is a nematode worm of the family strongylidæ; subfamily strongylinæ, genus uncinaria. It is very commonly distributed in the animal world in distinct species. U. canina is very common in dogs; u. stenocephala in dogs and foxes; u. trigonocephala causes great losses in the sheep industry; u. radiata in cattle; u. Lucasi in seal pups. These are the principal animal species. In man we recognize two species, uncinaria duodenale (Dubini) and uncinaria Americana (Stiles), very commonly spoken of as the old world and the new world hookworms. All evidence seems to be clear on the point that man is not affected by the species infecting animals, nor have the human species been found in animals, excepting in the experiments of Loos which I shall quote later on. The brief references that have reached us of his recent work seem to indicate that, in one instance at least, the same species was infecting for man and dog. This must, however, be regarded as unusual. The specific diagnosis of the two human worms is a refinement of helminthology with which I will not burden you. I believe, however, that the chief biological differences in the species lie in their ability to resist low temperatures. Viewed in this light, the uncinaria duodenale may be regarded as a tropical or subtropical worm, the uncinaria Americana, perhaps, as a worm capable of higher extensions into the temperate zone.

The two sexes are distinct, the male worm is from 8 to 10 mm. long and the female slightly longer, 10 to 18 mm. The specimens I show you here are a male and female of the uncinaria duodenale from the Philippine Islands. You will observe the length of the two worms, their thickness, about that of a stout pin, that they are grayish-white in color, cylindrical in shape, with a contracted head and a broad caudal bursa. If you will look at the specimens under the microscope, you will see in the first specimen the powerful buccal armature with its six retaining teeth. In the other specimens you can see the rather complex digestive tract with the heavy muscular esophageal pump clearly indicated. When male and female worms are present, as they usually are in the proportion of one of the males to three of the females, the female excretes an enormous number of ova. These ova when deposited in favorable surroundings develop into embryos in 24 hours. The embryo grows rapidly, passing through two ecdyses or castings of its skin in about five days. The second ecdysis is the termination of the extracorporeal phase, and the embryo is now infective for man. When ingested into its approriate host, the worm goes through three more ecdyses, making five in all, the fourth ecdysis marking the formation of a provisional buccal armature, the fifth, the appearance of the definite armature. From this time, it becomes an adult mature form in from five to six weeks.

The sources of infection are the ingestion of infected water or food, the accidental ingestion of infected earth from soiled hands and infection through the skin, during or after the second ecdysis of the worm. The mode of infection by earth is, of course, obvious. The infection through dirt and clay eating (geophagy) opens up an interesting question. There can be no manner of doubt that geophagy, in infected areas, is a common manner of taking the disease, but it is also true that this peculiar perversion of taste does not show itself in many cases until the disease is fully developed. In these latter cases it seems quite clear that the earthy matter is eaten in obedience to an instinctive craving of the organism, and that it brings relief by mechanically loosening a number of the parasites. That infection may take place through the skin, the experiments of Loos and many clinical observations, as well as accidental laboratory infections, have made quite evident. It has often been observed that children walking barefooted through infected ground were prone to become infected. The disease known as pani-ghao or ground itch is probably a skin infection of this parasite. Loos experimented with the young worms in a mixture of earth and charcoal. This mixture was placed on the skin of dogs, after shaving off the hair, but without scarification or friction. In due time the parasites were found in the intestine. While making these experiments he accidentally allowed some of the earth mixture to remain on his own hand, and he later developed the parasites himself. At the last Egyptian Congress he was able to show specimens in which parasites could be seen in the skin and could also be seen to have passed through the skin, penetrating commonly at the hair follicles. The possibility of the dissemination of this parasite in dried air has been urged. I do not believe that it resists dessication and hence that air-borne infection very rarely, if ever, occurs.

The symptoms vary with the number of parasites in the intestine and with the general condition of the patient. You will readily understand, if there be but a few worms, that there may be very little in the line of general symptoms produced. If, on the other hand, the worms mount up into the hundreds, as many perhaps as a thousand, you can also see how extensive a blood loss obtains if each one of these voracious blood-sucking worms consumes no more than two or three minims of blood daily. In conditions of great deterioration, in the half-starved or ill-nourished, in acute or chronic dysentery, the presence of only a few of these parasites may be sufficient to turn the scale and act as a very dangerous complication. In a well-developed case the symptoms are those we know as pernicious anemia. It has been perfectly well known for a long time that the term pernicious or idiopathic anemia covered a group of diseases the etiology of which was not understood. "Idiopathic," here as elsewhere, meant a confession of ignorance. Now the recognition of this variety of severe anemia due to the uncinaria is one of the first inroads into that unknown group, the remainder of which offer such an interesting field of research for you coming men in medicine. The principal phenomena are dyspeptic symptoms with colicky pains in the early stages, followed by progressive anemia speedily becoming profound with little or no emaciation and with terminal edema. The pain in uncinariasis is colicky in character, it is one of the earliest symptoms and is fairly constant throughout the disease. In cases in which only a few parasites are present, it may amount only to uneasiness; when there are many, it may be severe. Like all abdominal pains due to intestinal parasites, it is relieved for the time being by food. A delayed meal, passing of the usual meal hour, causes faintness, an empty or "gone" feeling in the epigastrium with dull, gnawing pain. During this stage the appetite is very variable. It may be voracious or it may be diminished. Curious perversions are very common, such as geophagy, clay or earth eating. It is probable that we have here, as indicated before, a vicious circle. The clay eating may be the original infecting cause. Later it is practised to diminish the bowel discomfort.

Following the development of the colic, anemia appears and rapidly progresses to a most marked degree. With this anemia there is, as a rule, very little wasting. The subcutaneous fat is fairly well preserved. The skin is a lemon-white color, the conjunctivæ and lips exsanguinated, the scleræ pearly or muddy white. All the subjective phenomena of profound anemia become marked. There is lassitude, breathlessness on the slightest exertion, vertigo and occasionally dimness of vision. Even as in other pernicious anemias we observe curious crises of fever that may last for days or even weeks. Auscultation over the precordial area will reveal soft hemic bruits, propagated to a remarkable degree into the great vessels. These bruits have been heard down the brachial artery almost to its bifurcation and well down the femorals. Retinal hemorrhages accounting for the occasional dimness of vision may be found. The face and ankles become puffy and there may be a slight general edema adding to the deceptive plumpness of the patient. Harris has reported a case of uncinariasis with symptoms resembling pellagra.

When we examine the cadaver of one of these cases we find, first of all, that the subcutaneous fat, the panniculus adiposus and the mesenteric fat are fairly well preserved. The parasites will be found usually in the jejunum, still attached to the bowel wall if the section is early, or free in the intestinal contents, if the section is delayed. The jejunum is covered with old and recent pinhead-sized extravasations. The bowel may be thickened in spots, or there may be small cavities in the bowel wall filled with blood and containing one or two parasites. The liver and kidneys commonly show some degree of fatty degeneration. The cause of the anemia is probably twofold, the constant abstraction of a considerable amount of blood by the parasite and a hemolytic effect probably brought about by a toxin elaborated by the worms. The parasites are very voracious, sucking in the blood through the strong muscular esophagus and, apparently, only using the plasma while discarding the corpuscles. The hemolytic effect is shown by the increased iron in the liver, the occurrence of hematoidin in liver and kidney, as well as the free iron in the stools.

The blood shows the changes of pernicious anemia. There has been some little confusion brought into the question of these blood changes owing to the fact that incomplete cases have been studied. It is true that in early cases, in which the anemia is moderate, the color index is relatively low, and the condition there simulates a chloranemia. In the later stages, however, when the red corpuscles have fallen to 1,000,000 or below, the color index will be found to be relatively high. There is perhaps not the same tendency to the formation of the very large megaloblasts so common in other types of pernicious anemia. There is no leukocytosis, but there is a relative increase in the eosinophiles ranging from 3% to 30%. This increase is fairly constant and should put you on the lookout for intestinal parasites even when the other symptoms may be obscure.

The feces contain the ova which I will describe in some detail when we consider the diagnosis. They also contain considerable blood, in which differential staining will demonstrate a great many eosinophiles. Showing that not only is there a general increase in the eosinophiles in the general circulation, but that in all probability the parasite causes an active determination of these cells to the intestinal lesions. As is to be expected in such an increase of eosinophile cells, Charcot-Leyden crystals are also constantly present. They are, indeed, a fair diagnostic test of the cure in any given case after treatment.

The diagnosis is easy if the attention be directed to intestinal parasites, and it should be so directed in every instance of advanced anemia without other obvious cause. In conjunction with symptoms of this disorder, the occupation, if it be one that predicates working in earth, is very suggestive. Probably the most instructive way I can teach you the diagnosis will be to recite to you the things that have been mistaken for uncinariasis. In Cuba, for instance, after the recent studies called attention to the incidence of this disease, nineteen grave anemias were examined for ova and in sixteen the uncinaria Americana was found. In these sixteen cases the previous diagnosis had been: Three cases, paludal hydremia; 2 cases, chronic paludism; seven cases, paludal cachexia; three cases, splenic anemia, and one case, intestinal tuberculosis. Here you see sixteen erroneous diagnoses, twelve of which were ascribed to malaria. I think these figures sufficiently emphasize what I have told you over and over again about the fallacy of attempting to make a diagnosis of malaria without microscopical evidence. In tropical medicine, as indeed in many sections of the United States, it is the habit of some practitioners to label everything not readily explained or isolated, malaria. It is true, you may have, indeed you commonly do have, a concurrence of the two conditions, But you will have no trouble in unravelling these cases unless you are a very slipshod investigator and, if you are that, you had better let these cases alone, because a ready apprehension of this condition and early treatment of these cases means the cure, and the lack of them means the death of your patient. This disease has also been mistaken for beriberi, but if you will remember the total lack of paralytic symptoms in uncinariasis you will not go astray. A recent diagnostic sign of some importance has been described. It needs further study and verification, although it seems to be fairly constant. That is, the occurrence of triangular, black, pigmented patches on the dorsum of the tongue looking as though a pen had been wiped on it. This appearance is quite striking; it is said to be quite constant; it appears early, even before the advent of pronounced anemia, and persists to the end of the disease.

The definitive diagnosis, however, is made by the identification of the ova, and I propose now to rehearse with you briefly and rapidly the diagnosis of the ova of these parasites with which we have been dealing to-day. The examination of feces for ova is quite a simple matter. Please remember that the search should be made in as fresh specimens as possible, to avoid confusion in case the embryos have formed and quitted the ova. A small amount of the material is placed on a large slide, diluted with distilled water and pressed down with a thick cover. The search should be made with about a $\frac{1}{4}$-inch objective. The ova are easily found. As a rule they are very numerous, as many as five or six in every field of a $\frac{1}{4}$-inch objective.

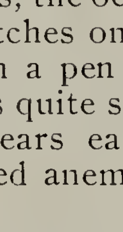
Fig. 1.

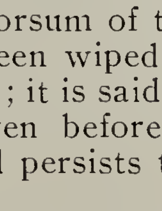
Fig. 2.

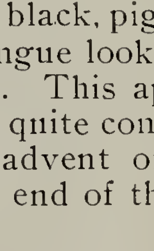
Fig. 3.

The ovum of trichuris trichuria is a very striking looking object in the field. It is sharply oval and measures 50 microns by 25 microns. It is dark brown in color with two distinct light plugs at the poles. The ova look like oval trays, the plugs being the handles. The outline is double, the center of the ovum coarsely granular with no differentiation of the embryo.

The ovum of ascaris lumbricoides is much larger than the preceding, 70 microns by 50 microns. It is oblate, dark brown in color and has a thick shell with warty or spinous excrescences. The sketch I make for you shows the mid-plane in focus. If the focus is carried through the ovum, the warty shell can be observed in front as clearly as it is shown marginally here. There is also in this ovum no differentiation of the embryo.

The ovum of uncinaria is strikingly different. In the first place, it is clear and transparent and light-gray in color, in contrast to the darkbrown or greenish-brown color of the other ova. It has a delicate transparent capsule containing in its center from one to six gray, granulated yolk segments with granular nuclei. In shape the ovum is regularly oval and its size is 60 microns by 35 microns. These ova are cast off in immense numbers. For instance, Leichtenstern found 4,216,930 ova in a stool of 233 gm.

In the treatment of uncinariasis we have two drugs of value, male fern and thymol. Santonin is not of any particular value unless there be a combination of parasites, such as the concurrence of ascaris or trichuris or both with uncinaria. The most effective remedy is thymol. It should be given in capsule or emulsion with acacia, in thirty-grain doses, repeated in two hours, for an adult. Remember that in these doses thymol may cause vertigo, excitement and smoky urine To insure success certain precautions are necessary. For one or two days prior to the administration of the remedy the patient should be put on liquid diet with a brisk saline purge the night before. I believe the starving of patients preparatory to administering anthelmintics is often a great mistake. If the patient have the active craving for food so common in helminthiasis, this starving process is nothing short of torture, and in any case the emptiness from lack of food brings about nausea so that the anthelmintic may not be retained. One other precaution: You must be very careful to avoid the exhibition of the solvents of thymol after giving this drug. Fatal cases of poisoning have occurred when alcohol or alcoholic drinks have been given in close proximity to the thymol. Similarly ether, chloroform, glycerine and most oils act as solvents and may cause severe symptoms of poisoning owing to the absorption of the drug in bulk. For this same reason you will avoid castor oil as a purgative. You will follow the thymol with a saline purge. Weekly examinations should be made of the stools for ova or Charcot-Leyden crystals, and the remedy repeated if necessary. Sometimes thymol is rejected by the stomach or, rarely, it proves inactive. In such cases male fern should be administered in the usual way. There have been numerous other remedies proposed, but I give you these two as of approved and assured value. When the anemia has been far advanced, you will need to apply the ordinary remedies after the expulsion of the parasites, to aid in rapid restoration of the blood condition.

The prophylaxis of uncinariasis would call for the exclusion from earth works of any person affected with the disease. Where large bands of laborers are collected, in districts in which the disease is prevalent, systematic examination of all cases of anemia should be made. Defecation in the workings or tunnels should be rigorously prohibited. Watertight latrines should be provided and the contents destroyed with a cheap disinfectant. The personal prophylaxis should include careful washing of the hands before eating and the wearing of sound shoes when working in suspected soils.

JOURNAL DES PRATICIENS.

December 20, 1902. (16me. Année, No. 51.)

1. Sibson's Crescentic Dulness Without Pericarditis. E. CASSAET.
2. The Nature and Treatment of Cardiopathies of the Menopause. C. FIESSINGER.
3. The Diagnosis of Ulceration of the Pharynx. DIEULAFOY.
4. Hystertical Delirium. RAYMOND.

1.—Cassaet reports a case of circumscribed **pleural effusion giving the crescentic area of supposed cardiac dulness,** Sibson's sign, next to the normal cardiac dulness, in a man of 33, cured by puncture with evacuation of 500 cc. of bloody fluid. There were no other signs of pericarditis, and recovery followed. Therefore, this sign of Sibson's is not always a sign of pericarditis. [M. O.]

2.—Will be abstracted when concluded.

3.—Dieulafoy reports a case of **dysphagia with an oval ulceration on the pharynx.** It looked like tuberculosis or **syphilis,** but specific treatment had no effect. Cauterization was also unavailing; the patient grew cachectic. and gastrostomy was performed. The ulceration spread, and the dysphagia became intense, but no tubercle bacilli could be found. Dieulafoy tried intense mercurial treatment with gradual improvement and eventual recovery. [M. O.]

4.—Raymond reports the case of a girl of 22, who had borne a child at 19. The infant died. and the patient developed **hysteria.** She grew worse after being frequently hypnotized and had attacks of **delirium** just like delirium tremens, seeing animals, etc. Isolation and cold water affected a cure. [M. O.]

LA PRESSE MEDICALE.

December 20, 1902. (Volume II, No. 102.)

1. The Nucleins in Therapeutics. ALFRED MARTINET.
2. A New Chloroform Apparatus. F. JAYLE.
3. The Principal Solvents of Uric Acid. V. GRIFFON.

1.—**Nucleins** are albumin bodies rich in phosphorus, almost entirely constituting the protoplasm, forming what is commonly called chromatin. Nucleic acid has been prepared, and with the metals this forms metallic nucleinates. Nucleins are valuable, since they give the organism ready made what it has to elaborate. While more thorough investigations are still needed for finding stable nuclein products, there seems no doubt that they are bactericidal and antiseptic, as is brewers' yeast, and that they have some effect on nervous elements, also. [M. O.]

2.—Jayle describes the recently patented **chloroform-oxygen apparatus of Roth and Draeger.** While it has been used in 1,000 cases, it offers no great advantages over simpler methods of administering chloroform. [M. O.]

3.—From a series of experiments Griffon found that the best **solvents of uric acid were lycetol, lysidine, piperazine and urotropin,** closely followed by potassium bicarbonate, lithium bicarbonate and sodium bicarbonate. [M. O.]

Original Articles.

THE DUCTLESS GLANDS AS ORGANS OF THE FIRST IMPORTANCE IN VITAL FUNCTIONS, AND THEIR RELATIONSHIP AS SUCH TO DISEASE AND THERAPEUTICS.*

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of Philadelphia.

The deductions embodied in this paper represent the results of investigations begun in 1889. The earlier researches made in this country and in France did not, however, bear directly upon the functions of the ductless glands; they had for their purpose the elucidation of a question which has increasingly imposed itself upon the attention of all clinicians, namely: the nature of the vital process. As the succeeding editions of the *Annual of the Universal Medical Sciences* and its successor, the *Analytical Cyclopaedia of Practical Medicine*, passed before our eyes, we had been led to conclude that medicine could never hope to be ranked as a branch of applied science until this problem had been solved; until we had learned, in other words, how the cellular elements out of which all tissues are built utilized oxygen. Even now, text-books do not afford a clearer explanation of this all-important function than did Professor Foster, in 1895, in his Physiology when he said: "We cannot trace the oxygen through its sojourn in the tissues. We only know that sooner or later it comes back in carbonic acid." How can we hope to gain an insight into *morbid* tissue-changes without a clear knowledge of *normal* tissue-changes—those upon which the existence of the cellular elements depends? Indeed, hardly two years have elapsed since Prof. Osler, in an able review of the contributions to medicine during the nineteenth century, referred to "a large number of drugs the action of which we know little." followed up the remark with the reflection "and yet we put them into bodies the action of which we know less." The late Prof. Virchow was no less categorical when he said: "Unmistakably medical men are tired of the many new hypothetical systems that are thrown aside as rubbish only to be replaced by similar ones."

Although our belief, that a clearer conception of the intimate nature of life's processes would eliminate much of the obscurity in our knowledge of disease, led us to devote much time—several years indeed—to the study of various subjects which proved sterile as to direct results, it nevertheless kept before us the one fixed factor of vital functions, namely: oxygen. When, in the course of time, we were brought to study the literature of the ductless glands, therefore, the marked affinity of the suprarenal secretion for oxygen could not but attract our attention. Cybulski[1], for example, had found that weak doses of potassium permanganate destroyed the activity of suprarenal extract. Moore[2] had ascertained that the color reactions noted by Vulpian were destroyed by oxidizing the reducing agent. Abel[3] had noted that suprarenal extractives were so prone to become oxidized as to become a source of great inconvenience. Takamine[4] had noted that his adrenalin was easily oxidized by contact with the air. We had evidently found the true path, for it furnished a clue to many previously unknown physiological functions.

The itinerary of the suprarenal secretion first received our attention. We soon met an obstacle, however: We could not trace it beyond the pulmonary alveoli. Still, this served to recall the doubts expressed by an increasing number of physiologists as to the correctness of prevailing views concerning the respiratory process. Could the suprarenal secretion possibly endow the blood with its affinity for oxygen? The weakness of present teachings grew apace as our inquiry progressed. The older labors of Robin, Verdeil and Garnier had led Prof. Mathias Duval, of Paris, to say in his Lectures on Physiology: "It is perhaps wrong for physiologists to continue only to see in these phenomena mere results of endosmosis of liquids and of diffusion of gases through an inert membrane." Prof. Reichert, of our city, alluding to the interchange of O and CO_2 between the alveoli and the blood, also remarks in the American Text-book of Physiology, Ed. 1900, after reviewing the generally accepted doctrines: "It is, however, impossible under certain conditions, and possibly under ordinary conditions, to account for the transmission of all of either the O or the CO_2 by the laws of diffusion." Bohr[5] found, in experiments upon dogs, that the tension of oxygen in arterial blood is almost invariably higher than the partial pressure of oxygen in the lungs, and, in some instances, considerably higher. His records of CO_2, while lacking uniformity, are of like import and indicate that the tension of CO_2 in the blood is lower than the partial pressure of this gas in the lungs. Although Bohr's results have met with much adverse criticism, they have received substantial support in the recent researches of Haldane and Smith[6] on mice, birds, dogs and other animals. They found that the normal oxygen tension in arterial blood is always higher than in the alveolar air, and they were consequently led to conclude that the transmission of O between the alveoli and the blood cannot be satisfactorily explained by mere diffusion. Moreover, about twice as much argon exists in solution in the blood-plasma as can be accounted for by physical laws. Facts of this kind are explicable on the hypothesis that the living tissues are, as contended by Ludwig, Bohr and others, actively engaged in the process, but our knowledge is as yet too incomplete and contradictory to justify its acceptance."

Our own investigation, which took up all phases of the subject and cannot possibly be given here, served only to justify the doubts expressed, for it showed that,

When the venous blood reaches the pulmonary alveoli, the marked affinity of the adrenal secretion in the plasma for oxygen causes it to absorb this gas from the alveolar air. The carbonic dioxide in the blood is thus forcibly replaced by oxygen and expelled with corresponding vigor. The red corpuscles, after this operation, bathe in an oxygen-laden medium, and their hemoglobin becomes converted into oxyhemoglobin.

We state that the *plasma* takes up the oxygen, thus emphasizing the secondary rôle played by the red corpuscles as oxygen carriers. The evidence we were able to muster pointing directly or indirectly to this fact may be characterized as overwhelming. Not only did physiological chemistry prove the existence of an oxygen-laden compound in the bloodserum through the labors of Schmiedeberg, Jaquet, Salkowski[7], Abelous and Biarnés[8] and others, but, where we had previously met nothing but obstacles, we now entered easily-followed paths ready to accommodate a multitude of recorded experimental facts—the products of patient workers in all civilized countries. Oxygen, once a constituent of the bloodplasma, it could penetrate where red corpuscles had never been observed and through channels the functions of which had not been associated with the circulation. The cellular elements of all parts of the organism thus became tangible quantities, as it were; they had been brought into direct contact with their exogenous source of energy.

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The functions of the internal secretion of the adrenals which had asserted themselves so far, therefore, can be defined as follows:

The physiological function of the internal secretion of the adrenals is loosely to combine with the atmospheric oxygen in the lungs and to endow the bloodplasma with its oxidizing properties.

The organic compound or oxidizing substance thus formed in the lungs we have ventured to name adrenoxin—a term which will henceforth be employed in this paper.

So important a function betokened the existence of a center capable of regulating the production of adrenal secretion and, therefore, of adrenoxin. A study of the experimental data upon the innervation of the adrenals, including those recorded by Biedl[9], Soddu[10], Howell[11], Dreyer and Dogiel[13], among others, fully sustained this assumption. Biedl's experiments had demonstrated, for example, that, when the splanchnic nerve was cut and the suprarenal branches were stimulated, hyperemia of the adrenals occurred. Howell, on the other hand, had found that stimulation of the glandular end of the cut splanchnic nerve did not increase the amount of the blood poured by the adrenals into the efferent vein, but that it augmented the proportion of adrenal secretion in that blood. Dogiel, in turn, had noted that the plexiform arrangement and the nerve cells of the cellular elements of the adrenals differed in no way from those of any sympathetic ganglion. We had clearly suggestive evidence here that the sympathetic ganglionic chain and the splanchnic served for the transmission of efferent impulses capable of causing fluctuations in the production of adrenal secretion, and that if there was a center it should prove to be one of unusual importance and connected with the sympathetic system.

If the sympathetic is supplied with an autonomous center, it has not as yet been discovered. Traced upward, the ganglionic chain communicates with various ganglia of the first and second divisions of the fifth pair, but everywhere distinct sympathetic fibers do not lead to a possible point of origin but to structures to which they are distributed as efferent filaments. The fact that various nerves that communicate with the spinal system are not regarded as sympathetic but as motor and sensory fibers intended to reinforce the ganglia, suggested that the medulla might contain a nucleus capable of fulfilling the functions of adrenal center. We could find no experimental evidence to that effect, however, although the bulb and its centers had received more attention in experimental physiology than many other important structures combined. Finally, as is well known, the sympathetic ganglia and the splanchnic nerves respond in a slow and characteristic way to stimulation, while the response obtained when spinal nerves are excited is sudden and decided. Stimulation of the nervous supply of the adrenals gives rise to phenomena essentially characteristic of stimulation of sympathetic structures. This exactly coincides with the observation of Dogiel that the structure of the nervous supply of the adrenals differed in no way from that of a sympathetic ganglion. Search along familiar paths had, therefore, to be abandoned.

We then retraced our steps from the adrenals upward, followed the great splanchnic along the ganglionic chain and traced filaments of the splanchnic nerve to the first or upper cervical ganglion. The medulla and the cephalic branches being out of question, the filaments given off by the carotid plexus immediately above the superior cervical ganglion were then studied anew. The available literature upon this subject was rather scant, but in the older works, after a roundabout research into the pathological aspect of the question, we ascertained that Tiedmann, Pourfour du Petit, Fontana, Bok, Hirschfeld and Bourgery had traced sympathetic fibers to the pituitary body. Hirschfeld[14], in fact, emphasizes the fact that he had invariably traced fibers from the superior cervical ganglion to this organ. That time has not served to counteract this teaching is shown by the more recent researches of Berkley, of John Hopkins[15], who, referring to the *anterior* lobe of the pituitary, writes: "All nerves belonging to it appear to be derived from branches of the carotid sympathetic plexus." He then strengthens his assertion by the statement: "Nerves other than those belonging to the sympathetic system are not found." A concomitant study of the experimental physiology of the pituitary body and of the ultimate effects of sympathectomy and a rather extensive research into the pathogenesis of acromelagy and other disorders of the pituitary, having likewise pointed to phenomena directly ascribable to functional disturbance of the adrenals, it became clear that we had found the governing center of these organs, and that the following conclusion (abbreviated herein) was warranted:

The anterior pituitary body governs the functional activity of the adrenals and is directly connected with these organs through the cervicothoracic ganglia, the splanchnic nerves and the semilunar ganglia of the sympathetic system.

A long line of research into the physiological action of some forty of the more important drugs and venoms had brought out a feature of marked importance, *i. e.*, the similiarity of the action of all poisons, including toxalbumins and venoms, to the phenomena that ensue after the experimental removal of both adrenals or hemorrhage into these organs. When this observation was extended to the effects of disease toxins, it became evident that sufficiently active doses brought on symptoms corresponding to those of other poisons. This is shown in the annexed table in which the cardinal symptoms of adrenal hemorrhage, adrenalectomy, Asiatic cholera and acute arsenic poisoning are compared.

Symptoms that follow: (1) removal of both adrenals in mammals; (2) hemorrhage into both adrenals; (3) sudden cessation of adrenal functions as a result of organic disease.	Cardinal symptoms of Asiatic Cholera.	Cardinal symptoms of cholera infantum, cholera nostras; tartar emetic and acute arsenic poisoning; poisoning due to ingestion of certain toxic foods; meat milk fish and mushrooms (phalline) especially.
1. Great weakness, with gradual loss of muscular power.	1. Marked muscular weakness.	1. Rapid loss of strength.
2. Violent abdominal pain.	2. Violent griping pain.	2. Abdominal discomfort and pain.
3. Great reduction of vascular pressure, pulse small and weak.	3. Pulse rapid and weak; sometimes intermittent	3. Pulse rapid, weak and intermittent.
4. Temperature subnormal, just before death especially.	4. Temperature in mouth and on surface very low, but 104° F. in rectum.	4. Temperature subnormal, but rectal temperature 103° to 105° F.
5. Respiration frequent and difficult; dyspnea; sometimes cyanosis.	5. Respiration frequent and difficult, and cyanosis.	5. Respiration rapid, labored; Cheyne-Stokes type sometimes.
6. Urine scanty.	6. Urine scanty; sometimes suppressed.	6. Urine scanty; sometimes complete anuria.
7. Abundant liquid stools.	7. Rice-water; serous stools.	7. At first bile-stained stools, and then nothing but serum.
8. Death; coma; convulsions.	8. Coma; convulsions.	8. Coma: convulsions.
9. Proves fatal in from 20 minutes to 3 days.	9. Proves fatal in from 2 to 3 days.	9. Proves fatal in from a few hours to 4 days.

As this series might have merely represented symptoms capable of being interpreted without reference to the adrenals, the diseases peculiar to these organs, Addison's disease, interstitial hemorrhage, tumors, etc., were taken up. We then ascertained that the steady decline of adrenal functions incident upon these local conditions gave rise to phenomena which *gradually* assumed those of total arrest of adrenal functions, but that this gradual development of morbid phenomena was attended by several symptoms which did not appear when adrenal functions were suddenly arrested. Bronzing, for example, only appeared, we found, when the adrenals had reached an advanced morbid state from one cause or another. This led to the discovery that methemoglobin and hematoporphyrin, both constituents of hemoglobin, were held in combination by the adrenal secretion and that the presence of these pigments in the urine indicated advanced inefficiency of both adrenals. Now, hematoporphyrin and hematoidin, the pigment of bronzing, are isomers, and the brown urine of hematoporphyrinuria, caused by venoms, is but the prototype of bronzing, the pigment in the latter case being deposited in the skin instead of passing out with the urine. Indeed, Garrod[16] and Stockvis[17] found hematoporphyrin in small quantities in normal urine and almost always in pathological urine. Various other observers, including MacMunn[18], D. Fraser Harris[19], Nakarai[20] and Ogden[21], have collectively found it in rheumatic fever, pericarditis, peritonitis, meningitis, cirrhosis of the liver, croupous pneumonia, typhoid fever, measles, Hodgkin's disease, exophthalmic goiter, pulmonary tuberculosis, pleurisy, leprosy, lead poisoning and chronic poisoning with sulphonal, trional and tetronal. Bronzing or bronze spots also occur, as is well known, in many disorders: Abdominal growths, diabetes, exophthalmic goiter, tuberculosis, chronic gastric and hepatic disorders, hysteria, etc. All this, of course, is confirmed by experimental evidence in animals, and particularly by that afforded by Boinet[22], who, having excited an inflammatory process in the adrenals of twenty rats, found that in several of them (those doubtless in which the local lesions were sufficiently marked) the subcutaneous cellular tissue was permeated with hematoidin—a pigment which, submitted to analysis, proved to be similar to that found in the same structures in Addison's disease.

These few facts of the large number we collected and analyzed showed conclusively that the adrenals were functionally depressed by any drug, toxic or toxin when the quantity introduced into the organism were sufficiently active, and that the general symptoms caused by all these poisons were of adrenal origin. The more our work progressed, the more did this deduction affirm itself.

Adrenal insufficiency obviously meant a lower ratio of adrenoxin in the blood and correspondingly reduced metabolic activity. A normal inference to be derived from this fact is that excessive metabolic activity, which, reduced to terms of adrenal functions, likewise means excessive adrenal activity, was the underlying factor of all general symptoms which suggest erethism. The correctness of this deduction was shown in various ways, *i. e.*, the effects of adrenal extractives as recorded in the experiments of various investigators, including Oliver and Shäfer[23], Scymonowicz[24], Auld[25] and Isaac Ott[26], and the action of various toxic agents and toxins upon the adrenals as studied by Langlois and Charrin[27], Roger[28], Wybauw[29], F. Arnaud[30] and numerous other investigators. Not only was a perfect concordance of general symptoms brought on by the many toxics and toxins used evident, but the brand of overwork, hypertrophy, was a noticeable feature of all adrenals examined *post mortem*. Even this feature of the problem was controlled by the experiments of Stilling[31], in rabbits, and Auld[32], which showed that removal of one adrenal was followed by hypertrophy of the other. On the whole, all the evidence obtainable imposed the conclusion that

All general symptoms witnessed in disorders in which the blood is invaded by a poison of any kind are, in reality, manifestations of overactivity, insufficiency or inactivity of the adrenals.

The manner in which all drugs, poisons, toxins, etc., either stimulated or depressed the functions of the adrenals and with them all the oxidation processes of the organism had next to be ascertained. As we had found that fluctuations of adrenal activity were governed by the anterior pituitary body, it seemed but logical to conclude that upon this organ all toxics that penetrated the bloodstream acted. Further evidence of this was found when the functions of the thyroid gland were analyzed.

The close relationship between the thyroid and all oxidation processes is well illustrated in myxedema and cretinism. The effects of thyroid extract in these disorders are so striking in this connection, as to have led Robert Hutchinson[33] to close a review of the subject with the remark: "Briefly, then, it may be said that the effect of the administration of the thyroid is to increase oxidation in the body; it makes the tissues as it were more inflammable, so that they burn away more rapidly." How is this brought about?

We are dealing here with another internal secretion, the anterior pituitary body being, in reality, a nervous structure. The arteries of the thyroid are remarkable for their large size, and their veins are correspondingly large. The great volume of blood which passes through them travels in a suggestive direction: to the internal jugular or innominate veins, then to the vena cava. As in the case of the adrenal secretion, the thyroid secretion must, therefore, penetrate the pulmonary circuit, return to the heart (when converted into adrenoxin in the case of the adrenal secretion) and then be distributed throughout the organism. As shown by various observers, iodine is the main active constituent of all thyroid extractives. Employed therapeutically, it gives rise to all the manifestations of activity which other agents among those capable of stimulating the adrenals procure; it does more than any, however, in that it can raise their functional activity to the highest degree without overwhelming them; without, in other words, suddenly causing insufficiency of the adrenals or arresting their functions. The "cumulative" action of a drug, digitalis for example, is naught else than suddenly induced adrenal insufficiency. Thyroid extract, as is well known, has produced similar effects. What is, then, the difference between iodine and any other drug that many be introduced into the blood? Simply this: Iodine in organic combination is Nature's own stimulant; it sustains the functional activity of the anterior pituitary body. When the functions of the thyroid are inhibited, the pituitary and the adrenals become correspondingly insufficient, and all the oxidation processes of the organism are reduced in proportion as exemplified by the syndromes myxedema and cretinism. Thyroid extract re-awakens Nature's normal processes, however, sets the organism aglow, "it makes the tissues, as it were, more inflammable," and adequate cellular metabolism, we know, means life. It also means, however, that "they burn away more rapidly," nay, sometimes, *too* rapidly, for there may be overproduction of thyroid secretion, hyperoxidation, *i. e.*, the symptom complex we recognize as exophthalmic goiter.

It has thus become apparent that, while exophthalmic goiter is the result of adrenal overactivity, myxedema and its infantile form, cretinism, are due to adrenal insufficiency. But here, as in all intoxications, the physiological action of drugs or of bacterial toxins asserts itself, the phenomena witnessed have proved to be results of excessive, or reduced, functional activity, not of the thyroid, anterior pituitary body or adrenals, as individual organs, but as *related* organs. Indeed, the following conclusion is fully sustained by the evidence collected from various directions:

The thyroid gland, the anterior pituitary body and the adrenals are functionally interdependent and constitute a system, the "adrenal system," which has for its purpose to sustain physiological oxidation and the metabolic activity of all tissues.

The Functions of Leukocytes.

What is the nature of the substances submitted to oxidation by the adrenoxin of the plasma? Strange as it may seem, the white corpuscles we found to play the leading part in this connection. While the red corpuscles proved to be mere storage-cells, calculated to take on a load of adrenoxin and carry it to all parts of the organism, the investigation showed that the white cells were the seat of a complex process, their function being not only to gather from the gastro-intestinal tract the proteids, hydrocarbons, minerals, water, etc., required by the various cellular colonies of the body, but to convert them into the final products ultimately to be oxidized in the various organs to which they carried them.

The structure of the white corpuscle or leukocyte was first studied, beginning with the mitoma or network of threads or fibers with which each cell is permeated. With the aid of experimental evidence recorded by Gulland[34], Stokes and Wegefarth[35], Wynn[36] and others, and the confirmatory evidence afforded by staining methods, we were able to ascertain that these intracellular fibers were, in mature leukocytes, not mere protoplasmic threads, as generally believed, but minute channels or canaliculi for bloodplasma and granules. Hankin, ten years ago, advanced the view that acidophile granules were secretory products destined to be secreted into the blood or lymph; Kanthack, Hardy and Keng have taken much the same view. Our conclusion that the fibers were minute channels thus found itself doubly controlled, since the granules are located along the fibers and increase in size from the center toward the periphery. Evidently we were dealing, as regards the granules, with products formed in the cell itself and gradually forced centrifugally toward the surface, to be dealt out as needed.

The manner in which leukocytes ingest various substances is well known, especially since the investigations of Metchnikoff into the phagocytic properties of these cells. We were led, by the fact that the network of fibers had proved to be canaliculi, and a study of the data published by this distinguished zoologist concerning the digestive process in lower organisms, to recognize an inter-*canalicular* absorption process. Thus, leukocytes could not be said only to ingest materials by projecting pseudopodia, *i. e.*, by "infolding" or "inglobing," but this act proved to be limited to the ingestion of solid or semisolid bodies, fluids being taken in by simple absorption—through their protoplasm or by a process similar to that observed in some species of sponge in which the cylindrical cells of the endoderm keep up a continuous passage of water through the sponge substance. This is an important feature of pathology, since it is mainly through such a mechanism that alkaline salts penetrate into the cell substance to the nucleus.

The plasma and its adrenoxin were thus traced from the surface to the nucleus, the cell's laboratory, which also proved to be supplied with a network of plasma-channels or canaliculi. But it was here that we obtained a first inkling of the vital process, for the plasma was found, with the aid of staining methods, to contain adrenoxin, rich in oxygen.

Nuclein, the main component of the nuclear substance, contains, as is well known, nearly ten per cent. of phosphorus. Oxygen-laden plasma, brought in contact in the nuclear canaliculi with phosphorus-laden nuclein, offers precisely the conditions necessary for the liberation of considerable energy. Indeed, Pflüger[37], referring to the photogenic organs of lightning-bugs, says: "Here, in the wonderful spectacle of animal phosphorescence, Nature has given us an example that shows where the taper burns that we call life. . . . It is certainly no rare exception, but only the special expression of the general law, that *all* cells are burning continually, although with our corporeal eyes we do not see the light."

The considerable heat thus developed became an important factor of the whole intracellular process when the fact that, when boiled with alkalis, nuclein yields phosphoric acid was recalled. "The phosphoric acid of the urine," writes Purdy[38], "is derived in part from the food and in part from the decomposition of lecithin and leucin. The excretion of phosphoric acid by the kidneys varies with the amount of food taken." This primary and intimate association with the aliment intake became very suggestive in the light of subsequent developments, especially since it suggested that it was the function of the leukocytes to ingest foodstuffs in the intestinal canal, then digest and convert them into the organic bodies to which tissue-cells owed their activity, in the presence of adrenoxin brought to them in the plasma. Again, a feature of great practical importance also came to light, *i. e.*, the rôle of alkaline solutions in disease, since it became apparent that besides their rôle in osmosis, diapedesis, etc., these salts were indispensable factors in the physiological chemistry of the cells which kept up the vital processes of the entire organism.

The manner in which leukocytes were supplied to the intestinal canal and returned to the circulation, and their itinerary in the bloodstream, then had to be ascertained. Lymphocytes and hyalines having proved fully entitled to the position generally accorded them, *i. e.*, that of immature leukocytes, the three main cells distinguished by Ehrlich, the neutrophiles, eosinophiles and basophiles, were studied.

Neutrophile Leukocytes. These cells, as is well known, constitute about three-fourths of the blood's white corpuscles, and, simultaneously, Metchnikoff's main group of phagocytes. Phagocytosis merely means the power to ingest and digest; wherever, therefore, phagocytic cells happen to be, they ingest and digest whatever substance, solid, semisolid or fluid, for which they may possess what has been termed "chemotaxis." Foodstuffs, bacteria and toxins are equally attractive to them unless satiated.

Macallum[39] observed, in sections of intestines taken from animals first starved, then fed upon a substance containing iron albuminate, free leukocytes crowded with granules of *iron-pigments*, in the intestine. Some of these cells appeared to pass out through the epithelial cells, while others advanced into the subepithelial elements. He also found them in the venules of the villi, the spleen, etc. L. F. Barker[40] has likewise noted the presence of iron in leukocytes. Metchnikoff[41], in the course of an analysis of the functions of phagocytes, refers to "the presence of *peptones* in leukocytes which has been so often proved by Hofmeister," and since peptones are the terminal products of the digestion of proteids, the latter must have been taken up by the intestinal leukocytes precisely as Macallum had found them to take up albuminate of iron.

Again, Stewart[42], in reviewing present teachings as to the assimilation of gastric and intestinal proteoses and peptones, writes: "They rapidly disappear from a portion of the mucous membrane kept at a temperature of about 40° C. outside the body; but *not* if it has been thrown into boiling water immediately after excision, nor even if it has been heated at 60° C. for a few minutes and then kept at 40° C. Now, a temperature of 60° C. does not destroy an unorganized ferment, but kills a *living cell.* The regeneration of the proteose and peptone must, therefore, presumably take place in cells, and the only available cells in this locality are those which *line* the intestine, or the *leukocytes* which wander *between* them. Accordingly, both have been credited with the power of absorbing and transforming these substances." Foster adds another link to the chain of evidence when he says[43]: "While some observers have succeeded in finding peptone in the portal blood after food, but not during fasting, many have failed to demonstrate the presence of peptone in the blood either of the portal vein or the vessels at large, even after a meal containing large quantities of proteids." Again, "If an artificial circulation of blood be kept up in the mesenteric arteries supplying a loop of intestine removed from the body, the loop may be kept alive for some considerable time. During this survival a considerable quantity of peptone placed in the cavity of the loop will disappear, *i. e.*, will be absorbed, but cannot be recovered from the blood which is being used for the artificial circulation, and which escapes from the veins after traversing the intestinal capillaries. The disappearance is not due to *any action of the blood* itself, for peptone introduced into the blood before it is driven through the mesenteric arteries in the experiment may be recovered from the blood as it escapes from the mesenteric veins. It would seem as if the peptone were changed *before* it actually gets from the interior of the intestine into the interior of the capillaries." In the light of our views it became apparent that the peptone was hidden in leukocytes, even while these cells migrated with the blood of the mesenteric and portal veins.

Macallum's observation as to the presence of leukocytes in the intestinal canal and in the villi, found itself confirmed by our analysis of the manner in which these cells entered the digestive tract and left it. The intestinal lymph follicles, including the agminated follicles or Peyer's patches asserted their identity as the normal source of these cells, containing as they do a central nodule, described by Flemming, in which leukocytes proliferate. How they pass out is suggested by the presence above the nodule of a fenestrated subepithelial membrane, "the orifices of which," according to Berdal[44], "appear to afford passage to lymphatic cells that emigrate from the follicle toward the cavity of the intestine." They were then traced to the villi, and thence through the mesenteric and portal veins.

What are the functions of neutrophile leukocytes? The physiological process through which food products leave the intestines and are distributed throughout the organism is quite unknown, as we have just seen. Conversely, leukocytes, in the light of the data we have just submitted, plainly showed their ability to satisfy the needs of the problem, and to account for the proximate and remote phenomena connected therewith. They are evidently capable of ingesting various substances, since neutrophiles include the only two wandering phagocytic cells recognized as such by Metchnikoff, the polymorphonuclear and mononuclear leukocytes. They evidently ingest proteids. Even the end-product of each cell, *i. e.*, the granules, attest to this fact. Sherrington had suggested that they might be "of nucleoproteid nature"; Milroy and Malcolm[45], after chemical analysis of the granules, supported the view that they are composed of a "complex proteid substance." The origin of the peptones found in these cells thus became a normal consequence of their rôle in the intestine.

To speak of "peptones" as granules, seems unusual, but, as is well known, various secretions, those of the pancreas and parotid gland for example, assume this form in the organ itself.

Still, why the "complex" character of these granules to which Milroy and Malcolm refer? Again, as the name "neutrophile" given these cells by Ehrlich suggests, why are they simultaneously basophile or base-loving, and oxyphile or acid-loving? This suggested the presence of other constituents, which, in fact, were actually found in these cells by various observers, and which could readily be accounted for by the promiscuousness of the food-materials which leukocytes ingest in the intestine. Indeed, they do not only ingest proteids, but carbohydrates likewise, sugars and starches.

The latter compounds proved to be related to muscular activity. That leukocytes ingest particles of starch paste was shown by the experiments of Zabolotny[46], who states that the cells are thus rendered iodophile. This, it will be remembered, is the glycogen reaction, and glycogen is closely associated with muscular activity. Foster adds his valued testimony to this feature of the question when he writes: "In the case of many corpuscles, at all events, we have evidence of the presence of a member of the large group of carbohydrates, comprising starches and sugars, viz., the starch-like body glycogen." The bearing of all this appears when he adds: "And we have reasons for thinking that in the living white corpuscle there does exist a body identical with, or allied to, *myosinogen*." We may now state that, long before we had at all studied the leukocyte, we had been led to the conclusion that the immanent constituent of muscle-cells, which, under the action of adrenoxin, supplied the muscle with its mechanical energy, was myosinogen.

But myosinogen proved not only to be used in muscle-cells, but likewise in the blood. The identity of myosinogen as a member of the globulin group of proteids had led us to suspect that other members of this group, particularly the fibrinogen of the plasma, were of leukocytic origin. We had not far to seek. Stewart, alluding to the origin of nucleoproteid, writes: "In shed and clotted blood, the only possible sources of nucleoproteid, so far as we know, are the corpuscles and the bloodplates." After dismissing the red corpuscles he adds: "We have left over the leukocytes and the platelets. The latter are said, and the former are known, to yield nucleoproteids when they are broken up in the laboratory; and it is highly probable that from both, but especially from the white corpuscles, *nucleoproteid* is liberated in the first moments after blood is shed, and that this nucleoproteid is then changed into *fibrin ferment*." Ranvier[47], many years ago, emphasized the relationship between free granules, the so-called elementary vesicles of Zimmermann, which, he says, "appear as if they were fragments of white corpuscles." The characteristics of neutrophile granules are recalled by his statement: "They are stained by iodine, but remain colorless in carmine solutions. We will see that these are also the characteristics of fibrin." Finally, after reviewing the phenomena that attend coagulation and exposure, by washing, of the fibrinous network, he says: "When this preparation is examined and magnified 400 to 500 diameters, the fibrinous reticulum can be seen distinctly, and is disposed in a very interesting manner. From an angular granulation, from 1 to 10 microns in diameter, very tenuous fibrils start divergingly, then subdivide, to unite with other fibrils, in order to form a delicate network. . . . The granulations which serve as centers for each diminutive fibrinous reticulum have the same microchemical properties as the fibrils." This was fully confirmed by our own study of the question. We were led to conclude in fact that the myosin of *rigor mortis* and the fibrin of *extra corpore* blood were similar bodies, both *partly* oxidized myosinogen and fibrinogen. Just as in the dead body the muscular myosinogen takes up what oxygen remains in the adrenoxin of the plasma, so does fibrin in blood removed from the body take up what oxygen there remains in that blood.

We must lay stress upon the vast importance of this fact in pathology. What is now termed "fatty degeneration" is mainly due to the accumulation in any organic structure of partly oxidized fibrinogen—either due to insufficiency of the adrenal system or to impairment of the nutrition of the part, through some local or peripheral obstruction to its normal bloodsupply. The extensive use of the iodides in neurology indirectly confirms this fact; for we have seen that of all adrenal stimulants, Nature's own was the most potent. The increased activity induced by a greater production of adrenoxin caused by the remedy enhances the functions of all structures, including those of the leukocytogenic organs. A greater number of neutrophile leukocytes and more food mean more fibrinogen, while more fibrinogen and more adrenoxin entail a gradual combustion of the so-called "fatty degeneration"—which to us represents fibrinogen *plus* another organic body to which we will presently refer, *i. e.*, myelin.*

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*We may add that the simultaneous use of saline solution would materially assist the iodides and hasten the beneficial effects.

Summarizing all these facts, it seems evident to us that

Neutrophile leukocytes ingest proteids and certain hydrocarbons, sugar and starch, in the digestive canal, and convert these into peptone, myosinogen and fibrinogen granules.

Eosinophile Leukocytes. The foregoing review applies in a great measure to the eosinophiles as to origin, as it is in these cells that L. F. Barker found iron, which metal is taken up in the intestine. Still, eosinophiles differ materially in their properties from the neutrophiles; they are not phagocytic and cannot, therefore, ingest the iron pigment. Again, they are only acidophile, and their granules are larger. They only represent 2 to 4 per cent. of all leukocytes in the bloodstream. While, therefore, they present a certain kinship to the neutrophiles, they differ from them in several ways.

Besides their affinity for acid dyes, the eosinophile granules show unusual affinity for oxygen. "The intensity of the oxyphile reaction of these granules," write Kanthack and Hardy, "differs in different animals, but is always high. Thus, it is very high in the case of the granules of man." They are also characterized by so high a refractive index, that they have a brilliant greenish lustre—a feature easily accounted for by the presence of adrenoxin in the plasma, and the fact recognized by Milroy and Malcolm, that they are also nucleoproteid bodies. An excess of phosphorus in the latter and the presence of the oxygen of adrenoxin in the plasma afford chemical conditions similar to those that underlie the production of phosphorescence of the photogenic organs of lightning-bugs.

The kinship between eosinophiles and neutrophiles seemed to us strengthened by at least one of the features mentioned in the above paragraph, *i. e.*, the fact that both cells were nucleoproteid bodies. A still closer relationship asserted itself, however, when the proclivity of neutrophiles to part with segments of their cell-substance, by mitosis, was taken into account. It transformed the obscure features of the problem into normal steps of a process. Thus our inquiry showed that the neutrophiles remained the original or parent cells; being phagocytic, their mission was to take up proteids and iron in the intestine and to find their way through the mesenteric and portal veins to the liver. Here, owing in part to the inordinate local temperature, probably, the division occurred. "The blind, sac-like endings of the venous capillaries seem to be particularly adapted for this purpose," wrote Böhm, Davidoff and Huber[48], referring to the labors of Van der Stricht and von Kostanecki, "as in them the bloodcurrent stagnates, and it is here that the greater number of bloodcells reveal mitotic figures." Gulland[49] likewise states that the eosinophile is derived from the "finely-granular acidophile" (the neutrophile).

The physiological functions of the eosinophiles then revealed themselves in a rather striking way. The only anatomical path which the neutrophiles and their daughter-cells, the eosinophiles, could follow on their egress from the liver was through the hepatic veins, the inferior vena cava, the heart and the lungs. "It is not improbable," writes H. Lenhartz[50], "that the majority of cells designated as 'alveolar epithelia' are variously altered forms of leukocytes. The protoplasm very frequently shows finely- or coarsely-granular fatty metamorphosis, and is characterized by a strongly refractive index." Again, while expressing his belief that the positive identification of these alveolar epithelia is extremely difficult, he states that he understands thereby "the large oval and round polygonal cells, three to six times as large as a white corpuscle, which are found in almost every sputum. The usually large cell-body," he adds, "is *coarsely* granular."

The identity of the granules was now readily ascertained. "Hemoglobin contains," says Foster, "in addition to the other elements usually present in *proteid* substances, a certain amount of iron; that is to say, the element iron is a distinct part of the hemoglobin molecule, a fact which of itself renders hemoglobin remarkable among the chemical substances present in the animal body." The granules we have seen have a brilliant greenish lustre—a characteristic of hemoglobin crystals. It thus became evident that

Eosinophile leukocytes elaborate hemoglobin from the proteids, bilirubin and iron, ingested by their parent-cells, the neutrophiles. They take part in the formation of the epithelium of the pulmonary alveoli and supply the underlying plasma with hemoglobin.

Basophile Leukocytes. The granules of these cells differ from those already reviewed mainly in their reaction to various chemical substances. H. F. Müller[51], after a careful analysis, reached the conclusion that they were composed of bodies resembling fat. Kölliker[52], Bizzozero[53], Hayem[54] and others are referred to by Stokes and Wegefarth[55] as having also observed bodies resembling fat-granules in the blood of normal human beings. That the basophile granules are fat-like, as contended by Müller, or composed of a fat-containing body, is sustaned by all available testimony.

The manner in which these cells acquired the constituents for the elaboration of their granules, when submitted to analysis, led us to conclude that the epithelial cells of the villi captured fat-globules from the intestinal contents and, if need be, converted them into neutral fats. Once within the villus, the fat-globules were taken by leukocytes to the interior of the lacteal, *i. e.*, in the lymphatic circulation, the primary abode of the basophiles. As these cells had necessarily to follow the lymphstream of the thoracic duct, an interesting feature again appeared, *i. e.*, all found their way into the left subclavian vein, thence into the superior vena cava, heart and lungs; a repetition of what had been observed in the case of the neutrophiles and eosinophiles.

The two main characteristics of basophile granules is (1) that they are highly refractive, a feature emphasized by Müller, and (2) a marked tendency to disrupt or literally explode, especially in certain animals. In the guinea-pig and rabbit, for instance, immediate fixation by heat or absolute alcohol is necessary, the least exposure of the fluid containing them to the air being sufficient to cause their sudden disappearance. The atmospheric oxygen and phosphorus derived from the cells' nuclei are the only agents available to account for this phenomenon. In the bloodplasma they show, according to Müller and other observers, a dancing molecular movement, a feature which suggested to us a probable action of adrenoxin upon a compound rich in phosphorus. That these granules also contain phosphorus proved to be a recognized fact, as is shown by a remark of Prof. Foster's, introduced in his review of the physiological chemistry of white corpuscles. "Next in importance to the proteids as constant constituents of the white cells," writes this distinguished physiologist, "come certain fats. Among these, the most conspicuous is the complex fatty body, *lecithin*." This could only apply to the basophiles, for as a result of their analysis of the only two other varieties of leukocyte Milroy and Malcolm remark the fact that "neither alcohol nor ether dissolves the granules excludes the possibility that they consist of fat or lecithin." Of the composition of this body, Prof. Foster says: "It is, therefore, of a remarkable nature since, though a fat, it contains both nitrogen and phosphorus," and he further describes it as a "conspicuous component of the brain, nerves, yolk of egg, semen, pus, white corpuscles and the electrical organs of the ray." Indeed, an extensive analysis of the subject which it is impossible for us to reproduce, here, and for which we must refer the reader to our work[56], forcibly imposed upon us the conclusion that

Lecithin is the active constituent of the myelin of nerves. The axis-cylinder contains plasma, the adrenoxin of which, by combining with the lecithin, liberates nervous energy.

That the basophile leukocytes elaborate myelin, the active immanent constituent of all nervous structures, was now plain, but it was confirmed in another way. We have seen that all three varieties of leukocyte followed paths which led them to the lungs. Lenhartz, in the work to which we have referred, states that "the sputum of asthmatics contains numerous eosinophile and quite numerous *basophile* leukocytes." The granules of these he characterizes "as similar to myelin, and, occasionally, more refringent than fat." Finally, again alluding to the sputum of asthmatics, he remarks: "Here, however, the spherules show a decidedly full appearance, resembling that seen in crushed *nerve*-substances. For this reason they were designated by Virchow as *myelin* droplets." It seemed to us, therefore, that we could confidently conclude that

Basophile leukocytes convert fats derived from intestinal foodstuffs into myelin granules.

The relation of leukocytes to vital and functional processes. A prominent feature of this inquiry was the presence of phosphorus in all the compounds elaborated by these cells. Both the neutrophiles and their daughter-cells, the eosinophiles, were found to produce granules, the characteristics of which as nucleoproteids were unmistakable. These bodies, as is well known, are distinguished from other proteids by the presence of phosphorus. The granules of the basophiles proved to be composed of fatty bodies, but bodies also containing lecithin, a compound very rich in phosphorus. All granules derived from leukocytes, therefore, may be said to have asserted their identity as compounds in which phosphorus takes a prominent part and which, when brought into contact with the oxygen of the plasma's adrenoxin, cannot but give rise to the production of functional energy.

How are the granules distributed? Bail[57] saw granules leave the periphery of the cell and enter the surrounding medium after diluting a centrifugalized sediment previously treated with ether. Stokes and Wegefarth[58] studied the subject with the blood of some 500 patients. At a temperature of 35° C. the leukocytes became actively ameboid; and the granules within the neutrophiles, they say, "exhibited a characteristic activity which might be compared to the swarming of bees around a hive." The authors state that under such conditions "the number of fine granules free in the plasma is perceptibly increased." The eosinophiles showed a less vigorous motion. Gulland also states that large leukocytes show "a great tendency to leave their granules behind them." Sangree[59] saw eosinophile granules wander away from the cell oscillating very actively until lost to view. Finally, Gulland, to whom we have just referred, fixed a cell dragging behind it a large number of granules. He says in this connection: "The leukocyte was seen to have been fixed in the act of passing through a narrow hole between two bundles of connective tissue"—an example of the migrating function of these cells through which they are enabled to approach the cellular elements or nerve structures for which these granules are intended, and which they probably reach by virtue of the oscillating motion witnessed by various histologists. Here they meet the plasmatic adrenoxin.

The adrenoxin being dissolved in the plasma may readily penetrate not only capillaries of the greatest tenuity, the capillary networks of epithelium for example, but our inquiry revealed that various structures, the functions of which had remained hidden, were in reality plasma-channels. We have stated that axis-cylinders of nerves proved also to be channels which served to bring the adrenoxin of the plasma into contact with myelin to produce nervous energy. This myelin was not only found to surround the axis-cylinders of all nerves, but also to line the inner surface of the dendrits of neurons and to form the ground substance of their cell-body. The neuroglia proved to be the communicating channels between the general circulation and the neurons. This constitutes the minute circulation of the cerebrospinal axis, which, if we are not mistaken, is described in our work for the first time. The muscle-cells also asserted their identity as plasma-channels. "We might compare a living muscle," writes Prof. Foster, "to a number of fine, transparent, membranous tubes containing blood-plasma." To this plasma we would add adrenoxin, its energizing agency, which with the phosphorus-laden compounds constituting the granules insures the continuation of the vital processes of the entire organism and the functional efficiency of all organs. This appears to us to be embodied in the following general conclusion:

1. *Neutrophile leukocytes form:*

   Peptones, which combine with adrenoxin to sustain general metabolism, i. e., the vital process.

   Myosinogen, which combines with adrenoxin to supply contractile energy to muscles.

Fibrinogen, which combines with adrenoxin to supply heat energy to the blood.

2. *Eosinophile leukocytes form:*

Hemoglobin, which loosely combines with adrenoxin to insure its storage in erythrocytes.

3. *Basophile leukocytes form:*

Myelin, the active principle of which, lecithin, combines with adrenoxin to develop nervous energy.

The Splenopancreatic Internal Secretion.

The last of the internal secretions to which we will refer, is well known as a pancreatic product secreted directly into the intestinal canal. It has failed to be recognized, however, as an *internal* secretion poured into the vascular system and fulfilling therein a function of the highest importance to us, physicians, that of destroying the germs of disease and their toxins.

Shiff, many years ago, concluded, after a series of experiments, that the spleen supplied a ferment which, when added to pancreatic juice, greatly increased its digestive energy. Herzen[60] sustained him, contending, however, that the splenic secretion served to convert the trypsinogen of the pancreas into trypsin. This opinion was sustained by the labors of Laguesse, Lépine, Schäfer and others. Lépine[61], for example, found that a mixture of pancreas and spleen-pulp in glycerine possessed far more active properties than pancreas alone similarly prepared. On the other hand, the blood of an animal deprived of its spleen proved almost inert as a tryptic, while the blood of a normal dog possessed distinct digestive powers. Our own analysis of the subject led to similar conclusions.

Still, the anatomical relations between the two organs brought us to recognize a curious feature of the function involved. There is no way by which the splenic internal secretion can reach the pancreas without first passing through the liver, the heart, the lungs and the pancreatic branch of the celiac axis. On the other hand, as recently shown by Opie[62], the islands of Langerhans in which trypsinogen is formed are three times more numerous in the splenic end of the pancreas than elsewhere. This corresponds with the region of the organ in communication with the splenic vein, while the part of the pancreas not in communication with this vessel contains no islands of Langerhans. The pancreas being connected with the splenic vein by means of several short trunks, the trypsinogen must inevitably be secreted into that vessel and there meet the splenic secretion. This normally led to the conclusion:

The greater part of the trypsin of the organism is formed in the splenic vein.

Indeed, Herzen's experiments show that rapid digestion of albumins occurs in this vessel during active intestinoportal digestion. We have seen by Lépine's experiments that this would not take place were either of the two secretions absent. As the splenic vein opens into the *portal* vein, the trypsin is also carried to this vessel as fast as formed.

The action of trypsin on albuminoids is well illustrated by the following quotation from a work by a master in physiological chemistry, Prof. Gautier, of Paris[63]:

"We thus have as main sources of intoxication which it is the function of *trypsin* to counteract, the following agencies:

1. Toxins and diastases secreted by bacteria.
2. Diastases derived from leukocytes and glandular elements.
3. Tissue toxalbumins.
4. Snake- and other venoms.
5. Vegetable toxalbumins.
6. Diastasic ferments."

The relationship of the spleen to infection was well exemplified by the experiments of Charrin and Levaditi[64], Zaremba[65] and others, but those of Courmont and Duffan[66] showed that, in rabbits splenectomized from two to twenty-five days beforehand, the staphylococcus pyogenes and the bacillus pyocyaneus caused death in a few hours, whereas normal rabbits survived longer or altogether. Splenectomy, though not a fatal operation, therefore, was thus shown to increase the vulnerability to infection.

As we have seen, neutrophile leukocytes, while in the intestine, ingest proteids, sugars, starches, iron, etc., of a physiologically useful kind, but if bacteria, toxins and other noxious agents are present they likewise englobe or absorb them, and digest them. The important bearing of the splenopancreatic secretion upon the body's immunity to disease now becomes apparent, for Metchnikoff[67] writes: "Just as amebæ digest their prey with the aid of amebodiastase, a globule ferment belonging to the group of the trypsins, white corpuscles submit the foreign bodies they inglobe to the action of cytases. These cytases (the alexins or complements of other authors) are the soluble ferments which also belong to the category of the *trypsins*."

We have emphasized the fact that the neutrophile leukocytes, after ingesting foodstuffs in the intestinal canal, entered the circulation by way of the venules of the villi and then followed the mesenteric veins to the portal vein. When they reach this vessel, therefore, they are immersed in venous blood highly charged with trypsin. The splenopancreatic secretion thus becomes the main agency through which the organism is protected against disease caused by germs and their toxins, since it adds to the intestinal trypsin that the cells may absorb the bulk of that used in the intracellular digestive process. On the whole, the following conclusions seemed to us to be sustained from every direction:

The splenopancreatic internal secretion is represented by the trypsin which reaches the portal vein by way of the splenic vein, and which continues in the bloodstream the cleavage processes begun in the intestinal canal.

Interpreted as a protective function of overwhelming importance, one indeed primarily involved in all infections (although, when considered from the standpoint of physiology, it is only incidental to the intracellular digestive process to which all proteids and aluminoids are submitted), it is also evident that

The main function of the splenopancreatic secretion, trypsin, is to protect the organism from the effects of bacteria, their toxins and all toxic albuminoids, including vegetable poisons and venoms.

The Posterior Pituitary Body as the General Center of the Nervous System.

Before we can proceed with the practical side of all the questions reviewed, a brief allusion must be made to deductions reached after a searching study of the histology and physiology of the nervous system. We cannot do more in this connection than to quote the following lines from a summary of contents of the first volume of our work, published in the *Monthly Cyclopaedia of Practical Medicine,* for January. "The *posterior pituitary body,* far from being the insignificant vestigial organ it is generally thought to be, was found by us, thanks mainly to the investigations of Berkley[68], Andriezen[69], Howell[70] and de Cyon[71], to stand second in importance only to its mate, the anterior pituitary body. Indeed, it proved to be the *chief functional center of the nervous system,* its numerous groups of neurons forming the starting-point, or highly specialized center, of a single class of nerves. The various medullary centers thus became mere connecting nuclei, which, stimulated or injured, however, could become the source of all the morbid phenomena recorded by physiologists. The posterior pituitary body also proved to be the center upon which all emotions, shock—psychical or traumatic—and kindred sources of excitement or depression reacted, impairment of its functions accounting for the pathological phenomena now ascribed to such causes. Again, *as the general center of the nervous system, it was found to be the anterior pituitary body's co-center in sustaining the cellular metabolism of all organs. While the anterior pituitary body insured oxygenation of the blood through the adrenal secretion, the posterior pituitary body adjusted the functional activity of all organs through the nervous system.* This accounts for the fact that both cerebral hemispheres can be removed from various animals without materially impairing the functions of their motor, vascular, respiratory and nutritive systems."

The practical feature we wish to convey in this connection is the influence of the anterior pituitary body on its mate. Insufficiency of the former, by lowering the activity of cellular oxidation, depresses the functional activity of the latter. Vaso*constriction* being governed by the posterior pituitary (leaving out of the question the vasodilators, which in the light of our work do not exist as active entities), we thus have, when insufficiency of the anterior lobe occurs, general vascular dilatation. Still can we say *general* dilatation of all bloodvessels? Our analysis of this question brought out what has seemed to us to constitute another point of far reaching importance in all morbid processes in which any variation of temperature occurs, *i. e.,* the fact that the only vessels which undergo contraction through the influence of vasomotors are those supplied with a muscular coat. The effect of this anatomical feature is embodied in the following principle:

Vessels supplied with a muscular coat and capillaries are antagonistic in contraction and dilatation.

As is well known, capillaries are not supplied with a muscular coat, so that, when the vessels that are, undergo contraction, the blood in them is forced into the capillary system. Conversely, when the coated vessels dilate through relaxation of their vasomotors, the capillaries are depleted. We were thus brought to realize that:

Fever is primarily (as regards its mechanical aspect) due to contraction of all vessels supplied with a muscular coat (especially the great central vascular trunks), the cutaneous redness and diffusion being the result of engorgement of the peripheral capillary system. It indicates overactivity of the adrenal system.

Pallor is due to dilatation of all vessels supplied with a muscular coat (especially the great central vascular trunks), the cutaneous hypothermia being due to depletion of the capillary system. It indicates insufficiency of the adrenal system.

The Ductless Glands in Disease and Therapeutics.

In the earlier portion of this paper we emphasized the fact that all toxics either stimulated the anterior pituitary body, *i. e.,* the adrenal system, or depressed it. Whether we call this toxic a toxin, a poison or a remedy, the phenomena of adrenal overactivity or insufficiency always appear (irrespective of the specific properties which each drug or toxin shows, and which cannot be referred to here), their intensity varying with the power of the dose in the circulation. The symptoms of overstimulation are very numerous and increase as the morbid process is prolonged; thus in the erethic stage of exophthalmic goiter many symptoms appear that are not witnessed in acute poisoning. The same may be said of adrenal insufficiency; but, when this is due to acute intoxication, the phenomena may be said to be practically similar. This is well shown by the chart already submitted, in which the symptoms of cholera, arsenic poisoning and other intoxications are compared to those that follow double adrenalectomy.

Our investigations also led us to conclude in this connection, that the majority of drugs, toxins, physiological toxalbumins, etc., *stimulated* the adrenal system when the proportion of these agents in the blood did not exceed a certain limit, and that, when this limit was exceeded, *i. e.,* when the dose administered, or the amount of toxins secreted by bacteria, etc., was excessive, it either *inhibited* or *arrested* the functions of this system. A large dose of quinine may, for instance, cause adrenal overactivity, a flushed face, a bounding pulse, etc.; but, if the dose is excessive, it will overwhelm the adrenal system, the signs of which are always similar, *i. e.,* pallor, a weak and rapid pulse, etc. Between the two stages of adrenal overactivity and insufficiency, however, whether due to disease toxins or to poisons, there is a period corresponding in a measure with the normal state. This has been clinically recognized as the *crisis.*

An outline of the modifications which our investigations have suggested in the pathology and treatment of a few of the more important diseases will serve to illustrate the action of pathogenic elements upon functions of the ductless glands, and the manner in which remedies tend to offset the morbid process.

Pulmonary Tuberculosis. The organ primarily at fault in this disease is the anterior pituitary body. Vulnerability to any disease, whether inherited or acquired, means insufficiency of this organ, that is to say, of the adrenal system. Reduced oxidation entails impaired metabolism and nutrition of all structures, including the heart. The lungs bear the brunt of tissue starvation, however; the vast capillary system opposes the already weakened cardiac contractions, and the pulmonary structures do not even receive their share of the deficient blood available. Pallor, muscular weakness, a thin, compressible pulse, an undeveloped or slightly dilated heart, anemia, anorexia, coldness of the extremities, and habitual hypothermia point to this adrenal insufficiency in a large proportion of subjects. It denotes *vulnerability* to the germs of all diseases, including tuberculosis. Given such a subject with a suggestive family history, however, a course of treatment including forced nutrition, the iodides in gradually increased doses with strychnine, adding a little digitalis if there is any cardiac dilatation, will actively stimulate the adrenal system, and cause the untoward symptoms slowly to disappear along with the vulnerability. This is one of the phases of what we have termed "Immunization Medication."

How does infection occur in a vulnerable subject? We had occasion recently[72] to express views directly opposed to those advanced by Prof. Koch. Since vulnerability means insufficiency of the adrenal system and lowered oxidation, the functional activity of the spleen and pancreas and the production of trypsin are correspondingly reduced. We have seen that the digestive process within the neutrophile leukocytes, which collect foodstuffs in the intestinal canal, is due to the action of trypsin, as shown by Metchnikoff; a deficient supply of this proteolytic ferment, therefore, reduces the efficiency of this process. The protection it affords to the general system is reduced in proportion, since *undigested* bacilli mean *pathogenic* bacilli. If we now recall the path followed by these leukocytes: The villi, portal system, heart and pulmonary circulation—it will become evident that direct infection of the lungs can occur through bacilli ingested by leukocytes in the intestinal canal—precisely as may be the case in the pulmonary alveoli. *Contaminated milk and foods are, therefore, as active sources of infection as air-borne germs.*

The feature of the pathology of pulmonary tuberculosis which first claims our attention, owing to its importance, is the relationship between the adrenal system and the alkalinity of the blood. We have referred to the leading rôle of sodium chloride as a factor of leukocytic functions. When we realize the part played by leukocytes in the vital processes of the entire organism, this new rôle of the adrenal system assumes proportions exceeding in importance any excepting general oxygenation which this system governs. Von Fodor[73] found that, when rabbits were infected with various toxins, including those of tuberculosis, the alkalinity of the blood *rose*, but *declined* as the effects of the disease became more marked. Cantani observed the same effects under the use of diphtheria toxins; here the blood's alkalinity rose two hours after the poison had been injected, increased up to the twelfth hour, then declined. In another series of experiments performed with Rigler (*Centralbl. f. Bakter.*, Feb. 6, 1897), von Fodor observed that the intensity of the symptoms varied with the dose of toxin injected, and that, while moderate doses increased the alkalinity of the blood, very large doses caused it to decrease. Finally, injections of antitoxin were found to raise it. Stronger proof could hardly be adduced to show that the adrenal system also underlies this farreaching vital function.

Very recently, Albert Robin[75], of Paris, laid special stress upon what he termed "organic demineralization." He had noticed that during the *pre*-tubercular and during the earlier stages of the disease there occurred almost always a very marked loss of mineral salts, "causing one to wonder," he remarks, "whether this demineralization might not be one of the mysterious conditions which create the soil for a rapid pullulation of the Koch bacillus." He also refers to an investigation now in progress which he hopes will disclose the meaning of what has been termed "idiosyncrasy" and simultaneously enable him to "ascertain the practical means of overcoming it."

Both problems are met by the functions of the adrenal system as we interpret them. "Idiosyncrasy" is primarily the result of inherited or acquired insufficiency of the adrenal system. To counteract the loss of alkaline salts, the adrenal system must be judiciously stimulated, to insure their assimilation when introduced into the organism. Indeed, we view the process involved not as one in which waste of salts already in the tissues occurs, as the word "demineralization" would tend to suggest, but as a result of inadequate absorption of the salts from intestinal foods. We have stated that leukocytogenesis was also dependent upon the oxygenation of the leukocytogenic organs. Insufficiency of the adrenal system, therefore, entails hypoleukocytosis, and the deficiency of salts and general nutrition is mainly due to a reduction in the *number* of leukocytes supplied to the digestive canal.

In the treatment of pulmonary tuberculosis we are brought to realize that the indications are (1) actively to stimulate the adrenal system, (2) to supply alkaline salts to the organism. Besides these, of course, recourse must be had to the dietetic and hygienic measures which justly receive so much attention at the hands of clinicians nowadays. Active stimulation of the adrenal system is induced by the very agents that have acquired the confidence of the profession, particularly iodine, the iodides, creosote, ichthyol and strychnine. But the feature we wish to emphasize is that *adrenal stimulants will often prove inadequate if the alkaline salts are not administered simultaneously, while the use of alkaline salts without adrenal stimulants will prove unavailing, though perhaps beneficial for a time.* The decinormal solution introduced intravenously affords a ready means when rapid results are to be attained, but rectal injections or hypodermoclysis may likewise be used, bearing in mind, however, that small quantities frequently repeated produce better results in chronic diseases than the large quantities required in acute ones.

Does the use of alkaline salts directly influence the destruction of bacteria and their toxins? This question is forcibly met by the fact that *trypsin will not act in the absence of salts.* Metchnikoff[76] found, we have seen, that trypsin was the active body which in the phagocytic leukocytes digested bacteria; he also ascertained that "it only acts in the presence of salts." Behring and Nissen[77] were led to conclude by a series of experiments that the resistance of the white rat to anthrax was due to the intense alkalinity of the blood. Paul[78] not only supported this view, but also found that, if the alkalinity of the rabbit's serum was neutralized, its germicidal powers disappeared.

Pneumonia. The last census shows that, while the mortality of tuberculosis has diminished, that of pneumonia has greatly increased. This disease has become one of the greatest foes of humanity and has altogether baffled the efforts of science. We are not dealing with insufficiency of the adrenal system as a precursor of the disease or even as a factor of the morbid process during its most active manifestation. Indeed, the phenomena witnessed, the sharp febrile process, the flushed face, the congestive headache etc. point to precisely the opposite condition, *i. e.*, adrenal overactivity. The rusty or blood-stained expectoration of the erethic stage is but a repetition of the hemorrhages caused in animals by toxic doses of adrenal extract or by quinine in large but not excessive doses.

The time comes, however, when the crisis either inaugurates convalescence, or the accumulated toxins, after stimulating the adrenal system to the utmost, gradually overpower it. This introduces the asthenic stage—that during which stimulants—adrenal stimulants—are needed. Another kind of expectoration then appears, the prune-juice expectoration, *i. e.*, sputum loaded with the same methemoglobin or hematoporphyrin found in the blood when a viper—the *fer-de-lance* viper of Martinique for instance—has introduced into the bloodstream of its victim a dose of venom sufficient to all but arrest the functional activity of the adrenal system and deprive the blood of the substance which holds its hemoglobin in loose combination. All vessels supplied with a muscular coat then dilate in this stage, pallor and hypothermia and other symptoms also pointing to advanced adrenal insufficiency.

Pneumonia is regarded as a self-limited disease. Still, a large number of clinicians have advocated remedies deemed by them capable of curtailing it. Prof. Osler[79] remarks in this connection: "Certain drugs are credited with the power of reducing the intensity and shortening the duration of the attack. Among them veratrum viride still holds a place in doses of *M.* ii-v of the tincture given every two hours. Tartar emetic—a remedy which had great vogue some years ago—is now rarely employed. To a third drug, digitalis, has been attributed of late great power in controlling the course of the disease. Petresco gives at one time as much as from 4 to 12 grams of the powdered leaves, and claims that these colossal doses are especially efficacious in shortening the course of the disease and diminishing the mortality." Suggestive in this connection is the fact that *veratrum viride and tartar emetic are essentially adrenal depressants, while "colossal" doses of digitalis are likewise.* We have seen that pneumonia was primarily characterized by excessive adrenal overactivity; these drugs serve to inhibit the inordinate stimulation, thus holding, as it were, adrenal functions within safe bounds.

Still, the fact that these measures have not been generally adopted suggests that the results reached have not proved encouraging in the hands of the profession at large. True, the large doses of digitalis recommended have inspired fear of the "cumulative" action displayed by this drug, but this cannot be said of veratrum viride, and larger doses than those mentioned above have been given every two hours and even more frequently to adults without untoward effect, by many clinicians, who *without exception* insist upon its employment during the first stage. Its adoption would have been general, in our opinion, if an important feature of the pathology of the disease had been recognized, *i. e., the rapid exhaustion of alkaline salts by the enormous number of leukocytes which invade the lungs of the patient during the first stage.*

Osler refers to saline injections used hypodermically in the following terms: "I have seen it do good in helping to tide over a critical period of cardiac depression. As much as a couple of pints may be allowed to run beneath the skin by gravity, etc." F. P. Henry, who first used hypodermoclysis in pneumonia, writes[80]: "The surest method of conveying water to the tissues is by subcutaneous injections of (deci-) normal saline solution; a solution of common salt of the strength of 50 grains to a pint." Referring to the worst types of lobar pneumonia met with, *i. e*, those that occur in drunkards, alcoholic intoxication, exposure and a debilitated adrenal system incident upon the alcohol habit, concurring to place the patient on the brink of death almost from the start, he remarks: "Such cases treated by ordinary methods terminate, as a rule, with few exceptions, in death. Such cases treated with hypodermoclysis terminate, as a rule, in recovery." Still, ten years have passed since this was written, and the method has not been generally adopted. In the light of our views, two reasons are available to account for this: (1) Hypodermoclysis has been used too late, and altogether too infrequently to compensate for the rapid consumption of alkaline salts incident upon the excessive hyperleukocytosis; (2) an inhibiting influence such as that possessed by veratrum viride over the adrenal system is required to reduce the hyperleukocytosis. The main indications suggested, therefore, when the adrenal system and the hyperleukocytosis are taken into account, are as follows:

(1) Tincture of veratrum viride in sufficient doses (2 to 5 minims) repeated every two hours to reduce and soften the pulse, and lower the temperature.

(2) The introduction of at least one-half ounce of sodium chloride into the organism in the twenty-four hours either by repeated hypodermoclysis or intravenous injections.

Enemata of salt solution or of the physiological salt solution are considered by some authors as effective as the more direct methods, but the rapid action which the latter insures is of vital importance in the first stage of pneumonia. This treatment should be instituted from the start and, if carried on faithfully, should lower the mortality very materially, since it fulfills conditions which Petresco's enormous doses of digitalis do not meet. Notwithstanding this his mortality was only slightly above 2 per cent. as against the 15 to 25 per cent. afforded by prevailing methods of treatment.

Veratrum viride is thought to be a dangerous remedy. H. C. Wood[81] refers to it in the following words: "Although veratrum viride is a remedy of great power, capable of producing the most alarming symptoms, yet it is the safest of the cardiac depressants. Overdoses of it provoke vomiting so soon and so certainly that it is somewhat doubtful whether a robust adult could be killed by a single dose of any of its official preparations." The toxicology of the drug distinctly points to the class in which it may prove lethal, *i. e.*, in the debilitated and in infancy and in the stage of asthenia of any disease. The adrenal system of feeble subjects is already insufficient; in infancy and early childhood the adrenal system is too inadequately developed to protect the organism. Again, fear has been expressed that the injection of saline solution might cause cardiac arrest by overloading the circulation. The recent experiments of J. B. Briggs[82] have demonstrated that hypodermoclysis produces no increase of vascular pressure whatever; while those of Sollmann[83] have shown that the introduction of even large quantities of saline solution into the veins was accompanied with the rapid escape of blood fluids into the perivascular space, thus preventing the undue backpressure thought to occur upon the heart muscle. This accounts for the copious diuresis that follows these injections, a potent aid in the curative process, since it greatly increases the elimination of toxic elements.

The Pathology of Fever and the Preservation of Life During Febrile Processes.

We would not close these remarks upon the treatment of pneumonia without laying stress upon the fact that it is the *only* disease in which, in the light of our investigations, the febrile process is at all harmful and requires to be controlled. If any one feature has been affirmed by our labors, it is the fact that *fever is essentially a protective phenomenon*, the purpose being to force all pathogenic elements into the capillary system and there to expose them to the combined destructive action of the phagocytes and trypsin. The mechanical action involved is the one to which we have already referred, *i. e.*, contraction of all vessels supplied with a muscular coat, especially the larger central trunks, as soon as the toxic in the blood stimulates the anterior pituitary body. The capillaries being deprived of such a coat are the seat of engorgement until the center of the adrenal system is no longer stimulated, *i. e.*, when the pathogenic elements in the blood have been destroyed.

The *manner* in which pathogenic elements are destroyed was brought out by our study of immunity. Trypsin, to assume the proteolytic properties, requires a temperature somewhat higher than that of the surface of our body. In leukocytes this is supplied by the action of the oxidizing substance upon the phosphorus-laden lecithin of the nuclein—provided alkaline salts are available. During the febrile process the plasma in the capillaries contains not only trypsin, but two other agents, adrenoxin and fibrinogen. As fibrinogen contains phosphorus and adrenoxin is an oxygen compound, we have (provided the plasma be supplied with alkaline salts) a repetition of the process that occurs during the intracellular digestive function. It is evident, therefore, that *to administer antipyretics is to defeat Nature's effort to relieve the organism of pathogenic elements.*

We are afforded in this conection further evidence of the importance of alkaline salts during disease. Indeed, as interpreted from our standpoint, the absence of these salts represents the main cause of death during febrile processes. During health the sodium chloride needed by the organism is ingested with the food, both as a condiment and as a constituent of meats, vegetables, etc.; the alkaline phosphates and the sulphates likewise form part of our diet, the latter salts being obtained from most drinking-waters. As to the alkaline carbonates, they are products of dissociation of acids ingested with vegetables and fruits. All the alkaline salts referred to are thus ingested with foods or beverages. During disease, on the other hand, anorexia, the restricted or modified diet, etc., involve, if anything, a marked reduction in the amount of alkaline salts ingested. It thus becomes evident that a morbid cycle exists, in this connection, pernicious in the extreme to the welfare of the patient in febrile disorders, because, the course of these salts being *external to the organism*, the latter is possessed of no intrinsic reserve. *Steadily, as the febrile process advances, the alkaline salts are consumed, and, being inadequately renewed, the vital and defensive functions are increasingly hampered until life ceases.*

This applies not only to the diseases recognized as "fevers," but to intoxications, including uremia, puerperal eclampsia and other disorders, during which, as is well-known, patients deemed to be *in extremis* have been practically resuscitated by the use of an alkaline solution. But at times even this fails. The data submitted in the foregoing pages seem to us to account for this if they have adequately sustained the general conclusion that:

The power of the organism to antagonize the constitutional effects of pathogenic germs, their toxins and other poisons, is directly proportionate, all else being equal, to the functional efficiency of the adrenal system.

As this applies to the entire field of general diseases, it follows that,

When a favorable reaction does not follow the use of saline solution, it is because the adrenal system also requires direct stimulation, such as that afforded by strychnine, digitalis, etc., administered subcutaneously.

The strength of the first deduction is illustrated by the manner in which the teachings of clinical experience are sustained. Thus, cholera Asiatica, which proves to be the symptom complex of acute insufficiency of the adrenal system due to the effects of cholera toxins upon the anterior pituitary, is only benefited, we know, by active stimulation, heat, etc.

Syphilis is likewise a manifestation of adrenal insufficiency. Here, however, it proved to be of gradual development, the terminal stages being attended with actual death of circumscribed areas of the peripheral tissues: those, indeed, most liable to succumb to denutrition. In "secondary" syphilis, a powerful stimulant of the adrenal system, mercury, is efficacious; later on, in the "tertiary" form, a still more powerful agent is required, *i. e.*, Nature's own stimulant, iodine.

The words "gradual development" suggest a series of diseases in which, however, the clinical evidence, based on the teachings of but one investigator, is sustained as against the prevailing opinions of the clinicians of all other countries. This investigator, Professor Baccelli, of Rome, and his followers report a mortality of less than 3 per cent. in tetanus, as against the 50 to 70 per cent. recorded elsewhere. Baccelli's low mortality is accounted for by our views: *The two per cent. solution of carbolic acid he injects stimulates the insufficient adrenal system.* We recently[84] called attention to the fact that in a certain class of diseases, tetanus, epilepsy, hydrophobia, puerperal septicemia and kindred disorders, symptomatic treatment could prove harmful. We then wrote: "In tetanus, for example, the convulsions normally suggest the use of cannabis Indica, the bromides, etc., as sedatives or depressomotors. In the light of our views, precisely the opposite course is indicated, *i. e.*, active stimulation of the adrenal system, because *the convulsions are not due to the tetanus toxins, but to accumulated waste-products.* Indeed, the effect of this toxin is gradually to reduce the efficiency of the adrenal system and of all oxidation processes accordingly. The present mortality sustains us, especially when compared with the results of Baccelli's carbolic-acid treatment. As interpreted from our standpoint, this agent powerfully stimulates the adrenal system, and simultaneously causes prompt oxidation of the waste-products. Baccelli, we know, saves almost all of his cases. The same may be said of hydrophobia; here again the method of treatment employed in the various Pasteur Institutes insures precisely what Baccelli does with the aid of carbolic acid: in suitable doses, the extract of desiccated cord injected raises the anterior pituitary body's functions to their normal standard and sustains them until all danger is past." We may now add that, in the light of our views, Dr. Barrows, of New York[85], saved his recent case of puerperal septicemia because his weak formaldehyde solution was just strong enough to stimulate his patient's inadequate adrenal system, but not strong enough to overwhelm it.

In closing, we wish to state that, since the functions of the ductless glands and of the leukocytes have been known to us, medicine has appeared in a new light. The majority of abstruse problems have become normal combinations, bereft, as they now are, of theories which before were necessary to compensate for the functions of the organs we have described. Though our labors are by no means finished (the second volume will only appear in some months), what has already been done has demonstrated that there is available, even now, hidden in the annals of medicine, the product of hosts of patient investigators in all civilized countries—enough sound literature and experimental evidence to place medicine on a footing with any branch of applied science, which means to our profession the mastery of the greatest foes of mankind.

Whether the views embodied in this paper will contribute to this end remains to be seen.

1. Gazeta Lekarska, March 23, 1895.
2. Journal of Physiology, Vol. XVIII, p. 230.
3. Johns Hopkins Hospital Bulletin, Sept.-Oct. 1898.
4. Therapeutic Gazette, April 15, 1901.
5. Skandinavisches Archiv für Physiologie, Bd. II, S. 236, 1891.
6. Journal of Physiology, Vol. XXII, p. 231, 1897.
7. Virchow's Archiv für path. Anatomie, Jan. 4, 1897.
8. Archives de Physiologie, Vol. 1895.
9. Pflüger's Archiv, Vol. LXVII, H. 9 and 10, 1897.
10. Lo Sperimentale, No. 2, 1898.
11. Transactions of the Congress of American Physicians and Surgeons, Vol. IV, 1897.
12. American Journal of Physiology, Jan. 13, 1899.
13. Archiv für Anatomie und Physiologie, p. 90, 1894.
14. Système Nerveux et Organs des Sens de l'Homme, Paris, 1866.
15. Brain, Winter, 1894.
16. Journal of Physiology, Vol. XVII, No. 5.
17. Jahresb. für therap. Chemie, Vol. XXIII, 1893.
18. Journal of Physiology, Vol. 1885.
19. British Medical Journal, Feb. 5, 1898.
20. Deutsches Archiv für klin. Med., Nos. 2 and 3, 1897.
21. Boston Medical and Surgical Journal, Feb. 24, 1898.
22. Marseille Médical, April 15, 1896.
23. Journal of Physiology, Vol. XVIII.
24. Archiv für die gesammte Physiologie, Bd. LXIV.
25. British Medical Journal June 3. 1899.
26. Medical Bulletin, Jan., 1898.
27. Comptes-Rendus de la Société de Biologie, July 10, 1896.
28. Berliner klinische Wochenschrift. Jan. 21, 1894.
29. Annales de la Soc. de Méd. de Belgique, Vol. VI, Nos. 2 and 3, 1897.
30. Archives Générales de Médecine, July. 1900.
31. Virchow's Archiv, Dec., 1899.
32. British Medical Journal, June 3, 1899.
33. British Medical Journal, July 16, 1898.
34. Journal of Physiology Vol. XIX., 1893.
35. Bulletin of Johns Hopkins Hospital, Dec., 1897.
36. Journal of Anatomy and Physiology, April 1900.
37. General Physiology; by Max Verworn, Transl. by P. S Lee, 1899.
38. Practical Urinalysis and Urinary Diagnosis, p. 56, Ed. 1900.
39. Journal of Physiology, Vol XVI, 1894.
40. Johns Hopkins Hospital Bulletin, Oct., 1894.
41. Lectures on the Comparative Pathology of Inflammation, translated by F. A and E. H: Starling, 1891.
42. Manual of Physiology, 4th Ed., 1900.
43. Text-Book of Physiology, 6th Ed, 1895.
44. Histologie Normale. Paris, 1894.
45. Journal of Physiology, Vol. XXV, 1899.
46. Russian Archives of Pathology, April, 1900.
47. Traité Technique d'Histologie, 1875.
48. Text-Book of Histology.
49. Journal of Physiology, Vol. XIX, 1896.
50. Manual of Microscopy; translated by H. T. Brooks.
51. Centralblatt für allg. Path. und path. Anatomie, Bd. VIII, 1896.
52. Handbuch der Gewebelehre des Menschen, 1867.
53. Handbuch der klin. Med., 1887.
54. Du Sang et des altérations anatomiques, 1889.
55. Bulletin Johns Hopkins Hospital, Dec., 1897.
56. The Internal Secretions and the Principles of Medicine, Vol. I.
57. Berliner klin. Wochenschrift. Oct. 11, 1897.
58. Loc. cit.
59. Philadelphia Medical Journal, March 12, 1898.
60. Revue Générale de Sciences pures et appl., Vol. 1895.
61. Société des Sciences Médicales de Lyon, July, 1895.
62. Johns Hopkins Hospital Bulletin Sept., 1900.
63. Chimie de la Cellute vivante, pp. 102 et seq.
64. Semaine Médicale, March 22, 1899.
65. Archiv für Verdauungskrankheiten, Bd. VI. Hft. 4, 1900.
66. Société de Biologie. Lancet, June 27. 1896.
67. L'Immunité dans les Maladies Infectieuses, p. 204, 1901.
68. Johns Hopkins Hospital Reports, Vol. VI, p. 89, 1897.
69. Brain, Winter, 1894.
70. Transactions of Congress of American Physicians and Surgeons, Vol. IV, p. 83, 1897.
71. Archives de Physiologie, July, 1898.
72. Monthly Cyclopædia of Pract. Med., Jan., 1903.
73. Centralblatt für Bakt. und Parasit., Vol. VII, 1890.
74. Centralblatt für Bakt., Feb. 6, 1897.
75. Bulletin Général de Thérapeutique, Dec. 23, 1902.
76. L'Immunité dans les Maladies Infectieuses, 1901
77. Zeitschrift für Hygiene, Bd. VII, 1890.
78. Proceedings of the Royal Society, London, May 22, 1890.
79. Principles and Practice of Medicine, 3rd Ed., 1898.
80. System of Therapeutics by H. A. Hare, 1st ed., Vol. II, p. 290, 1892.
81. Therapeutics; its Principles and Practice, 11th Ed., 1900.
82. Johns Hopkins Hospital Bulletin, Feb., 1903.
83. Archiv für exp. Pathol. und Pharm., Bd XLVI, 1901..
84. Monthly Cyclopædia of Practical Medicine, Jan., 1903.
85. New York Medical Journal, Jan. 31, 1903.

GANGRENOUS DESTRUCTION OF THE PITUITARY BODY, WITH DISINTEGRATION OF THE BLOOD, FOLLOWING A FRACTURE OF THE SPHENOID BONE AND SUBSEQUENT INFECTION.

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In view of the recent publication in the Monthly Cyclopedia of Practical Medicine of the "Preface and Summary" of a forthcoming work upon the Internal Secretions and the Principles of Medicine, by Dr. C. E. deM. Sajous, and of the immense importance of these observations and the conclusions to be drawn therefrom, therein presented, I deem it timely to offer the following facts, encountered in a clinical case, as illustrative of the influence which the integrity of the pituitary body exercises upon the integrity of the blood through the adrenal glands. I will preface with the statement that the clinical facts encountered in this case caused me the greatest amount of uncertainty and doubt as to their cause, insomuch that I acknowledged to my assistants my inability to trace the facts to a sufficient cause, and that this bewilderment existed not only prior to death, but even after autopsic examination, and that it was only after a careful reading of the preface that I realized the condition as one bearing directly upon the principle which Dr. Sajous has offered.

Case of P. McC., aged 24 years; entered the hospital on the 9th. and died on the 30th. of November, 1902. History: The patient had no signs nor record of syphilis, has had only the ordinary diseases, there was no family history of malignant disease or tuberculosis. Status praesens: He was a well-built, florid adult in good physical condition, there was a transverse fracture of the left inferior maxilla extending from the angle of the jaw to the base of the last molar; the fragments were in good apposition; there was bleeding from the torn gum, the fracture was compound; temperature 38.6° C.; pulse 102. He stated that this injury was caused by a fall against some hard object, the concussion rendering him unconscious for a few minutes, about eighteen hours before admission. There was no evidence of other injury. Treatment was, as in all these cases, thorough disinfection of the oral cavity, feeding by tube, and approximation of the fragments by a four-tailed bandage, so that, when I first saw it on the next day, there was no indication for change in the measures instituted by my residents. On the morning of the third day he complained of a dull headache which was attributed to the tight bandage; there was also some enlargement of the submaxillary glands; temperature 38.2°, pulse 80. Hourly irrigations of the mouth with acetozone 1—16,000; tube feeding; slight bleeding, no pus. This condition remained practically unchanged, temperature 38° to 38.2°; pulse 88 to 100, until morning of ninth day, when the pulse and temperature became normal; he expressed himself as much better and asked to be allowed to smoke, although there was still headache and a sense of vague uneasiness. On the tenth day there was increased enlargement of the submaxillary glands, and great pain in the fracture; temperature 37.6°, pulse 80; an incision was made over the seat of fracture and low enough to ensure drainage; the edges of the torn periosteum were green in color. There was some odor, but no pus; through-and-through hourly irrigations with acetozone solution were instituted, gauze drains were employed. At 6 P. M. the temperature was 39.0°, pulse 108. On the eleventh day the temperature was 37.6°; the pulse 96. The patient complained of much pain in the head and vague discomfort. Over the exit of the infra-orbital nerve there was a red, discolored and edematous patch as large as a half silver dollar and very tender to the touch. This led to a careful examination of the superior maxilla for possible injury involving the antrum, but this could not be established. Ichthyol was applied to this area. Feeding had been generously carried out. The gangrenous tissues in the wound were replaced by healthy granules and the wound itself became sweet and clean without much pus. On the twelfth day the temperature was 37.2°, pulse 82. At this time the enlarged glands were decreasing in size without suppuration. At this date there was noticed a *delicate yellowing* of the *skin of the face and body*. Examination showed the liver extending from the sixth interspace to the border of the ribs, but no tenderness was present. The spleen extended to the midaxillary line and above the border of the ribs; the edematous spot on left face was less pronounced. Patient also complained of feeling very badly, and a vague, indefinable sensation was causing a loss of sleep. On the thirteenth day the temperature was 38.6°, pulse 90, the facial spot had nearly disappeared, but he was more distinctly yellow. Again careful examination of the liver was negative; urine showed no bile, no sugar, no albumin, but was highly colored. The condition was quite puzzling, there was no local colony of organisms at the site of fracture, which was clean,and, but for the general condition, ready for vivifying and wiring; the antrum was not involved, and for the first time I suggested to my assistants the remote possibility of fracture at the base of the skull, possibly through the ethmoid, the expression being along the orbital canal and through the vessels and nerve to the exit of the infra-orbital canal. This appeared very remote in the absence of all symptoms of basic fracture, except pain and the vague uneasiness in the head, and in view of the almost total disappearance of the facial edema and discoloration. Blood plants in bouillon at this date were negative, both in the air and in Buchner's tubes. There was no blood invasion, but yet I feared local colonization in the liver, and therefore, ordered the administration of antistreptococcic serum. On the fourteenth day the temperature was 38.2°, the pulse 96, the skin decidedly jaundiced; no liver tenderness; no terminal abscess formations, urine normal, except for its high color, lips pale, blood examination showed lowered hemoglobin, normal leukocytes, no deformity of erythrocytes. On the fifteenth day the patient had a decided chill at 9 A. M.; temperature 39.2°, pulse 104, skin quite yellow, with bronzed tint; severe headache; there was a slight ecchymosis of the left lower eyelid. On the sixteenth day there was commencing edema and discoloration of the face over the exit of the *right* infra-orbital foramen; the temperature was 38.8°, the pulse 104. There was no longer any doubt as to the presence of a fracture at the base of the skull, and that it was infected. Treatment was instituted to assuage the suffering. On the seventeenth and eighteenth days the temperature was 40.2° and the pulse 124; the skin showed a deep, bronzed yellow; the spleen extended to the border of the ribs and was tender on pressure; there were a few small skin extravasations; patient at times was delirious. On the nineteenth day rectal temperature was 39.8° and the pulse 104, skin extravasations larger and more numerous: the right side of the face was greatly swollen and discolored, and a sense of crepitation was present; there was edema of the right conjunctiva and exophthalmos. Blood plants again made; examinations showed hemoglobin below 50%, but there was no count of the elements. In the cover examinations there had been at all times observed a number of small round hyaline bodies of a delicate greenish tint and containing granules exhibiting motion. These bodies were familiar to me as those seen in the fluids of inflamed joints and bursæ caused by the gonococcus, and which Gaylord has found so freely in cancers and in the blood of cachectics, and which recently a commission of the Public Health and Marine-Hospital Service has encountered freely in the blood of yellow-fever subjects, to the extent that it accepted them as a possible cause of the disease. Guiteras, Gaylord, Lyon and myself have found them in a number of diseases, but they are undoubtedly more numerous in the acute infections, and I find that Salmon described them in 1880, and that Sternberg observed them in yellow fever blood. From their increasing presence in the blood in this case I assumed that the disintegration of the blood, as shown by the intense hematogenous jaundice, was due to some virulent colonization at the base of the brain, bearing in mind Flexner's observation that there may be developed among the toxins an endotheliolysine which could give rise to these bodies, through its influence upon the endothelium of the vessels, just as I had observed these hyaline bodies to be produced from the disintegration of the endothelium of the joints in localized gonorrhea, some of my dependent drop preparations showing the irregular cells filled with them. Death took place on the twenty-second day after the injury. The rectal temperature at this time was 40.9°, the pulse 145. Autopsy, 18 hours post mortem. Anatomical diagnosis, fracture of the lower jaw opening into buccal cavity, fracture of the body of the sphenoid through the sella turcica with infection resulting in localized gangrene of the contents of the sella, the lobes of the pituitary body, general intoxication. Rigor pronounced, pupils dilated, skin of a deep bronze-yellow with some hypostasis of back and loins, the right half of the face was greatly discolored and edematous, the right eye protruded to overdistension of the swollen lids, between which the edematous conjunctiva extruded, the left half of the face was almost normal, there was an open incision at the angle of the jaw, draining a fracture of the bone. Incision enlarged, there was denuded bone along the fracture line, with red granulations of periosteum, there was no local expression of continued infection. Median section showed the tissues yellow, abdominal contents yellow. Intestines of normal appearance. Liver normal in size and color, and on incision there were no signs of fatty changes in the cells. The spleen was enlarged and soft. The kidneys were congested and the bladder contained a little dark-brown urine. The liver was freely incised for possible abscess; none was found; cultures were made from these organs in duplicate, on agar-agar and in bouillon, also from the blood of the right heart. The heart and its membranes were normal, as were also the lungs and pleuræ. The glands of the neck were not enlarged. Calvarium removed, membranes normally congested; cerebral tissues normal save the right crus as it overlaid a gangrenous area on the base of the skull. The fossæ of the base were normal, save in the left midfossa, where there is a dark-green mass near the carotid opening of the petrous bone involving the Gasserian ganglion, and which, passing backward, involves all the contents in the sella turcica, then as a slender greenish line it passes along the right cavernous groove into the orbital cavity, the contents of which are involved and of a greenish tint. On the left side there is no extension of the process into the orbit to be noted, although the expression at the infra-orbital foramen on the eleventh day would indicate that there had been such extension. The middle and posterior clinoid processes were necrotic, and the pituitary removed showed a fracture through the body. The cavernous tissues were not wounded. Cultures were made from pituitary mass. It was not permissible for me to follow further the line of fracture.

Upon the completion of the autopsy I expressed myself as much in ignorance of the cause of the extreme degeneration of the blood, as evidenced in the intense hematogenous jaundice, purpura and the changes in the red cells, as before the section in the light of the very limited local colonization of the infective organism, unless the organism was of a most virulent toxic type. All autopsy cultures were placed in an incubator temperature, one-half of them exposed to the air, the others to an atmosphere deprived of oxygen. At the end of 72 hours all tubes proved sterile save those from the pituitary mass and one from the liver, the latter a colon bacillus, the former a short, thin rod, growing more readily in the air than without oxygen.

I regret that this organism could not be observed further at the time, but in the light of the principle advanced by Dr. Sajous its presence was of importance principally because of its influence upon the pituitary tissue, and not because of its elaborated toxins.

I have thus fully stated this case, because it seems so striking an example of the results of injury to, and destruction of, the pituitary without any great damage to other important structures which would have served to cloud the observation. There must remain some doubt as to the route of the infection from the fracture of the maxilla, but it must have been along the lymphatics of the inferior dental nerve and through the foramen ovale with the third division of the fifth nerve to the ganglion and into the line of fracture, destroying the pituitary body. Without the infection from the fractured jaw the sphenoidal fracture would probably not have resulted badly, and, although there were pain and vague head symptoms early in the case, it was only at the time of the local reaction at the site of the former that the first symptom of destruction of the blood was noted, the commencing jaundice from adrenal insufficiency due to the primary changes in the pituitary body. The acceptance of the fact of the influence of this hitherto obscure ductless gland, through the cervicosympathetic system, over the secretion of the more well-known adrenal glands, and of the value of the adrenal secretion in the preservation of the integrity of the blood, readily explains the puzzling facts in this case without the necessity of seeking the source of a sufficiently virulent toxin to have caused them.

SURGICAL AFFECTIONS OF THE BILIARY TRACTS.*

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(Concluded).

In a typical attack the patient may suffer for some days from discomfort in the epigastrium, perhaps slight jaundice or itching, and an examination reveals the liver as slightly enlarged and painful on pressure. These symptoms are due to the infection of the gall-bladder and ducts just mentioned, and may be entirely absent, the number and degree of virulence of the infecting micro-organisms determining the extent of the inflammation.

The symptoms of a calculous cholecystitis, excepting the previous history of stomach-aches, are precisely identical with those of the noncalculous form, which I have before described, with the added tendency toward ulceration from the presence of the stones acting as foreign bodies.

When the inflamed gall-bladder forces a stone into the cystic duct, the gall-bladder enlarges and becomes quite painful, the symptoms of acute cholecystitis being augmented by the passage of the stone through the inflamed and spiral cystic duct.

The intense pain in gall-stone colics is due to the distension and muscular contractions of the inflamed ducts dragging upon the nerve endings in the walls.

The stone frequently never gets beyond the cystic duct, remaining impacted and rendering the gall-bladder functionless. If the infection in the gall-bladder remains active, an empyema results; if the infection has subsided entirely when the obstruction takes place, hydrops of the gall-bladder is a sequel. In addition to a stone in the cystic duct, hydrops may be caused by a quietly passing infection of slight degree or as an end product of an acute infectious cholecystitis of slight degree. Empyema has been described and hydrops presents but few symptoms. Palpation detects a rounded, smooth tumor, which is quite painless, as a rule, and, when depressed into the abdomen, will return immediately, the mass moving from side to side and from a fixed point like a pendulum. It may attain such a size as to be mistaken for a floating kidney or even an ovarian cyst. Jaundice is not present.

With the passage of the stone into the common duct the symptoms become more marked, the pain is usually intense and unbearable and may be colicky in type or persisting for nearly half an hour with unmitigated severity, in which case the patient completely collapses with sweating and a cold, clammy skin. The pain commences in the right hypochondrium or in the epigastrium, and spreads to the back and thence upward to the shoulders or downward to the lumbar or even the sacral region. The greatest intensity of pain will be found very near a point at the junction of the lower third and the upper two-thirds of a line drawn from the umbilicus to the tip of the ninth rib or in the epigastrium. Infection of the liver and acute cholecystitis may contribute to the severity of the pain.

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*Oration delivered before the James C. Wilson Medical Society, February 24, 1903, at the Jefferson Medical College, Philadelphia.

Vomiting is nearly always an accompaniment of severe pain, especially in the region of the stomach, and in this instance may be marked and persistent. Fever is not always present, but, as a more or less extensive infection of the gall-bladder and ducts may be co-existent, we may expect frequently to find an elevation of the temperature.

In a slowly moving stone jaundice may become intense, as in twelve hours after the commencement of the initial symptoms of the attack it may have reached its maximum intensity.

In addition to these symptoms there is marked rigidity of the abdominal muscles, and especially those on the right side, enlargement of the liver and sometimes of the spleen.

With the passage of the stone into the duodenum there is an immediate cessation of all symptoms, the jaundice disappearing in about four or five days, and a careful examination of the stools may detect calculi, though the presence of stones in the stools does not necessarily mean that there are not more left behind.

A single attack is nearly always followed by others, days, months or even years later, and frequently after several seizures the disease subsides and gives no further evidence of trouble; but, unfortunately, all cases do not terminate with such a happy result, the stone may become impacted in the common duct or in the ampulla of Vater and give rise to serious lesions of the liver or pancreas. The stone does not become permanently impacted with a total obstruction to the bile flow, and persistent extreme jaundice indicating a fixed obstruction should rather be attributed to a tumor of the pancreas or stomach.

In chronic obstruction the duct dilating behind the stone will allow the bile to escape around the obstruction and the jaundice fades, but the stone may pass downward a trifle, and again the symptoms of acute obstruction appear. This chronic obstruction persists with intermittent attacks of pain, fever and jaundice, and, unless surgical intervention takes place, the sufferer becomes a chronic invalid. When a calculus becomes firmly fixed in the ampulla of Vater or at the duodenal orifice, serious lesions of the pancreas from obstruction and infection of its duct may result.

Gall-stones are sometimes present in the hepatic ducts and are either formed in them or come from the gall-bladder. In the former instance they are small concretions and may accumulate, in the intrahepatic ducts, into masses. If they lie for some time in the hepatic ducts, an increase in size is to be expected, as the mucous membrane of these ducts is identical with that in the gall-bladder, cholesterin and lime salts being excreted.

In connection with cholelithiasis of the liver, we might mention that multiple abscesses of this organ may accompany the calculi, usually a fatal disease. Diffuse hepatitis, with an enlarged liver and an increase in the interlobular connective tissue, is sometimes dependent upon biliary calculi in the intrahepatic ducts with infection of the bile.

As a result of the continuous presence of a calculus in the common duct various sequelæ and complications frequently present themselves.

(1) Ulceration, hemorrhage, perforation or stricture of the duct itself.

(2) Local or general peritonitis following rupture.

(3) Adhesions to neighboring organs and the formation of a fistula through which the stone discharges.

(4) Intestinal obstruction due to (a) the size of the stone, (b) volvulus of the small intestine, (c) adhesions from the gall-bladder region obstructing the lumen of the bowel.

(5) Abscess or cirrhosis of the liver.

(6) Pancreatitis.

(7) Carcinoma of the gall-bladder or ducts.

Ulceration followed by perforation of the wall of the common duct may occur, though it occurs more frequently in the gall-bladder, and is followed by a local pus collection or a general peritonits, The latter is infrequent from the adhesions which have formed to neighboring organs limiting the spread of infection. This abscess may lead to the formation of multiple fistulæ or, more rarely, may rupture into the general peritoneal cavity.

Fistulæ may also be directly caused by adhesions of the ulcerating gall-bladder or duct to a neighboring viscus with subsequent perforation. They have been observed between the biliary passages and the stomach, duodenum, jejunum, ileum, colon, urinary passages, thorax, abdominal walls, retroperitoneal tissues and portal vein. In most instances the occurrence of fistulæ is impossible to diagnose unless, for instance, a very large stone was passed in the stools or was vomited. As to the relative frequency of fistulæ, Naunyn tabulates 43 fistulæ in a total of 10,866 autopsies; 19 between the gall-bladder and duodenum, 16 between the gall-bladder and colon, 5 between the common duct and duodenum and one each between the gall-bladder and stomach, gall-bladder and liver, and between the several bile-ducts.

Hepatic abscesses do not always result from an infectious inflammation of the liver-ducts unless there is ulceration of the mucous membrane, with extension of the purulent process through the duct walls to the liver. In rarer cases an empyema of the gall-bladder may rupture into the liver, and finally the liver abscess may be metastatic in its origin. This last may occur from impaction of a stone in the common duct at a point at which the portal vein crosses, with compression of the vein and the formation of a thrombus; secondly, by a direct fistula between the duct and portal vein resulting in pylephlebitis; and, lastly, an infectious pylephlebitis through the bloodchannels, the veins of the gall-bladder and its ducts entering the portal vein.

The symptoms of hepatic abscess are ill-defined and inconclusive and similar to those of chronic obstruction with ulceration of the duct. There may be marked fever, 106°, at the onset, with rigors, chills, enlarged and tender liver and a large spleen. The temperature may subsequently descend to the normal and then again rise, the patient becomes weak and septic in appearance and the leukocytes are greatly increased. An important symptom is the increased tenderness on pressure, during a rigor, of a circumscribed spot upon the liver.

Pancreatitis may follow the impaction of a stone in the ampulla of Vater from occlusion of the common opening into the duodenum. Bile then enters the pancreatic duct, and by mechanical or infectious irritation the pancreas becomes involved with necrosis of the parenchymatous cells, hemorrhage and the accumulation of inflammatory products. Chronic induration of the head of the pancreas may follow with obstruction of the common duct and persistent, often intense, jaundice.

Carcinoma of the biliary passages, when primary, is frequently a result of gall-stone irritation, especially with an hereditary predisposition to malignant disease. The malignant growth occurs most commonly in the gall-bladder, infiltrating the walls and spreading to the neighboring hepatic tissue.

In the bile-ducts the growth may be primary or as a result of extension from the gall-bladder, the walls of the duct becoming infiltrated and occluded.

The diagnosis is difficult to make in the early stages, because, with the probable history of previous gall-stone attacks, the resulting pericholecystitis with adherent and tangled omentum will give a resistance to palpation just as the beginning tumor will. There are digestive disturbances with gradual loss of weight or strength; jaundice is absent unless the portal lymphatics become enlarged and cause pressure, or the infiltration in the duct walls occludes the lumen. It then increases slowly, becoming intense and permanent. Fever and rigors are rarely present. Later in the disease the well-marked cachexia develops, and there is ascites from disturbance of the portal circulation. The appearance of a hard, nodular tumor tender to palpation, moving with respiration and increasing rapidly, decides the diagnosis. It is well to remember that in cases of chronic obstruction of the common duct by a stone, of long standing, a cachexia may be present, very closely resembling that of malignant disease.

When the gall-bladder is infiltrated by a growth from neighboring organs, the condition is beyond surgical help and needs no description.

The treatment of cholelithiasis may be stated under two headings:

A. Palliative or medical.
B. Radical or surgical.

From more intelligent observations upon the cause of gall-stones and the sequelæ attendant upon neglected cases, physicians are recognizing that medical treatment does not suffice to cure their patients. The inability to find a drug capable of dissolving the calculi or to effect their dislodgement from the biliary tracts, has led to this conclusion, together with aseptic methods and the brilliant results of surgeons whose experience with this disease has been extensive. The various saline cholagogues, while they may increase the fluidity of the bile, do not exert any moving force upon a stone the progress of which is chiefly due to the contraction of the muscle fibers in the walls of the gall-bladder. Olive oil has been employed for years as a remedy for cholelithiasis from its supposed effect upon the secretion of bile, increasing its quantity and diminishing its consistency. This action has been explained by the splitting of the oil into fatty acids and glycerine in the duodenum, the well-known hygroscopic powers of the glycerine causing hyperemia and, through irritation, contraction of the muscular coat of the bile-ducts. If we possessed such an agent, capable of contracting the gall-bladder to such a degree as to expel its contents, the risk would be greater than the good accomplished, from obstruction of the cystic or common ducts by a stone too large to pass through them.

In general it may be said that the indications for medical treatment are:

(1) Acute obstruction of the common duct. The stone, having left the gall-bladder, is moving through the common duct and may reach the duodenum. When the disease drags on, however, with fever and increased pulse-rate, then the time has arrived when to defer operation is no longer warrantable. During the acute stage the pain may be alleviated with small doses of morphine, absolute rest enjoined and hot applications applied to the hypochondriac region. The stools should be searched for the presence of stones. After the subsidence of the attack, intestinal antiseptics may be administered and the bowels kept freely moving. Digestion should be regulated, regular exercise and warm bathing ordered and the patient carefully watched.

Should symptoms of obstruction return after apparent relief, indicating a fixed position of the stone, operation should be immediately advised.

(2) Hydrops of the gall-bladder, due to an infection and not to calculous obstruction of the cystic duct.

(3) Mild attacks of colic without any inflammatory symptoms, unless chronic invalidism is threatened. Such cases are markedly benefited by the Carlsbad treatment. In those of sluggish habits and torpid constitutions the regular mode of living, the soothing effect of the warm medicated waters and the laxative action of the springs are all conducive to a powerful and beneficial stimulation of the tissues. The efficacy of the Carlsbad treatment lies in the subsidence of the inflammatory process, not in the expulsion or the dissolving of the calculi. The stimulation of the liver and the portal system in general aids very materially toward bringing about this temporary cure.

(4) In cases of marked obesity or on account of diabetes, heart, lung, kidney or liver disease in which the shock of operation would result fatally.

It is well to remember that a stone may obstruct the pancreatic duct, causing pancreatitis and that in advanced chronic pancreatitis the islands of Langerhans may be implicated and glycosuria result.

(5) Carcinoma of the biliary apparatus, unless the obstruction requires a palliative operation.

Early surgical treatment has for its aim the relief of the condition causing the lesion, the prevention of future complications and the restoration of the parts to as near as possible their normal condition.

The patient is prepared in the way usual to surgical operations upon the abdomen, and, in addition, calcium chloride may be administered in 30-grain doses, three times a day. This drug seems to have some action in preventing oozing, which frequently follows operations upon jaundiced subjects. This bleeding has lost several patients to the writer after an otherwise apparently successful operation and is more often noted when the obstruction is associated with enlargement of the head of the pancreas.

After the patient is on the operating table, a sand pillow should be placed beneath the back, arching the liver forward so that when the abdomen is opened the liver may easily be rotated and drawn out of the abdomen far enough to give a better exposure of the biliary passages. Adhesions should be carefully separated and unnecessary handling of the liver, gall-bladder or ducts avoided. The incision is made through the rectus muscle and over the gall-bladder, and, when additional room is required, it is curved from the costal margin to the xiphoid.

The indications for surgical treatment are:

(1) Chronic obstruction of the common duct. The operation of choice is choledochotomy or opening the duct, extracting the stone and closing with a double row of Lembert silk sutures.

Choledochotomy is performed by incising the duct over the stone, removing it and searching with the finger and probe to ascertain that the ducts are clear; this is particularly important. The main, as well as the right and left, hepatic ducts are to be explored. If the integrity of the duct will permit the wound in the common duct may be closed with Lembert sutures, and in these cases gauze drainage should always be instituted. If the position of the duct renders suture impossible, or if its coats are infiltrated and friable, a rubber drainage tube should be introduced well into the hepatic duct, held in place by a purse-string catgut suture and carefully surrounded by gauze packing. In certain cases of choledochotomy it is wise to drain the gall-bladder as well.

When calculi are situated close to the duodenum, in the ampulla of Vater, the duodenum must be opened through its anterior wall and the duct laid open from within the duodenum. If no intestinal contents have escaped, a Lembert suture of the duodenum is sufficient, without drainage.

When the common duct, immediately to the proximal side of the ampulla of Vater, is the site of a stone which cannot be crushed between the fingers or dislodged, the duct may be exposed by reflecting the posterior parietal peritoneum to the outer side of the descending portion of the duodenum.

(2) Chronic obstruction of the cystic duct from an impacted gall-stone with infective cholecystitis (empyema). The operation to be performed is cholecystostomy, or opening and draining the gall-bladder and removal of the stone from the cystic duct by forcing it back into the gall-bladder, or opening the duct, cysticotomy.

Cholecystostomy. The gall-bladder is exposed by an incision in the right rectus muscle and, excepting in highly infectious cases, is generally freed from adhesions, which, when present, usually involve the abdominal wall, liver, omentum, duodenum and pylorus. The gall-bladder is isolated with gauze pads and aspirated of its contents. The puncture is then enlarged and the gall-bladder examined for stones; if present, they may be removed with forceps or a scoop. A small piece of iodoform gauze is introduced into the gall-bladder and the opening temporarily closed with an hemostatic forceps. The gall-bladder is then brought into the wound, if possible. A piece of gauze is passed around the gall-bladder in such a manner as to allow the lower end of the gauze to protrude from the lower end of the wound, and the gall-bladder is sutured to the aponeurotic layer of the abdominal wall. Before tying the gall-bladder sutures, the gauze pads are removed, but not the gauze around the gall-bladder. The sutures are tied, the wound in the abdominal wall above and below the gall-bladder closed, the hemostatic forceps removed, the piece of iodoform gauze taken out of the gall-bladder and a solid rubber drainage tube carried into the organ. This drains into a receptacle at the side of the patient.

When acute empyema exists it is safer in most cases to empty, drain and suture the gall-bladder. When it is impossible to bring the gall-bladder into a position favorable for its suture to the peritoneum, it must be protected by gauze packing after introducing the drainage. Stones firmly impacted in the cystic duct require cysticotomy.

(3) Hydrops of the gall-bladder from an impaction of a stone in the cystic duct. Cholecystectomy or removal of the gall-bladder should be performed in most cases. After the usual incision the cyst is grasped and carefully freed from its adhesions, which in hydrops are very slight. A silk ligature is tightly tied around the duct near its junction with the common duct, and the former is severed between the ligature and the obstructing stone. The stump is sewed over with silk, apposing the serous surfaces after cutting enough mucous membrane away to allow apposition.

(4) Chronic calculous cholecystitis without jaundice and with or without enlargement of the gall-bladder. In this condition there is so often marked adhesion of the structures around the gall-bladder that its removal is very difficult. An attempt to dissect it loose from the liver is followed by considerable oozing and necessitates gauze drainage. The writer is usually satisfied with breaking up the adhesions about the pylorus, duodenum and colon, and covering the raw surface with "Cargile." The gall-bladder is then opened, the calculi are removed and a rubber drainage tube protected by a gauze strip is introduced into the gall-bladder. Cholecystectomy is to be preferred when it is possible. The Mayo operation, enucleating the mucous membrane, is applicable only in comparatively few cases. Cargile is an animal membrane which, when steril-

ized, forms an excellent protection to raw surfaces. It is ultimately absorbed and, in the writer's hands, has never given rise to infection.

(5) Abscess, either about the gall-bladder and ducts or in the liver, requires the same treatment as do pus collections in other parts of the body, viz., incision and drainage. Hepatic abscess, if located, should be aspirated after opening the abdomen to confirm the diagnosis, and then be opened, cleaned out and drained. In addition, the hepatic ducts should be drained by introducing a rubber tube through an opening in the common duct. As infectious cholecystitis is always associated, the gall-bladder must be opened and drained as well. When operation is undertaken for the relief of suppurative cholangitis and cholecystitis with liver abscess, there is apt to be some leakage from the extensive drainage, and an opening in the right loin immediately below the right lobe of the liver is advisable.

Pus collections about the gall-bladder are almost invariably due to ulceration and perforation of its walls and require careful evacuation of the abscess and drainage of the gall-bladder.

(6) Infective and suppurative cholangitis. Hepatic drainage offers some hope in cases of a severely infected biliary tract with muddy, purulent bile and severe septic symptoms. The hepatic ducts must be drained until the bile becomes clear and normal in appearance.

(7) Acute phlegmonous cholecystitis and gangrene of the gall-bladder require in the former condition the gall-bladder to be opened, surrounded with gauze and drained, while in gangrene the gall-bladder should be removed. The walls are too friable, as a rule, to permit of suturing to the aponeurosis.

(8) Chronic catarrh of the gall-bladder and bile-ducts is frequently associated with stones in the gall-bladder with persistent infection by growing micro-organisms. Cholecystostomy and drainage of the gall-bladder induce rest, and in cases which have persisted for some time, and which do not yield to medical treatment, operation must be considered. The effect of "stringy" mucus is frequently very similar to that of small calculi.

For the sequelæ of cholelithiasis and, particularly, adhesions. The presence of adhesions hampering the movements of the alimentary tract renders the life of the patient miserable with vague pains and various gastro-intestinal disturbances. The adhesions should be divided between ligatures and all raw surfaces covered with Cargile; gauze drainage should be avoided as much as possible and free peristalsis encouraged after operation.

(10) Malignant disease, if found early in the progress of the disease and limited to the gall-bladder, may be removed by cholecystectomy and, even when the liver adjacent to the gall-bladder is infiltrated, the whole disease can sometimes be removed by partial hepatectomy. But, as a rule, carcinoma can rarely be diagnosed until after extensive infiltration of the lymphatics has taken place, in which case operation would only hasten death. Obstructive jaundice from a tumor mass sometimes requires relief by establishing a fistula between the gall-bladder and intestine. This is known as cholecystenterostomy and should be confined to those cases of obstruction of the common duct due to stricture or a malignant growth not otherwise possible to remove, and in some cases of external gall-bladder fistula. This operation was formerly performed by the speaker in chronic pancreatitis, but has latterly been abandoned for cholecystostomy with drainage.

There are several other operations which are sometimes performed; one of which, cholelithotrity, or crushing the stone *in situ* with the fingers or between padded forceps, is ineffective as a curative procedure and may do serious injury to the duct wall.

Choledochoduodenostomy, or anastomosing the common duct to the duodenum, is an operation that I have fortunately been required but once to perform.

Postoperative vomiting may occur and be very difficult to check. Lavage of the stomach and the administration of all nourishment by the rectum are the best agents for its control.

Should capillary oozing follow operations on markedly jaundiced patients, all treatment usually fails, the patient becomes exsanguinated, and death results. Calcium chloride may be administered by the rectum, 30 to 60 grains every four hours, with full doses of opium.

With the exception of bleeding and vomiting, gall-bladder patients recover uneventfully, and the closure of the fistula is the only source of worry to the patient. With a clear common duct they close in a few weeks. Mucous fistula sometimes persists and indicates an obstruction to the patency of the cystic or common duct.

In conclusion, let me say that the only sure way of learning the pathology and diagnosis of gall-stone disease is by the accurate observation of ante mortem or living pathology.

The internist, in acquiring his knowledge of gall-stone disease, is greatly handicapped in that he is dependent upon what he learns at the bedside and in the post mortem room. The abdominal surgeon, on the other hand, studies the intricacies of the pathological rôle played by gall-stones and infectious diseases of the biliary tracts by the inspection and palpation of these interesting lesions in the living belly cavity.

You should, therefore, note with great attention to detail the previous history and symptoms presented by a gall-stone sufferer and at the operation make accurate deductions of the relation between the symptoms observed and the lesions found. A student can have no better foundation to make his medical career successful than a minute knowledge of surgical pathology.

Mistakes will occur, but it must be admitted that much is learned in error, and the greater our experience, the fewer mistakes will be made. Kehr has put it well when he states that "he who would learn the special diagnosis of gall-stone disease must accurately know its pathology." This author says that the above is as true as the proverb: "Whoever wishes to learn to swim must go into the water."

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The Rapid Diagnosis of Rabies.—Hydrophobia happens to present certain features which are of unusual interest and importance. Aside from the futile efforts to discover the causative agent, the pathology of the disease has been investigated by a number of observers with no better success. No appreciable lesions which could be considered at all specific have until late been brought to light, and the only pathological alterations found are confined to the nervous system. This is not at all surprising in view of the fact that hydrophobia is entirely a nervous affection, the rabic virus or toxin possessing a special affinity for the nervous tissue. In this respect it closely resembles tetanus, and it is quite possible that also in rabies the causative agent, whatever it is, invades the tissues locally and produces a powerful toxin which affects the nerve centers.

However, the discovery of a specific lesion is more than a merely scientific problem. On it depends the diagnosis of this disease and consequently the more rapid and satisfactory treatment. It is evident that the usual method of diagnosis of rabies by means of animal inoculations is entirely too slow a process to be depended on for practical purposes. As a rule, physicians do not wait with the Pasteur treatment until the diagnosis of rabies in the suspected dog is confirmed by animal inoculations, and the latter possess only a scientific value. This urgent necessity for a rapid diagnosis spurred various investigators to the effort of discovering specific lesions in the nervous system, where they would naturally be expected to be present. Preceded by Benedict, Kolesnikoff and others, Babes described an accumulation of leukocytes around nerve cells which he called the "rabic tubercle" and which he considered pathognomonic of the disease. This claim, however, while confirmed by a number of observers, was contradicted by others and even Babes himself has of late retracted his original views. The consensus of opinion is that Babes's "rabic tubercle" is secondary and inconstant in its appearance. Lately, van Gehuchten and Nelis described certain pathological alterations in the cells and capsule of the spinal ganglia which they consider specific. These changes consist principally in disintegration of the nerve cells, chromatolysis and proliferation of the endothelial lining of the capsule. The observations of these authors were fully confirmed by Hebrant, Nocard, Cuille and Vallee, Bailey and especially by Ravenel and McCarthy. The latter observers have made a thorough study of these lesions, and so confident are they of their specific nature that they depend almost entirely on their presence for diagnostic purposes. Their position, however, is somewhat weakened by the fact that the same or closely similar lesions were discovered in other affections by Crocq, de Buck and de Moor, and Spiller. Furthermore, the diagnostic value of the lesions is also impaired by the fact that they may be, and usually are, absent in the earlier stages of the disease. Krizshanovsky (*Archiv Biologitcheskich Nauk*, Vol. IX, No. 4, 1902) investigated the cardiac ganglia of rabbits, dogs and men (2), dead of natural or experimental rabies. In no instance did he find the "rabic tubercle" of Babes, but the changes described by van Gehuchten and Neli he observed in all cases, the intensity of the pathological changes being in direct proportion to the chronicity of the disease. Proliferation of capsular endothelium and the invasion of the latter into the spaces formerly occupied by the nerve cells he observed only in chronic cases. He concludes, however, that these lesions are not specific.

While there is still considerable uncertainty as to the nature of these lesions and their diagnostic value, the conclusion seems to be fully justifiable that, when other canine affections can be excluded by the aid of the history and a careful *post mortem* examination, the presence of the ganglionic changes is fairly certain evidence of the existence of rabies.

A New Diphtheria Antitoxin.—As is well known, there are two forms of immunity, one antitoxic and the other antibacterial. In the antitoxic immunity the toxins generated by the bacteria are neutralized, while in antibacterial immunity the bacterial cells themselves are destroyed. In the case of diphtheria, artificial immunity is purely antitoxic, *i. e.*, the diphtheria toxins are neutralized by the antitoxin, while the bacilli themselves suffer no ill effects from the administration of the serum and are capable of developing in the throat of the patient for days and weeks after recovery. Wassermann (*Deutsche medicinische Wochenschrift*, No. 44, 1902) conceived the idea that, if animals were actively immunized by means of the diphtheria bacilli, an antibacterial serum could be produced. Experiments along this line finally led to the elaboration of a method by means of which animals can be actively immunized without endangering their lives. This is accomplished by means of dried and crushed diphtheria bacilli to which a certain amount of diphtheria antitoxin is added. The serum obtained from animals thus immunized is bacteriolytic to diphtheria bacilli, causing agglutination and sedimentation of the latter. Such serum, the author believes, may prove valuable in the treatment of diphtheria, since by its means we may bring about the destruction of the diphtheria bacilli after the neutralization of their toxins has been accomplished by the antitoxin.

Fascinating as this hope is, we cannot share it in view of our knowledge of the nature of antibacterial immunity. It has been established that in this form of immunity two factors are essential, namely, an immune-body, which is formed as the direct result of immunization, and alexin, which is normally present in the blood of every animal. The immune-body fixes the bacteria, which are then destroyed by the alexin. The relation between the immune-body, alexin and the bacteria is definite and never varying, and, while the laws governing the union are still hidden from our mental vision, we know that the combination takes place in strict proportions and in a definite order. We have also learned that, although certain constituents of the animal tissues of different animals, as albumins for instance, are identical as far as physical or chemical tests go, they, nevertheless, differ in their molecular composition, as may be ascertained by means of biological tests. Reasoning from analogy and actual observation, we are justified in concluding that the alexins in the serum of different animals are different in their composition, and that in that event the immune-body of one animal may not enter into partnership with the alexin of an animal of a different species. And this is precisely the reason why the various antibacterial serums, such as antistreptococcic, antipneumococcic and other serums, have generally proved a failure in human practice. Wassermann's antidiphtheria serum, therefore, cannot be expected to bring about in man the results which have been obtained in experimental animals, and the only real value of the serum that we can perceive is that it can be used as means of differentiating true from pseudodiphtheria bacilli.

Naftalan as a Dermatological Remedy.—In a certain region in Little Caucasia, "Naftalan" (from the Tartar "Neitlan," meaning a region where coal-oil is obtained) the natives have used from time immemorial the coal-oil, with which that region abounds, for therapeutic purposes. The coal-oil has been held as a specific for rheumatism, burns, and diverse affections of the skin in man and beast, and hundreds of Persians, Tartars, Russians and others flock yearly to Naftalan to bathe in the healing fluid. Lately, a German engineer, Eger, bought the place and has been producing, by a process of distillation of the oil, a substance which he named "naftalan." This is a dark-green, thick, semifluid mass of neutral reaction and with a slight odor of kerosene. It does not mix with water or glycerine, but is miscible with oils and fats and is soluble in ether, chloroform, and benzin. The drug was first introduced to the profession by a Russian physician, Dr. Rosenbaum, in 1896, and has since been extensively tried by a number of therapeutists and dermatologists in Germany and, especially, in Russia. Rohleder used the drug in 108 cases of acute and chronic rheumatism without the slightest effect in the former and with but little benefit in the latter. On the other hand, in diseases of the skin, especially eczema, the results obtained were exceptionally good. Favorable results were also obtained in psoriasis, pruritus, burns, and frost-bites. Gruenfeld considers the remedy a specific in eczema, and his view is shared by Eberson, Klug, Friedberg and a number of others. In a paper contributed to the *Praktitchesky Vratch* (Vol. I, No. 31, 1902) Averbach presents the results obtained in the treatment of acute and subacute eczema with naftalan, having employed it in 180 cases. The best results were obtained in cases of moist eczema, or eczema madidans, and also in drug-eruptions. In these cases a cure was obtained irrespective of the location or the chronicity of the affection. Judging from these results, we might consider naftalan as a specific for the treatment of what is one of the most obstinate and annoying affections of the skin. We presume, however, that the local applications of naftalan should not displace the internal medication and other measures, as eczema is a constitutional rather than a local disease, and its causes are usually more than skin-deep.

Colloidal Silver in the Treatment of the Infectious Diseases.—In 1897 Benno Credé introduced colloidal silver (collargol), a preparation which is soluble in 25 parts of water. He employed the drug as an ointment (15%), called *unguentum Credé*, and in an aqueous solution (1-100 or 200) for intravenous injection, giving from 20 to 30 mg. at a time. Experiments upon animals show that the silver is absorbed and eliminated normally, and that marked and rapid leukocytosis follows the injections. The drug appears to exert only a slight bactericidal action, yet has been very effective in veterinary medicine. Netter (*Bulletins et Mémoires de la Société Médicale des Hôpitaux de Paris*, December 18, 1902) recently praised the drug before the Société Médicale des Hôpitaux de Paris, reporting 13 cases of different infectious diseases successfully treated with collargol. In 3 cases of severe typhoid fever, 2 of septic endocarditis and of grave diphtheria, and in one each of acute pericarditis, pneumonia with pleural effusion, purulent epidemic cerebrospinal meningitis, severe scarlet fever, acute phthisis and pyemia, this method of treatment was followed by rapid amelioration and eventual recovery. Streptococci, staphylococci, meningococci and pneumococci were found in these cases, on bacteriological examination. The effects of collargol were decrease in the temperature and improvement in the general condition in 24 hours. Local inflammatory conditions cleared up very quickly. Netter enthusiastically advised it in all infectious diseases. Renon and Louste (*Ibid*, December 25, 1902) reported a case of typhoid fever in which rapid disappearance of symptoms followed the use of *unguentum Credé*. Moutard-Martin and Thaon (*Ibid*, January 2, 1903), who doubted the value of collargol, found its action excellent in 2 cases of pneumonia, defervescence occurring rapidly after intravenous injections of colloidal silver. Netter reports another successful case of infectious endocarditis in which the patient recovered upon this treatment. In America but few physicians have attempted to employ *unguentum Credé* locally, except in some cases of tubercular meningitis in which its action was not marked, and still fewer, if any at all, have given collargol in intravenous injections. At least, no cases have as yet been published. It is to be hoped, however, that clinical experience here will soon prove whether this remedy is really as valuable as our French colleagues assert.

Tuberculosis—the Flogging Schoolmaster.—The February number of the *Practitioner* contains the address on Tuberculosis delivered by Professor T. Clifford Allbutt, at Glasgow, on November 6, 1902. The subject is a most familiar one; scarcely an issue of any medical paper appears without a well-directed thrust at what Dr. Allbutt terms the "pestilent fungus." The seeds of all this writing are at last beginning to bear good fruit, and our tuberculosis problem may now be looked upon as having gained a distinct start toward its solution. City and state governments have been aroused to action, and institutions are rapidly multiplying to combat the great white scourge. In addition to this, men of wealth with millions at their command have entered the arena, and the battle of the next generation will leave more to be said on the part of those who have met the pestilent fungus and have won the fight.

The general content of the average paper dealing with the prevention of this disease is thoroughly familiar to medical men, but Dr. Allbutt's handling of his subject has presented the problem from some different points of view. He recognizes in tuberculosis the flogging schoolmaster. Tuberculosis has gone on counting its myriad victims: The man who has been holding on to what he calls "common sense" and the belief that the life his father lived was good enough for him, and that the situation of his home, despite perhaps its bad water-supply and unsanitary location and surface drainage, was as well adapted as ever to his needs, begins to wince when tuberculosis and other infections decimate his own family. Tuberculosis, Allbutt goes on to say, is beating into the farmer, the milkman, the butcher, and into every mother and every nurse, that tubercle is but one of a host of invisible foes, preying upon us and upon those dependent upon us. The oft repeated warning of medical men begins to take hold. Legislators pay heed to the public clamor, and state funds come to the rescue. There may be something like panic in the air. The public begins to look for help. The flogging schoolmaster flogs on, says Allbutt, till the toughest backs begin to smart, and the victims begin to recant and to confess that useless studies are full of utility, that pedantic scrupulousness about the infinitely little is statesmanlike appreciation of the infinitely large. We have stirred up a hornet's nest, but we have done something to remove the sting. We have proven that tuberculosis is an infection, but we have shown the means by which it may be avoided. There is much that is of interest in Dr. Allbutt's paper. As a literary morsel it is delicious, as medical gospel it is not to be gainsaid.

The Question of Lord Byron's Sanity.—The great edition of Lord Byron's works, including letters and journals, recently published by John Murray in London, throws a curious light on one phase of the sensational separation of the poet from his wife. In some of her letters, written about that time, Lady Byron distinctly hints at insanity in Lord Byron, and she even makes clear the fact that she had set inquiries on foot among his attendants and medical advisers as to his mental soundness. She finally abandoned the idea that he was insane, but seems to have done so with reluctance. She evidently felt that the demonstration of insanity in her husband would be a justification for her leaving him; or, perhaps (to be more exact), she wished to make it appear that his conduct toward her had been so outrageous that it naturally suggested insanity; and that, this excuse of mental disease being found not to be allowable, she had all the more reason to leave a man whose unnatural conduct was not even to be extenuated on the score of madness.

In none of the letters to which we refer does Lady Byron succeed in creating even a fair presumption of the insanity of the poet. There are simply dark hints and ambiguous expressions, and these can be explained as the natural outpourings of a woman who wrote under the stress of emotion. Lady Byron evidently was deeply outraged in some of her most sacred feelings; what the real cause was, the world will probably never know, but the point which particularly concerns us here is her blind feeling out for some ground upon which to impeach Lord Byron's mental soundness. The attempt is now seen, from the modern scientific standpoint, to have been entirely futile, and she herself was forced so to acknowledge it.

Although the letters throw comparatively little light upon Lord Byron's personal frailties toward his wife, they create the impression that the lady had, or thought she had, some grievous wrongs to endure from him. Of the justness of this complaint we are no judge; but the attempt to drag insanity into this domestic tragedy, is now seen to have been in accord with an almost universal impulse of human nature. The plea of insanity is no modern invention; the cry of something like "degeneration" was raised even to explain, if not to excuse, the scandals of Byron's life. The explanation probably lies in the fact that very few persons have clear ideas of what insanity really is, and think the term should include all the corruptions and deviltries to which flesh is heir—an opinion which Lady Byron evidently held long before the time of Lombroso.

A Worthy Record.—The *Boston Medical and Surgical Journal* celebrated its seventy-fifth year of continuous existence as a weekly publication on February 19. During most of this long period it has been owned and conducted by medical men and in the interests of the medical profession. It is probably exceeded by only one other medical journal, the *London Lancet,* in the length of this happy and honorable record. The Boston periodical was the product of a combination of two other journals in 1828; so its age is even greater than appears. Some of the best names in Boston have been associated with it, and it represents the interests and reflects the culture of the medical profession in all that part of New England. It sounds somewhat trite to say that we congratulate it—but we do, nevertheless. We congratulate it not only on its length of days but on its faithful representation of the best interests of scientific medicine and of the dignity of the medical profession.

Anatomy According to the Newspapers.—The newspapers of Philadelphia always show great enterprise in breaking into the clinics and medical societies in order to secure interesting and sensational news items. Of course, this does not meet with the approval of the doctors, very few of whom like to see their names in print. The newspapers might be forgiven, however, if they would only not get so badly mixed in their anatomy. Last week an enterprising daily in this city, in describing a surgical operation, spoke of the "femoral artery, which is a continuation of the jugular vein." This is a new exhibition of the license of the press.

Current Comment.

WAS MOHAMMED AN EPILEPTIC?

Dr. Med. M. L. Moharrem Bey reopens this discussion, and from a purely medical standpoint reviews the biographical literature and traditions concerning the family history, the early life, and especially the first revelation, and following this experience the partially unconscious states into which the prophet so frequently lapsed when receiving other revelations; and concludes that there is no basis for the assumption that Mohammed was an epileptic. He calls attention to the character of the so-called attacks when he would lie down upon the floor and would be covered with a garment and have a pillow placed under his head by those near him, and distinguishes them from the genuine epileptic attacks. These attacks were not followed by stupor, but the prophet would arouse himself quickly and begin at once to relate his divine revelation. Furthermore, the character of his intelligence, which was maintained until his death at sixty-three of an acute febrile disease, rules out the possibility of his having suffered in any degree from epileptic dementia.

—*Journal of Nervous and Mental Disease.*

Correspondence.

THE DUCTLESS GLANDS, ETC. A CORRECTION.

By C. E. de M. SAJOUS, M. D., of Philadelphia.

To the Editor of the **Philadelphia Medical Journal:**

Through the omission of a line in the manuscript of my article on "The Ductless Glands, etc.," published in your issue of March 7, I inadvertently credited (page 427) Prof. Gautier of Paris, with the discovery that trypsin was the agency which destroyed bacteria, their toxins and other pathogenic elements in the bloodstream. Instead of reading, "The action of trypsin on albuminoids is well illustrated by the following quotation from a work by a master in physiological chemistry, etc.", the passage referred to should have read: "The action of trypsin on albuminoids is well illustrated by a quotation from *our first volume which includes a list of toxic albuminoids as given in* a work by a master in physiological chemistry, Prof. Gautier, etc." That the bactericidal and antitoxic function thus credited to trypsin was suggested by myself is thus made clear, although Metchnikoff had previously ascertained that a trypsin was the digestive (and, therefore, bactericidal) ferment of the cystase of phagocytic leukocytes.

I would hardly again avail myself of your valuable space, were the question involved not one of importance, in that it tends greatly to simplify the general problem of immunity. Thus, while Metchnikoff found that trypsin destroyed bacteria in the phagocytes, we were led to conclude that the bactericidal and antitoxic constituent of the blood was trypsin (besides the adrenoxin and fibrinogen which supply it with heat energy), and, moreover, that the main active constituent of antitoxin was likewise trypsin. Again, our researches suggested that the liquid portion of milk varied but little from the bloodplasma and that the nursling, therefore, received from its mother, to protect it against disease (while the adrenal system was undergoing development) the trypsin, adrenoxin and fibrinogen of its mother's blood.

These conclusions seem to me to have recently received considerable support in the **Philadelphia Medical Journal.** Thus in a single number, that of February 7, you refer, in an editorial, to the fact that Prof. Neumann Wender had found *trypsin* and substances in milk which "are capable of oxidizing or deoxidizing action," while in an abstract you review Moro's analyses of milk and state that this chemist had found milk to contain, besides other constituents, an "oxydative ferment," a "fibrin ferment" and "trypsin."

On page 429, "immunization medication" should read "immuniz*ing* medication."

Reviews.

Clinical Lectures on Neurasthenia. By Thomas D. Savill, M. D., Physician to the West-End Hospital for Diseases of the Nervous System, etc., etc. Second Edition. New York. William Wood and Company. 1902.

This work is an evidence of the increasing importance which is being attached to that rather obscure complexus of symptoms known as "neurasthenia." It is, in effect, a plea for the recognition of this condition as a distinct disease. In his preface the author disclaims any pretension to having written a complete systematic treatise on this disease, and in this statement we agree with him. The book is a rather discursive commentary on the subject, illustrated with a good many clinical observations, but it is lacking in as full and critical a presentation of the subject as could be desired. Dr. Savill states, however, that the series of lectures which forms the text of the work, is intended merely to assist the student and practitioner in the diagnosis and treatment of the malady, and to attract more professional attention to the subject. It is well adapted to this purpose in many particulars, but it has some faults which should not go without criticism.

Our principal objection to Dr. Savill's book is that it shows a weakness that seems to be inherent in the writings of most British authors on the subject of the so-called neuroses, especially hysteria. Dr. Savill does not sufficiently differentiate hysteria, and some of his statements concerning that disease are decidedly misleading. Thus in the table on pages 58 and 59, in which the differential points between neurasthenia, hysteria and hypochondriasis are given, it is stated that hysteria occurs *almost entirely in the female sex.* This statement is absolutely out of accord with almost universal experience. In fact, so many of the worst and most typical cases of hysteria are observed in boys and men that such a statement goes far in our judgment to invalidate the author's standard of comparison. It affords a rather curious point of view of his mental attitude toward the functional neuroses.

We think this error indicates the main weakness in Dr. Savill's book. We desire to accord him full justice for having written a very readable and not uninstructive work, but we think that students and general practitioners may obtain some erroneous views of the subject from the fact that the author himself has rather confused ideas. [J.H.L.]

News and Notes.

AMERICAN

PHILADELPHIA AND PENNSYLVANIA.

Associated Health Authorities and Sanitarians of Pennsylvania.—The tenth annual meeting will be held at Harrisburg, March 19-20. All boards of health throughout Pennsylvania have been requested to send a delegate. The annual address will be delivered by Dr. L. F. Flick, of Philadelphia, upon the Duty of Health Boards in the Prevention of Tuberculosis. The relation of boards of health to municipal councils, the working of the law authorizing boards of school directors to enforce sanitary laws of the State, the prevailing epidemic of smallpox and the responsibility of boards of health for the prevention of consumption will be among the subjects for consideration.

For the Suppression of Smallpox.—On March 3, the Pennsylvania State Senate finally passed the bill which had already been passed by the House, appropriating $50,000 to the State Board of Health, for immediate use in the suppression of smallpox. It has, however, been returned to the House for amendment.

To Include Antitoxin in the Pharmacopeia.—At a meeting held in Philadelphia, March 7, attended by a number of prominent bacteriologists and physicians, including Dr. Theobald Smith, of Boston; Dr. E. M. Houghton, of Detroit; Dr. W. H. Park, of New York; Dr. H. D. Pease, of Albany; Dr. M. J. Rosenau, U. S. P. H. and M.-H. S., of Washington; Dr. T. C. Craig, U. S. N., and Dr. J. J. Kinyoun, of Glenolden, the advisibility of inserting diphtheria antitoxin in the pharmacopeia was discussed. The special committee is unable to recommend that antitoxin be included in the pharmacopeia until some standard method of testing antitoxin be suggested. The committee will meet again May 12 next, and will then prepare its report. It is believed that a bureau should be established in Washington where all antitoxin samples should be tested before being used.

York Hospital.—Mr. A. B. Farquhar has given $1500 to establish a children's and maternity ward in memory of his friend, the late Mr. W. L. Small. Mr. M. D. Martin has also given $2500, to establish a new operating room. Both of these will be located in the new hospital annex.

The Health of Philadelphia.—The number of cases of typhoid fever reported during the week ending March 7 was 254, with 21 deaths, one case and one death less than during the preceding week. While 24 cases occurred in the 24th. ward, no cases were reported in the 9th., 17th., 35th. and 41st. wards. There was a great decrease in the number of cases of smallpox reported, only 17, as compared with 37 during the previous week. Between March 7 and 10, 20 new cases were reported. The number of cases of diphtheria, 50, was the same as in the week before. There was a slight increase in the number of cases of fever, 90 cases with 6 deaths being reported. As a case of diphtheria was discovered in a typhoid fever patient at the Episcopal Hospital, that institution is under quarantine. A similar condition is reported at the Charity Hospital at Norristown, diphtheria having developed in a pneumonia patient.

An Anniversary.—Dr. W. B. Atkinson, for many years professor of pediatrics at Jefferson Medical College, celebrated the completion of 50 years as a physician, March 10. He received his degree from Jefferson Medical College on March 10, 1853. He has been a prominent member of the County Medical Society. He is now 71 years old.

Society Meetings Next Week.—The following sections of the College of Physicians meet next week at the College of Physicians, Philadelphia, at 8.15 p. m.: Tuesday evening, March 17, Section on Ophthalmology; Wednesday evening, March 18, Section on Otology, and Thursday evening, March 19, Section on Gynecology.

Samuel D. Gross Prize.—This prize, consisting of $1200, will be awarded by the Philadelphia Academy of Surgery, January 1, 1905, for the best original essay, not exceeding 150 printed pages, octavo, in length, illustrative of some subject in surgical pathology or surgical practice, founded upon original investigations, the candidates for the prize to be American citizens. It is expressly stipulated that the competitor who receives the prize, shall publish his essay in book form, and that he shall deposit one copy of the work in the Samuel D. Gross Library of the Philadelphia Academy of Surgery, and that, on the title page, it shall be stated that to the essay was awarded the Samuel D. Gross Prize of the Philadelphia Academy of Surgery. The essays, which must be written by a single author, in the English language, should be sent to the "Trustees of the Samuel D. Gross Prize of the Philadelphia Academy of Surgery, care of the College of Physicians, 219 S. 13th St., Philadelphia," on or before January 1, 1905. Each essay must be distinguished by a motto, and accompanied by a sealed envelope bearing the same motto, and containing the name and address of the writer. No envelope will be opened except that which accompanies the successful essay. The Committee will return the unsuccessful essays if reclaimed by their respective writers, or their agents, within one year. The Committee reserves the right to make no award if the essays submitted are not considered worthy of the prize. The trustees consist of Drs. John B. Roberts, William L. Rodman and William J. Taylor.

Philadelphia Society of Tropical Medicine.—This society was organized March 9, in Philadelphia, its object being the preparation of students in medicine and physicians for services in the tropical dependencies of the United States. The society is the first of the kind to be organized in this country. The officers elected at the first meeting were: President, Dr. T. H. Fenton; vice-presidents, Drs. J. C. Wilson and J. M. Anders; secretary, Dr. Joseph McFarland; treasurer, Dr. E. D. Gleason, and the executive committee consists of Drs. J. V. Shoemaker, chairman; T. H. Fenton, Judson Daland, R. G. Curtin, Orville Horwitz and Hobart A. Hare. The society already has a large membership.

NEW YORK.

New York State Medical Examining Board.—Out of 103 physicians who took the examination for a license to practise medicine in the State of New York, in January, 1903, 75 were successful and 28 unsuccessful. Of this number 8 had already passed the primary medical branches. There was but one honor licentiate. Fifty-one candidates appeared for certificates of proficiency in the primary medical branches, anatomy, physiology and hygiene, and chemistry, 47 of whom were successful.

A Bill to Prevent Typhoid Fever.—Mr. Stewart, from Ithaca, has introduced a bill before the State Senate to amend the Public Health law relating to the discharge of sewage and other refuse or waste matter into the streams of New York State, hoping in this way to eliminate typhoid fever. This bill has the support of both the State and County Medical Societies. The bill provides that permission will hereafter be obtained from the State Commissioner of Health for any person, shop, factory or industrial establishment to discharge any sewage, garbage, offal, decomposable or putrescible matter of any kind into the waters of the State after the same shall have been forbidden by any local board of health or other public authority. The act will not forbid the discharge of sewage from any public sewer system owned by the municipality, or the discharge of waste matter from any industrial establishment in operation before the passage of the bill. No increase of this discharge, however, is permitted, nor any modification or reconstruction of a sewer system subsequent to the passage of this act without the stated official permit of the State Commissioner of Health. These permits are serviceable on due notice, within 2 years for sewer systems and one year for industrial establishments, and municipalities and owners of industrial establishments must report to the State Board and to the municipal authorities such facts and information about the discharge of waste and sewage as the State Superintendent may require, within 60 days of the passage of this act. Each Board of Health must preserve in its office a record of all permits of exemption from the law, and must promptly ascertain every violation of a noncompliance with the provisions of the law. If the violator, on being served with notice of his act and the stipulated time within which this noncompliance must cease, does not conform to the law, he is to be reported to the State Commissioner, who shall certify to the fact, and the local Board may then bring action in a court of record for the recovery of the penalties incurred and for an injunction against the continuation of the noncompliance. The penalty for discharge of sewage from any public sewer system without a permit is $500, and $50 a day while the offence is maintained. The penalty for discharging into any of the waters of the State any other matter prohibited by this act, besides that specified, shall by $25, and $5 a day for each day the offence is continued.

Typhoid Fever in Ithaca.—There has been a decided decrease in the number of cases reported during the past week, and there have been but few deaths. The general situation is very much improved, the chief danger at present being secondary infection. The city of Ithaca has now complete control of the water works. The epidemic at Seneca greatly resembles that in Ithaca, the disease having been caused and spread in much the same way.

NEW ENGLAND.

Boston Medical and Surgical Journal.—With the number appearing February 19, last, the *Boston Medical and Surgical Journal* celebrated the completion of 75 years that it had appeared as a weekly journal, as the first number was published February 19, 1828. During these 75 years the journal has been issued weekly without intermission. When it appeared in 1828, it was the product of a combination between the *New England Medical Journal*, which had appeared quarterly since 1812, and the *Boston Medical Intelligencer*, started as a weekly in 1823. The *Boston Medical Journal* was at first published by the former managers of the *New England Journal*, Drs. J. C. Warren, Walter Channing and John Ware, and was for many years the only weekly journal in this country. The *Lancet* was started as a weekly journal, October 5, 1822, in London, and *The American Journal of the Medical Sciences* appeared as a quarterly in November, 1827, in Philadelphia, a few months earlier than this journal in its present form. Prior to the publication of the *Boston Medical and Surgical Journal* 31 medical journals had been started in the United States, 23 of which had suspended or been merged in other journals. The journal has been "conducted by a number of physicians," as was stated on the title page of its progenitor, the *New England Journal of Medicine and Surgery*, in 1812. In this anniversary number, the following sentences from the first editorial of February 19, 1828, are repeated: "Whether it will be continued in its present form will be determined by experiment. As it is devoted to no party or institution, the editors (and Board of Management) offer it to the medical profession as a vehicle for such publications as they may wish to make; and they hope by it to bring out the talent of this part of the country."

Dartmouth Medical School, Hanover, N. H.—Graduating exercises were held February 24. The graduating class consisted of 13 members. An address was delivered by Dr. George Cook, of Concord, N. H.

Faulkner Hospital, Jamaica, Mass.—This new hospital, founded by Dr. and Mrs. George Faulkner, in memory of their daughter, was opened February 25. The buildings, 3 stories high and modern in every particular, are situated in the center of a 7-acre lot. The hospital contains 25 beds, 10 of them being in each ward, 6 of them free. The operating room is thoroughly up to date, as are the private rooms. Dr. Frank Balch has been appointed surgeon-in-chief, and Dr. Henry Johnson, chief physician. The hospital was opened for patients March 9 last.

Diphtheria in Gloucester, Mass.—The epidemic of diphtheria has rapidly been increasing, 35 cases having been reported, March 2. During February there were but 9 cases, while 60 cases were reported last September. The present outbreak seems more virulent than at any previous time, 2 deaths having occurred March 1.

Foot and Mouth Disease.—A case of this disease was found at the Union Market, Watertown, Mass., March 6. This is the first case discovered in Massachusetts since February 13 last. Dr. Salmon believes that the quarantine has not been enforced strictly enough. The disease cannot be stamped out without the most stringent measures being thoroughly enforced.

Bequests.—By the will of the late Mrs. M. H. Welles, $10,000 were left to the old People's Home of Hartford Hospital and to the Hartford Orphan Asylum, Hartford, Conn. Besides, the Hartford Hospital is to receive one half of the residuary estate, over $200,000.

WESTERN STATES.

Medical Society of the Missouri Valley.—The spring meeting of this association will be held at Council Bluffs, Iowa, March 19. The first day will be devoted to a symposium upon syphilis, the second day to a symposium upon typhoid fever. Many prominent physicians from Iowa, Missouri, Kansas, North and South Dakota and Nebraska will be present.

Scarlet Fever at Lake Forest, Ill.—On account of the development of a case of scarlet fever in the family of one of the professors in the boys' school at Lake Forest, near Chicago, that institution has been closed for 2 weeks, the pupils, numbering over 100, having been sent home.

University of Chicago.—It is rumored that Dr. Friedrich Müller, formerly the assistant of Dr. Adolf Lorenz, of Vienna, who is now in New York, is expected next week to become professor of orthopedic surgery in the Medical School of the University of Chicago. During his few days in New York, Dr. Müller has been operating upon a number of poor children at Beth Israel Hospital on the East Side.

SOUTHERN STATES.

The Treatment of Infantile Diarrhea.—Dr. Simon Flexner, professor of pathology in the University of Pennsylvania, announced at Johns Hopkins University, March 3, that a serum was now being prepared for the treatment of both infantile diarrhea and dysentery, the germs of which, if not the same, seem almost identical. As soon as sufficient experimentation has been performed to show that the serum can be used upon infants, it is probable that it will be employed in the treatment of summer diarrhea. It is to be hoped, therefore, that the investigations, at present under way, may permit some method of scientific dosage, so that the new serum can be used for the treatment of dysentery and cholera infantum during the hot weather of the coming summer. Dr. Hurd, superintendent of Johns Hopkins Hospital, believes that the new antitoxin will be perfected inside of a year, and that its effect will be similar to that produced by diphtheria antitoxin. As Dr. Flexner is director of the Rockefeller Institute for Medical Research, in New York, it seems probable that the new serum, if perfected, will be thoroughly tested next summer in New York City.

Union Hospital, Elkton, Md.—The following officers have been elected by the directors of the Union Hospital Company of Cecil County, which intends to erect a hospital at Elkton: President, Mr. G. A. Blake; secretary, Dr. Howard Bratton, and treasurer, Mr. C. B. Finley. A committee, consisting of Drs. C. M. Ellis, Howard Bratton and J. S. Wirt, was appointed for bringing the project to the notice of the people of Cecil County.

Too Large for the Navy.—It has recently been stated that Dr. A. H. Simonton, of Alabama, formerly contract surgeon, U. S. A., with an excellent record, has been refused a similar appointment in the Navy, on account of his great size. Measurements show that he would have trouble in the interior of large ships, and that it would be impossible for him to get through the gangways of torpedo boats and other small vessels.

Cambridge Hospital, Cambridge, Md.—Plans have been completed for the erection of this new hospital, to cost $40,000. The State has appropriated $5000, Cambridge has given $5000, and Mr. J. E. Hurst has contributed $15,000. The hospital, which will have a basement and 3 stories, will be erected on a bluff in East Cambridge. It will be thoroughly equipped with all modern improvements, and will accommodate 35 patients. The only hospital at present in Cambridge consists of 2 houses which have been altered. While it has from 15 to 20 beds, this is not nearly enough, as they are all occupied almost all the time.

Typhoid Fever in Washington, D. C.—During the past year 1572 cases of typhoid fever have been reported in Washington, 214 of which terminated in death. On March 1 there were 95 cases under treatment. The largest number of cases under treatment on any one day last year was 294, on October 11, 1902.

Naval Hospital, Annapolis.—As the Surgeon-General of the U. S. Navy has recommended that a hospital be built at Annapolis, in connection with the Naval Academy, to be the largest and best equipped hospital in the Navy, it is stated that the Secretary of the Navy has appropriated $200,000 for the construction and equipment of this new Naval Hospital.

Consumption in Maryland.—At the meeting of the Maryland State Tuberculosis Commission, many statistics as to the prevalence of tuberculosis were reported. In October last the death-rate from consumption in Baltimore was nearly double that for the entire State of Maryland for white people, while the rate among negroes in the city was just double that in the State. The death-rate among single white men was also greater than among married men. In women the conditions are just the reverse, a greater number of married women dying from tuberculosis than single ones.

Delaware's Senator a Physician.—Dr. L. H. Ball, who has recently been elected U. S. Senator from Delaware, is a physician, having been graduated from the University of Pennsylvania Medical School in 1885. He is a native of Wilmington, Del., but practised at Frankland a number of years.

Death of Dr. Ohr.—Dr. Charles H. Ohr, who was born October, 19, 1811, was graduated from Maryland University Medical School in 1834, and practised medicine at Cumberland, Md., since 1847, died March 3, in his ninety-third year. Besides being known as the oldest past grand master of Masons in the United States, his article, published in the *American Journal of the Medical Sciences*, upon the cholera epidemic in Cumberland in 1853, gained him renown, as he lost only 113 out of over 600 cases. He was president of the Medical and Chirurgical Faculty of Maryland in 1872, consulting physician to the Cumberland Board of Health for 10 years, first president of the Allegheny County Medical Society, member of the American Medical Association, etc. He was Mayor of Cumberland from 1862 to 1865 and State Senator from 1864 to 1867.

MISCELLANY.

Bubonic Plague in Mexico.—The situation has decidedly improved, as there were only 37 cases under treatment in Mazatlan, March 8, 2 of these patients being seriously ill. There is now an average of less than one death daily. Many people, who fled from Mazatlan when the plague appeared, are now returning. A desperate effort is being made to stamp out the plague, which appeared last week in Villa Union, all houses in which patients have died having been burned. Some cases of bubonic plague have recently been discovered at Siqueros, near Villa Union. One case was reported at Ensenada, March 4, which had probably been imported from San Francisco.

Obituary.—Dr. Charles H. Ohr, at Cumberland, Md., March 3, aged 93 years.—Dr. Robert Rose Dorsey, at Los Angeles, Cal., February 18, aged 43 years.—Dr. James Mitchell, at Mount Zion, Ga., March 2, aged 85 years.—Dr. James H. Dungan, at La Salle, Ill., March 4, aged 30 years.—Dr. George W. Bishop, at Snow Hill, Md., March 6.

FOREIGN.

GREAT BRITAIN, ETC.

The Population of Ireland.—The latest statistics show a marked diminution in the death-rate and in the number of emigrants from Ireland during the past year. All other statistics, however, show the great decrease which has been continuing for years in the population of Ireland. In 1824 there were over 7 million inhabitants in Ireland, in 1845 over 8 million, while in 1901 the population was a little under 4 million and a half. In 1902 the population was decreased by 17,756, showing a diminution in 56 years of almost 4 million people. Among the other statistics noted during the past year were the excess of births over deaths, 21,857; the loss by emigration, 39,613; the number of illegitimate births, 2,593, only 2½% of the total for Great Britain. Out of a total of 79,119 deaths only 1263 were attributed to insanity.

Liverpool School of Tropical Medicine.—It has been announced that the Mexican Government, which has taken a deep interest in the Liverpool School of Tropical Medicine since its formation, proposes to grant an annual appropriation to the school.

University of Edinburgh.—Dr. D. J. Cunningham, professor of anatomy at Trinity College, Dublin, has been appointed professor of anatomy succeeding Sir William Turner. In 1876 he became senior demonstrator of anatomy under Sir William Turner, holding this position 6 years, until he left for Dublin. He holds honorary degrees from the Universities of Oxford, Dublin, Glasgow and St. Andrew's.

CONTINENTAL EUROPE.

Tuberculin and Creosote in the Treatment of Tuberculosis.—At a recent meeting of the Société de Thérapeutique, held in Paris, February 25, Drs. Bernheim and Quentin reported the results obtained in the treatment of tuberculosis from the administration of phosphate of creosote for 3 days, followed by tuberculin on the fourth day, subcutaneously, these injections being repeated in that manner, tuberculin every fourth day. Of the 27 cases treated, 17 improved rapidly, the others remaining stationary. They explained the good effect of tuberculin by the fact that no reaction follows because the agglutinating power of the blood has been increased by the creosote. Most of the cases treated were already in advanced stages of tuberculosis. They have gained from one quarter to one pound weekly under this treatment, and tubercle bacilli have disappeared in some cases.

Academy of Sciences, Paris.—Dr. Léon Labbé, senator from the Department of Orme, honorary surgeon of the Paris hospitals, commander of the Legion of Honor, was elected member of the Academy of Sciences at its last meeting. Dr. Labbé was born in 1832, was graduated in 1861 and has been surgeon to the Paris hospitals for 25 years.

The Unna Prize.—As this was not awarded in 1902, the sum of $150 is now offered for the best work on the coccus found in eczema with discharge, the diclimactericus albus flavens, (typus Traubel) to be studied in comparison with the pyogenic staphylococci. Essays, sealed, should be sent to Leopold Voss, Hohe Bleichen 34, Hamburg, Germany, before December, 1903.

Meat With Borax Barred in Germany.—The Home Secretary recently announced in the Reichstag that the German Government would strictly enforce the regulations against meat treated with borax, until borax should have been proven uninjurious by indisputable scientific authorities.

Women Medical Graduates at Vienna.—A Mrs. Lubinger, who received her medical degree at Zurich several years ago, received the same degree from the University of Vienna, December 20 last. As a Mrs. von Possauer was graduated several years ago, there are now 2 women who have Vienna medical degrees.

Teaching Medical History in Spain.—Dr. R. Ulecia stated recently (*Janus*, January 15) that lectures upon the history of medicine had been given in the Medical School of the University of Madrid for over 50 years, having begun in 1845. In 1850 Dr. Jaime Salva delivered the lectures, being followed in 1852 by Dr. Gabriel Usera. In 1875 he was followed by Dr. F. J. Santero, who was succeeded the next year by his father, Dr. Thomas Santero. In 1888 Dr. M. S. Martin lectured upon medical history, and, in 1892, Dr. I. Rodriguez was appointed lecturer upon medical history.

The Heaviest Man in Germany.—The heaviest man in Germany, probably in the whole world, is Hans Fromm, a hotel proprietor at Willenberg, Western Prussia, whose weight is 502 pounds.

University Notes.—**Breslau**: Dr. Krehl, of Tübingen, has declined the appointment of professor of internal medicine and director of the medical clinic in the place of the late Dr. Kast.—**Kazan**: Dr. Sergueiev has been appointed professor of pharmacology.—**Kiew**.—Dr. Wolkowitsch has been appointed professor of clinical surgery.—**Leipsic.**—Dr. P. Friedrich, professor of surgery, has been appointed to a similar position at the University of Griefswald, taking the place of Dr. Bier.—**Naples**: Dr. G. Boccardi has been appointed professor of microscopical anatomy.—**Odessa**: Dr. S. V. Levachev has been appointed professor of therapeutics.—**Parma**: Dr. Odoardo Ughi has been appointed professor of clinical medicine.—**Warsaw**: Dr. Tomachevsky has been appointed professor of dermatology and syphilography.

Obituary.—Dr. D. Gallozzi, professor of surgery at the University of Naples, died recently.—Dr. Loesch, formerly professor of medical diagnosis in the Medical School of Kiev, Russia, also died recently.—The death is also announced of Dr. Clemens Paster, an authority upon tropical medicine from his long residence in Sumatra, who died suddenly, from apaplexy, in Munich.

The Latest Literature.

BRITISH MEDICAL JOURNAL.

February 21, 1903.

1. The Erasmus Wilson Lectures on Adenoma and Adenocarcinoma of the Rectum. (Lecture I.) CHARLES B. BALL.
2. The Lettsomian Lectures on the Conditions which Modify the Characters of Inflammation of the Skin, and their Influence on Treatment. (Lecture I.) H. RADCLIFFE CROCKER.
3. The Bacterioscopical Diagnosis of Sewage Pollution of Shellfish. E. KLEIN.
4. A Note on Bossi's Dilator in Eclampsia. J. W. BALLANTYNE.
5. Is Rupture of the Aortic Valve an Accident under the Workmen's Compensation Act? THEODORE FISHER.
6. A Note on the Therapeutic Value of Adrenalin. J. GRAY DUNCANSON.
7. A Note on Some Further Use of Picric Acid. F. VICTOR MILWARD.
8. Manson's Trocar and Cannula for the Treatment of Liver Abscess. ALEXANDER TURNBULL.

1.—Ball says there is only one positive evidence of malignancy in a rectal tumor made up of adenomatous elements, and that is perforation of muscularis mucosæ and the development of the epithelial elements in the deeper structures of the intestinal tunica. The symptoms of simple **adenoma of the rectum,** when of small size and not involving the sphincteric zone, are of a trivial character; when, however, the pedicle becomes sufficiently long to allow the protrusion of the growth through the anus, it becomes congested, and ulceration and bleeding follow. Hemorrhage from the rectum in young children always raises the suspicion of adenoma. The discharge of glairy mucus is a common symptom and may cause a frequent desire to evacuate the bowel. Unusually large adenomata occasionally produce intestinal obstruction, retention of urine or obstruction to parturition. When situated some distance up the bowel, the continued peristaltic action evoked may give rise to intussusception or prolapse. The treatment consists in removal of pedunculated forms after ligature of the pedicle or in excision in the sessile variety. [F. T. S.]

2.—Crocker believes that **eczema** is an inflammatory process in which parasites, blood dyscrasiæ and neurotic elements may all play causal parts. Once started, however, the pus cocci may modify its character. In the **treatment of boils and carbuncles** the aim should be to destroy the pus cocci locally as early as possible; to this end early incision and disinfection of the cavity should be employed. **Pemphigus neonatorum** is usually a sign of unhygienic surroundings, but it is readily amenable to aseptic treatment unless neglected or due to puerperal fever in the mother. [J. M. S.]

3.—Klein shows that the **bacillus coli communis is not a natural inhabitant of oysters.** The nearer oysters and cockles are planted to sewage outfalls, the greater the percentage polluted with the bacillus coli communis, *vice versa*, the further away from sewage outfalls they are taken, the smaller is the number of these shell fish that are found to contain the bacillus coli communis within their shells. An examination of 8 oysters coming from a distinctly sewage-polluted bed showed the spores of bacillus enteritidis sporogenes in 4. The presence of the spores of bacillus enteritidis alone cannot be held, according to Klein, to be sufficient proof that the oysters or cockles have been subjected to recent sewage pollution. On the other hand, when the spores of this organism are found in company with the bacillus coli communis and with streptococci, these spores have very probably arrived in the locality recently and in direct association with sewage and excremental matters. [J. M. S.]

4.—Ballantyne states that the rapid dilatation of the cervix uteri with the Bossi four-bladed dilator and the early termination of the labor by forceps or naturally is the newest method of management of **eclampsia** which has been placed before the profession. He reports 3 cases of albuminuria in pregnancy, 2 of which went on to eclampsia, treated successfully by this method. [W. A. N. D.]

6.—Duncanson reports a case of bleeding from the tonsil, a case of hemophilia and a case of hemorrhage from the urethra which were controlled by the use of **adrenalin.** [J. M. S.]

7.—Milward believes that **picric acid** is a simple and effective remedy in the treatment of burns and that it promotes rapid healing. It is best used in a 1·95 solution in distilled water. It is also useful, according to Milward, in the treatment of perionychia, soft corns and intertrigo. The method of application is to place lint, soaked in the solution, over the affected part and to cover this with nonabsorbent wool or gutta-percha tissue. The dressing may be left on for from 12 to 48 hours. [J. M. S.]

8.—Turnbull reports 3 cases of **liver abscess** successfully treated by the Manson trocar and cannula. [F. T. S.]

LANCET.

February 21, 1903.

1. Lettsomian Lectures on the Conditions which Modify the Characters of Inflammation of the Skin, and their Influence on Treatment. (Lecture I.) H. RADCLIFFE CROCKER.
2. The Harveian Lectures on Fibroids of the Uterus and its Ligaments Considered from a Clinical and Surgical Standpoint. (Lecture III). ALBAN H. G. DORAN.
3. Some Thougts and Observations Regarding Appendicitis Especially when Appearing in its Acutest Forms. J. A. MACDOUGALL.
4. The History of the Discovery of Trypanosomes in Man. RUBERT W. BOYCE, RONALD ROSS and CHARLES S. SHERRINGTON.
5. On the Permanent Cure of the Feeble-minded. ELLEN F. PINSENT.
6. Aneurysm of the Ascending Arch of the Aorta in a Small Boy; a Post Mortem Surprise. ALFRED C. JORDAN.
7. A Case of Hemophilia Illustrating the Value of Calcium Chloride as a Local Styptic. T. WILSON PARRY.

1.—See abstract of *British Medical Journal* for February 21, 1903.

2.—In his third lecture on **fibroid tumors of the uterus,** Doran discusses the management of capsules. When a burrowing fibroid is shelled out of its capsule of broad ligament, the tissues usually shrink so that little or no trimming is needed. Vessels have always to be secured on the inner or parametric surface of a capsule. This is better than to permit the oozing to continue into the peritoneal cavity. Doran fails to see how the most careful closing of a big gap in the parametrium can guarantee the patient against distant infection. He is not in favor of the use of drainage unless that cannot be avoided. Fortunately for the patient and the operator, adhesions are remarkably rare with uterine fibroid disease, but when they do occur they are not especially associated with any particular variety of the tumor or with any other complication to which it is subject. Postoperative ileus after hysterectomy he believes is usually septic in origin. Hernia following the operation of hysterectomy cannot be avoided in every instance. Cancer of the cervix following the operation is very rare. [W. A. N. D.]

3.—In this article MacDougall presents his personal experience and observations regarding **appendicitis,** devoting particular attention to the acute forms of this disease. By reviewing his own and the experience of others in the British hospitals he shows that appendicitis, although not a new disease, is largely on the increase, both as regards frequency and severity. This statement is fortified by the records of a number of the large hospitals of Great Britain. The tendency to recurrence or relapse is much greater than formerly. In view of the facts just stated, MacDougall's attitude toward the treatment of appendicits has undergone considerable change during late years. In the acute grave cases of appendicitis he recommends immediate operation. He states that the acuter the initial symptoms, the greater is the gravity of the case. He says that the character of the pulse is of greater value than its rapidity, very light temperature in the beginning, with a rapid small pulse and notable local symptoms, demand quick operative interference. These cases require the most careful nursing and recording of symptoms during their early stages. The facial expression is of great diagnostic and prognostic value. Costal respiration, especially in males, is of considerable importance. In the acute forms of this disease the absence of a palpable tumor in the right iliac fossa should not be considered when the other symptoms are present. Given rigor, intense abdominal pain, vomiting, a quick, small pulse, a high temperature or one depressed, a hard contracted abdomen with a point of maximum tenderness within the right iliac sphere or one marked by the same local conditions with spreading tenderness, short costal respiration and a drawn face, safety lies in an immediate operation. The writer sounds a warning against being deceived by the so-called period of repose, a condition which often results from gangrene of the appendix. Even at this period, when the graver symptoms have modified, the local symptoms are usually sufficiently marked to prevent an error. A leukocytosis may be of some value except in the very acute cases. MacDougall presents the history of a number of cases illustrating his remarks, and discusses briefly the differential diagnosis of appendicitis. He refers to a condition which he calls peritonism, resulting frequently from delayed or suddenly arrested menstruation which produces a congestion of the whole pelvis and which has occasionally so closely simulated appendicitis as to cause the surgeon to operate. In this condition the swollen abdomen lacks the tenderness of the thoroughly inflamed one. A commencing basal pleurisy or pneumonia will also frequently simulate appendicitis. A careful examination of the chest is sufficient to put one straight. When opium must be given for pain in acute appendicitis, it should be given by suppository or as an injection of laudanum into the rectum. To open the bowels in this conditon an enema should be used and not a laxative. [J. H. G.]

4.—Boyce, Ross and Sherrington discuss **the history of the discovery of trypanosomes in man.** They point out that there are 5 possible claimants in the field, namely, Herir, Barron, Nepveu, Forde and Dutton; their respective claims are analyzed in this article. They think that the names of Dr. Forde and Dr. Dutton should be associated in the history of the discovery, and, whatever the claims of others may be, it was certainly Dr. Dutton who first established the existence of trypanosomes in human beings in a manner satisfactory to science, and it was also he who was the first to give adequate descriptions and illustrations of the new parasite and a comparison of the symptoms with those of other forms of trypanosomatosis in animals. [F. J. K.]

5.—Pinsent contributes an article **on the permanent care of the feeble-minded.** She points out the necessity of establishing institutions for the care of feeble-minded individuals in the form of industrial colonies or permanent custodial homes to which children who are unfit to face life on their own responsibility could be transferred. She mentions that it might be difficult to decide what degree of mental impairment renders people morally irresponsible for their actions, but, on the other hand, the practical side remains independent and is not nearly so hard a matter for decision, and, admitting that a small percentage of feeble-minded individuals would be kept in a colony who might have gone through life without any serious harm to themselves or to others, the good that would be derived by confining a large proportion of feeble-minded individuals would compensate for this error. [F. J. K.]

6.—Jordan reports **a case of aneurysm of the ascending arch of the aorta in a small boy**, 6½ years of age, who consulted the writer on September 8, 1902, complaining of headache, vomiting and discharge from the ears. The patient had fever, his bowels were constipated, his pulse was irregular, and the pupils were small, equal and reacted to light and accommodation. The heart and lungs appeared normal. The urine had a specific gravity of 1015, was acid and clear, and there was no albumin or sugar. Under treatment the patient apparently continued to improve, and on September 26 he was up, playing and laughing, when suddenly he turned pale and dropped over dead. Necropsy revealed an aneurysm of the ascending arch of the aorta which had ruptured, the blood having leaked between the coats of the aorta and then into the pericardium. The heart appeared normal. [F. J. K.]

7.—Parry reports **a case of hemophilia** occurring in a boy, 7 years and 4 months of age. The patient suffered from a very profuse hemorrhage from the jaw which was with difficulty controlled. The author claims that calcium chloride was responsible for the successful issue of this case. [F. J. K.]

MEDICAL NEWS.

March 7, 1903. (Vol. 82, No. 10.)

1. Periduodenal Abscess Secondary to Ulcer of the Duodenum. WILLIAM SEAMAN BAINBRIDGE.
2. Mosquito Extermination in New York City. GEORGE A. SOPER.
3. Some Practical Suggestions on Mosquito Extermination in New Jersey. HENRY CLAY WEEKS.
4. The Sanitary Aspect of the Mosquito Question. JOHN B. SMITH.
5. The Symptomatology of Tabes: an Analysis of 140 Cases of Locomotor Ataxia. JOSEPH COLLINS.

1.—Bainbridge in his article mentions the following diseases to be thought of in the diagnosis of this disease: Empyema, pleurisy with effusion, cancer of the pylorus or liver: pyopneumothorax, hydatid cyst, hepatic abscess, intestinal obstruction, disease of the gall-bladder or its ducts, and appendicitis. Of all the conditions which periduodenal abscess simulates, next to general peritonitis, appendicitis is the most frequent. Blood examination for leukocytosis may be of assistance when cancer or some other nonpurulent condition is to be excluded. When there is a history of the presence of ulcer and of sudden severe pain, marked increase of vomiting or collapse, operation is imperative. [T. M. T.]

2.—Soper gives the 3 mosquitoes that inhabit New York City: (1) **Culex pungens**, the mosquito which is apt to give trouble indoors at night. (2) **Anopheles maculipennis**, the agent by which malaria is carried from person to person. (3) **Culex sollicitans**, more commonly known as the salt marsh mosquito. The author's advice to those who want to rid themselves of the mosquito is to see that the yards and grounds in the vicinity of their houses are put in good order. Useless receptacles which will hold water should be destroyed: tubs and barrels which have outlived their usefulness should not be cast out upon a rubbish heap, but be broken up for firewood. Rain barrels and cisterns, if indispensable, should be stocked with gold fish or covered with mosquitoproof screens. Cesspools and manure pits to which mosquitoes can gain access should have enough kerosene oil thrown in them to keep the surface completely covered. [T. M. T.]

3.—Weeks' conclusions concerning the mosquito plague are as follows: (1) Every mosquito found in a district is an indictment against the public spirit, the progressiveness, the intelligence or the persistence of the people of the district, except in instances so rare as not to affect the statement. (2) Every case of malaria, not a relapse or an importation into a district, is evidence of avoidable crime against humanity in some or all of its interests, and against the fair fame of some of the most beautiful sections of the land. (3) That in greater degree than smallpox is malaria a crime, for the latter reaches more persons and its effects are more persuasive. [T. M. T.]

5.—To be abstracted when concluded.

MEDICAL RECORD.

March 7, 1903.

1. Radio-Praxis. HENRY G. PIFFARD.
2. Feeding in Early Infancy; Home Modification of Milk. JOSEPH E. WINTERS.
3. Plastic Artificial Vitreous in Mules' Operation. E. L. OATMAN.
4. Clinical Results With Antistreptococcus Serum in Scarlet Fever. LEWIS FISCHER.

1.—Piffard states that as long as 25 years ago he employed sunlight concentrated by means of a glass lens in the treatment of a few cases of lupus and other semimalignant lesions of the skin. He presents a table showing the notable differences in the physical manifestations of the X-rays and the ultra-violet rays. We have a fairly clear view of the realm occupied by the X-rays and a very satisfactory knowledge of the proper technique, but the same does not apply with as much truth to the ultraviolet radiations. He mentions a number of points in connection with the latter which need further elucidation. His paper includes a consideration of the so-called **Becquerel rays.** [T. L. C.]

2.—Winters discusses the **home modification of milk** in the feeding of young infants. This paper is a comprehensive one and includes a number of formulæ for the home modification of bottled milk. [T. L. C.]

3.—Oatman reports a series of cases in which paraffin has been used in place of the glass ball in **Mule's operation.** [T. L. C.]

4.—Fischer reports the clinical results of 2 cases with antistreptococcus serum in scarlet fever. The clinical results he regards as striking. The effect of the serum on the temperature shows that it inhibited bacterial products. Another interesting observation in both cases was the disappearance of necrotic membranes after the fourth day; the temperature declined by lysis. [T. L. C.]

NEW YORK MEDICAL JOURNAL.

March 7, 1903.

1. Some Scientific and Practical Aspects of Vaccination. P. H. BRYCE.
2. The Present Method of Medical School Inspection in New York. CHARLES HERRMAN.
3. Uterine Inertia: Its Causes and Treatment. JAMES MORAN.
4. Incomplete Transverse Congenital Occlusion of the Vagina and a Theory as to its Origin. SAMUEL M. BRICKNER.
5. Expression of the Lid Margin as a Therapeutic Measure in Blepharitis and its Complications. PERCY FRIDENBERG.
6. The Detection of Renal and Vesical Calculi by Means of the X-Rays. HENRY PERKINS MOSELEY.
7. A Case of Abnormal Temperature. LUCIEN LOFTON.

1.—Bryce discusses **the practical aspects of vaccination.** He reviews the work of the immortal Jenner and then speaks of the subject of immunity and of the manner in which it is induced. He says that, despite the remarkable fact that the value of the practice of protective and curative inoculations, especially of diphtheria, has been generally accepted both by the profession and the public, there has, nevertheless, developed an opposition to the theory and practice of vaccination against smallpox. The origin of this opposition he believes is due to the facts that: (1) Vaccination laws are compulsory; and (2) that an occasional unfortunate result develops. These laws should be more rigidly enforced, and the author claims that states with compulsory laws should demand more care in the manufacture of vaccine, and, until all vaccine is tested and standardized, as is diphtheria antitoxin, we must feel that the ethical demands of the situation have not been met. Furthermore, the state should allow the compulsory work to be performed only by responsible and trained public vaccinators. In speaking of vaccine he says that only agents should be used that will produce normal results and effective immunity. The condemnation that the glycerinized vaccine has received, he thinks, is not justifiable, for statistical reports show a success of 97%, and an insertion success of 93%. [P. B. B.]

2.—Herrman describes the **method of medical inspection of the schools in New York.** This is more complete and much more satisfactory than the method formerly employed. Inspections are made weekly, and the children are examined in review, especial attention being paid to the skin, throat and eyes. Many of the children with minor affections, such as conjunctivitis, impetigo and ringworm, are treated in the school daily by thoroughly trained nurses; thus the children are not called from study. [P. B. B.]

3.—**Uterine inertia** is divided by Moran into the primary and secondary varieties. In considering the **causes** of the condition those set forth are found to be nearly all mechanical, such as distended bladder and rectum, rigidity of the cervix, tumors, deformed pelvis, etc. Other causes are paralysis of the uterus, exhausted patient and repeated labors in rapid succession. The author then speaks of the dangers that may result from this condition to both the mother and child. The early **discovery** of the cause will open the portal to intelligent **treatment.** If the uterus is exhausted, delivery should not be attempted with forceps, because dangerous and even fatal post partum hemorrhage might develop. The better procedure would be to secure the patient a few hours rest, after which the uterus will resume its contractions and the labor in all probability terminate spontaneously. [P. B. B.]

4.—In a large experience Brickner has only observed 4 **patients with incomplete transverse congenital occlusion of the vagina,** and the case-histories of these are given as a basis of his paper. He first reviews the various theories which have been advanced as to the etiology of the condition, and then expresses his own views. He believes that transverse vaginal septa are due: (1) To an embryonal fault and (2) to a reversion to the type, that is, a return to an ancestral type. Numerous lower animals are found in which this septum is constant and in which it seems to be endowed with a specific function. In the human subject these septa are derived from an inclusion by Müller's ducts of cells from the Wolffian ducts after the formation of the genital cord, therefore, they are of epiblastic origin. The diagnosis and treatment of the condition are appended. [P. B. B.]

5.—Fridenberg calls attention to the part taken by the Meibomian glands in the etiology of blepharitis by becoming a habitat for micro-organisms. In speaking of the treatment he says: We too frequenly prescribe "yellow salve" without first differentiating this condition from other pathological processes that may exist. The paper directs attention to the value of **expression of the lid-margins as a therapeutic agent** in this condition. The author has found the procedure of decided advantage. [P. B. B.]

6.—Mosely divides the methods of examination for **renal and vesical calculi** wih X-rays into the fluoroscopic and radiographic examination. The fluoroscope does not possess any practical advantage and is rarely employed by the author; on the other hand, the radiograph is indispensable and the only means of detecting the presence of renal or vesical calculi with the X-rays. The technique of the method is then described. [P. B. B.]

7.—Lofton reports the case-history of a girl, 12 years of age, who had an attack of remittent malarial fever. The patient had a persistent **abnormally high temperature,** reaching over 106° F. Despite the heroic administration of quinine and the employment of cold in its various forms the fever could not be influenced. Later phlebotomy was performed, withdrawing over a quart of dark-colored blood, after which the temperature sank to 103°F. and the patient continued to improve. [P. B. B.]

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

March 5, 1903. (Vol. CXLVIII, No. 19.)

1. A Research into the Means of Controlling the Bloodpressure. GEORGE CRILE.
2. On Routine Determinations of Arterial Tension in Operating Room and Clinic. HARVEY CUSHING.
3. Cytodiagnosis; A Study of the Cellular Elements in Serous Effusions. A Preliminary Report. PERCY MUSGRAVE.
4. Intestinal Obstruction below the Ileocecal Junction. THOMAS M. MANLEY.

1.—Crile says: (1) **Surgical shock** is an exhaustion of the vasomotor center. (2) **Collapse** is due to suspension of the function of the cardiac or of the vasomotor mechanism. (3) In shock therapeutic doses of strychnine are inert; physiological doses are dangerous or fatal. (4) Stimulants of the vasomotor centers are contra-indicated. (5) In shock cardiac stimulants have but a limited range of possible usefulness and may be injurious. (6) In collapse stimulants may be used because the centers are not exhausted. (7) Saline infusion in shock has a limited range of usefulness. (8) In collapse it may be effective. (9) Adrenalin acts upon the heart and bloodvessels. It raises the bloodpressure in the normal animal; in every degree of shock; when the medulla is cocainized, and in the decapitated animal. (10) The pneumatic rubber suit provides an artificial peripheral resistance without injurious side effects and gives a control over the bloodpressure within a range of from 25 to 60 mm. mercury. It has been found that, by combining the use of artificial respiration, rhythmic pressure upon the thorax and adrenalin injected into the jugular vein, animals which were apparently dead as long as fifteen minutes were resuscitated. [T. M. T]

2.—Cushing states that there occur many maladies usually characterized by a hypo- as well as others characterized by a hypertension of the arterial bloodstream, and tabulations of the pressure levels commonly found in these diseases have been made by Potain and others. Such records may be of considerable value for purposes of differential diagnosis, or, for example, between states of simple albuminuria and those of actual chronic nephritis, or again between the hemiplegia of intracranial hemorrhage and that of cerebral softening. Altertions in the bloodpressure which occur with a definite rhythm, such as those which occasion or accompany periodic respiratory phenomena, as of the Cheyne-Stokes type, or those which, for example, characterize the pulsus parodoxus, are easily recognized by the apparatus which he describes. [T. M. T.]

3.—Musgrave classifies **pleurisies** as follows: (1) The Tubercular pleurisy; (2) acute infectious pleurisy; (3) mechanical pleurisy; (4) cancerous pleurisy; (5) eosinophilic pleurisy. The **tubercular pleurisies** are divided into primary, a form which is supposed to start in the pleura itself and not by extension from a previously existing tuberculous focus in the lungs; and secondary, caused by direct extension of the tubercular process from the lung tissue. **Acute infectious pleurisies** are characterized in general by the relatively large number of polymorphonuclear elements. **Mechanical pleurisies** are characterized by the pressure of numerous large endothelial cells. **Eosinophilic pleurisies** are those in which eosinophiles are found. Three of this class were found in 43 cases. [T. M. T.]

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

March 7, 1903.

1. Laryngectomy for Carcinoma. E. FLETCHER INGALS.
2. The Asch Operation for Deviations of the Cartilaginous Nasal Septum: With Some Conditions Complicating its Performance. EMIL MAYER.
3. Recurring Multiple Angiomata of the Septum. JOHN O. McREYNOLDS.

4. Mercury in Syphilis: Its Administration Hypodermically in Contrast with Other Methods. EUGENE FULLER.
5. Dosage of Liquid Medicines: A Simple Plan for Greater Accuracy and Metric Measures. CARL S. N. HALLBERG.
6. The Identity of Nerve Force and Electricity. J. EMMET O'BRIEN.
7. The Absorption of Albumins and Globulins. CHARLES T. McCLINTOCK.
8. Modification of the Connell Suture. RAYMOND CUSTER TURCK.
9. The Improvement of General Anesthesia on the Basis of Schleich's Principles: With Special Reference to Anesthol. WILLY MEYER.
10. Fevers of Doubtful Nature in Infancy. Preliminary Clinical Note. J. L. DUENAS.
11. A Contribution to the Pathological Histology of Syphilitic Ethmoiditis. J. L. GOODALE.

1.—Ingals reports a case of **laryngectomy** performed by Christian Fenger **for carcinoma.** The patient was a man, 47 years of age. The symptom of hoarseness began 18 months before he applied for treatment. The growth started as two small smooth white nodules involving the middle third of the left vocal cord. Ingals performed a preliminary tracheotomy, and Fenger later removed the entire larynx, as the growth had at this time perforated the walls of the larynx. Fenger's remarks made at the time of the operation are quoted in full. He called attention to the fact that laryngoscopical appearances gave no idea of the extent of the disease. The patient made a satisfactory recovery from the operation, excepting that a sinus was established in the pharynx through the external wound. [J. H. G.]

2.—In this paper Mayer defends the **Asch operation for deviations of the cartilaginous nasal septum,** using as a basis for his remarks a paper written by another surgeon, which rather tends to minimize advantages and magnify the difficulties of the Asch operation. Mayer states that the operation is one which requires general narcosis and rest in bed for several days, and that without these the operation should not be performed. In hundreds of cases he has heard few real complaints regarding the tubes. For deviations involving the bony septum the Asch operation, of course, is not indicated. [J. H. G.]

4.—Fuller discusses the therapeutic **methods of administering mercury;** their advantages and the rules to be observed in their employment. In his experience most of the brands of mercury protiodide made in this country are too irritating to be of value, as they produce abdominal symptoms. He states that the French protiodide is much milder and more easily tolerated. He then discusses the hypodermic method of administering mercury. He prefers salicylate of mercury suspended in liquid petroleum products or olive oil. The dose of this insoluble salt is 1½ grains which he prepares so that 30 minims contain this dose. The oil mixture should be sterile and should be warmed to the temperature of the body when injected. Great care should be exercised to prevent salivation. He holds the opinion that, at the present time, more harm results in connection with syphilis from the administration of too little than too much mercury. He contends that mercury should be used in syphilis as soon as a diagnosis has been established, and that the drug in most instances should be administered by the mouth at first. If unsatisfactory results follow, another method of medication should be instituted. In the secondary stage hypodermic medication is indicated when there is anemia, facial or other prominent eruptive manifestations, alopecia, cephalalgia, rheumatoid pains, mucous patches or the like, so as to quell the symptoms quickly. He highly recommends the use of mercury hypodermically in conjunction with large doses of iodide by the mouth in the treatment of syphilitc ataxia. [F. J. K.]

5.—Hallberg suggests **a simple plan for greater accuracy in the administration of medicines.** He points out many inaccuracies in our customary methods of administration. He especially criticises the methods of administering medicines in spoonful doses, as the amount of liquid the spoon holds varies and depends also on the generosity of the patient filling it. He also points out that the drop measurement shows still less uniformity in volume. He then directs attention to the advantages of the metric system and holds that the greatest obstacle to its more general acceptance, especially for old practitioners, has been an attempt to learn and to use exact equivalents for the customary weights and measures. He also discusses the advantages which would be secured by the adaptation of the metric system in the calculation of doses, the strength of preparations, etc. [F. J. K.]

6.—O'Brien contends **that nerve force is electricty,** and that it would advance the knowledge of the nervous system to accept this proposition. He summarizes as follows: The construction of the nerves has been closely, though unconsciously, imitated in electric cables. Experiments on nerves should be interpreted according to the electrical peculiarities of cables, and not as if they were bare conductors. Nerves are insulated, distributed and arranged like fine electric conductors. Their purpose and use are the same as the purpose and use of electric conductors, namely, communications from point to point. They convey some form of force, and there is not such a gulf between its velocity and that of electricity as has been supposed. This force must be electricity because: (1) electricity is always present when nerves act. (2) Electricity is in the form of force that would do the work required. It is the form of force that would work with such construction. (3) Because the terminal and central mechanisms connected with the nerves correspond to the terminal and central mechanisms connected with electric systems of communication and do similar work in sending, receiving, relaying, switching, transforming, accumulating, retarding, distributing and translating impressions. (4) Finally, because electricty, with such construction of conductors and of terminal mechanisms, is the only form of force that we know of that would do all the work required. The author, therefore, maintains that nerve force is electricity, and that it would advance knowledge of the nervous system and its functions to accept this proposition. These views were regularly presented to medical societies in 1900 and published in the *Pennsylvania Medical Journal* in November, 1900. If they are considered worthy, he would value some acknowledgement of their method and propriety. The conclusions that nerve force is electricity may have been guessed at before, and some analogy must have been noted by all observers, but he thinks his paper covered more ground and brought more evidence together than could have been done before, and he first clearly stated the logical necessity of the electric concept. [F. J. K.]

7.—McClintock contributes an article **on the absorption of albumins and globulins.** He records the results of a number of animal experiments and points out that thus far they are unsatisfactory. These experiments deal particularly with the absorption of antitoxic serums. He concludes that the results appear to show either that antitoxin is not absorbed in the same proportion as the total albumins of serum, or is changed in being absorbed, the majority of pigs dying when injected with several times the fatal dose of toxin, despite a large absorption of albumins. [F. J. K.]

8.—Turck presents a lengthy and thoroughly illustrated description of a **modification of the Connell intestinal suture in performing anastomosis.** (A description of this suture is impossible without the aid of the illustrations.) [J. H. G.]

9.—Meyer carefully reviews the recent **improvement in general anesthesia** and pays particular attention to **anesthol,** which he has used very extensively. Anesthol is a clear, transparent fluid of very agreeable odor. It is a chemical combination of ethyl chloride and M. S. (a combination of chloroform and ether) and not a mixture. Meyer first used anesthol in 1898 in an interval operation for appendicitis, since when he has used it almost exclusively in hospital and private practice. The only exceptions were operations upon the face in which pure chloroform was deemed preferable. At first his experience was that deep anesthsia was not caused and that muscular rigidity was sometimes troublesome. This objection, however, was readily overcome by administering one-quarter of a grain of morphine hypodermically prior to the administration of the anesthol. The agent should be administered upon an Esmarch mask covered with sterile gauze and by the "drop-by-drop" method. It is necessary to continue the anesthetic throughout the entire course of the operation, as the recovery from it is very prompt. It is claimed for this agent that its administration is simple, not objectionable to the patient, and that few of the disagreeable and troublesome symptoms following other general anesthetics are seen. In his entire experience with this drug but 2 deaths have occurred, and one of these can certainly be accounted for by the condition of the patient. He has not hesitated to use the remedy in the presence of marked organic disease both of kidneys and heart. Dr. Guth has administered the anesthetic in 200 private cases for Meyer without any disagreeable results. [J. H. G.]

10.—Duenas contributes **a preliminary clinical note on fevers of doubtful nature in infancy.** He states that fevers occur with extraordinary frequency during infancy and childhood in the island of Cuba. At the time before the existence of typhoid fevers had been proved and when it was supposed that yellow fever only attacked unacclimated foreigners, the tendency of the physician was to diagnose all cases as malaria in which a local cause to the process could not be found or in which it could not be referred to another well-defined disease. He discusses the various causes of fever in childhood and emphasizes that, as a result of modern scientific investigations, it is generally accepted that malarial fever is not so frequently encountered as was formerly supposed, and that there is a large group of febrile cases in which neither malaria nor typhoid can be diagnosed. He describes 2 groups of fevers which he holds are of gastro-intestinal origin, one of rapid evolution and the other of slow evolution, common to all periods of infancy and childhood. He then describes their clinical features. He contends that most of the infantile fevers come from intestinal infection, and that the prognosis of these fevers depends on the virulence of the germs producing them and on the amount of resistance opposed to it by the organism of the child. [F. J. K.]

11.—Goodale records a case of **syphilitic ethmoiditis** in which careful histological examinations were made. In this condition it is shown that the tissue changes consist essentially in proliferative periostitis with a new formation of bone in the form of irregular excrescences, in association with a proliferation of the connective tissue in the vicinity and of the endothelial cells of the arteries, leaving in places an obstruction of their lumen. These changes partake of the character of a granulation tumor rather than of a gumma, and are to be referred to the class of syphilitic new growths termed syphiloma.

[J. H. G.]

AMERICAN MEDICINE.

March 7, 1903.

1. The Technique of the Operation of Celiotomy as Practised at the Gynecean Hospital, with the Report of 93 Consecutive Celiotomies Without a Death. HENRY D. BEYEA.
2. The Treatment of Suppurative Inflammation of the Kidneys. FRANK WARNER.
3. Direct Fixation in Fractures. GEORGE W. GUTHRIE.
4. Aneurysm of the Descending Aorta Displacing the Heart. CHARLES F. BEESON.
5. Communicated Insanity or Psychical Infection. J. W. WHERRY.
6. Briefs on Physical Training. G. FRANK LYDSTON.

1.—The title of Beyea's paper gives a comprehensive description of its contents. He takes up the steps of the technique of the operation of celiotomy at the Gynecean Hospital under the following heads: (1) The preparation of the patient; (2) the preparation of the sutures and ligatures; (3) the water used during operation; (4) sterilization of instruments; (5) preparation of the apparatus used; (6) the method of preparing the operating room; (7) the disposition of the operator; assistant and nurses; (8) the treatment after celiotomy. Ninety-three cases are reported without a death. [T. L. C.]

3.—Guthrie reviews the literature of **direct fixation in fractures** and reports a case of a compound fracture of the right olecranon process in which this operation was practised in the patient's own home under the most unfavorable conditions and yet with a satisfactory result. [T. L. C.]

6.—Lydston continues his paper on **physical training** limiting his discussion to **athletic overstrain.** This condition occurs in two forms which may be termed acute and chronic. The acute form is seen in two classes of individuals, (1) those out of training who undertake the performance of feats which would have been possible for them to accomplish while in training and (2) individuals in training who undertake feats beyond the possibility of accomplishment. The symptoms presented by these two classes of patients are discussed. [T. L. C.]

DEUTSCHE MEDICINISCHE WOCHENSCHRIFT.

January 22, 1903.

1. Concerning Free Receptors of Typhoid and Dysentery Bacilli and Dysentery Toxin. M. NEISSER and K. SHIGA.
2. The Differentiation of Human and Animal Bone by Means of Wassermann's Method of Differentiation. A. SCHUETZE.
3. Some Remarks on the So-Called Physiological Salt Solution. T. ENGLEMANN.
4. Diabetes Mellitus in Gynecological Operations. H. FUTH.
5. Concerning the Tissues and the Causes of Cancerous Growths. L. FEINBERG.

1.—Free receptors were obtained by adding a day-old agar-culture to 10 cc. of sterile physiological salt solution, heating for an hour at 60°, maintaining for 2 days at 37°, and then filtering through a Reichel filter. The flush had **the power of binding agglutinins through the formation of pro-agglutinoid;** and if the pro-agglutinoid serum was allowed to act upon the bacilli that had been used to produce the filtrate, it **furthered agglutination.** Also, by injecting the filtrate, it was **possible to cause the production of agglutinins in the animal body.** The filtrate had no poisonous action, but it had a marked bactericidal action. The toxin cannot be made inactive by heating to 60°; but by heating to 75° it becomes much weakened. [D. L. E.]

2.—Schütze claims his work demonstrates that, when **pieces of bone, that are so damaged that they cannot be recognized,** are examined by means of the biological method, it is possible to **determine definitely whether they have come from human subjects or from animals.** [D. L. E.]

3.—Engelmann's article is chiefly an insistence upon the fact that a **physiological salt solution should have a strength of 0.9%,** and that the solutions previously used, which vary in strength from 0.5 to 0.75%, are not physiological salt solutions. [D. L. E.]

4.—To be continued.

5.—Feinberg contributes an answer to the criticisms of his previous work that have appeared from various sources. The details cannot be abstracted. [D. L. E.]

MUENCHENER MEDICINISCHE WOCHENSCHRIFT.

January 20, 1903.

1. Remarks Upon the Question of Trachoma. A. PETERS.
2. The Application of Boric Acid to Internal Medicine. G. MERKEL.
3. A Case of Extensive Resection of the Ductus Choledochus and Hepaticus on Account of Carcinoma of the Choledochus With Ectomy of the Gall-bladder and Hepaticoduodenostomy. KEHR.
4. Myogen, a New Albuminoid Preparation. R. NEWMANN.
5. A Contribution to the Knowledge of Excessive Pock-Marks in the Course of Vaccination, and Post Vaccination Exanthema. A. GROTH.
6. A Remark Upon the Ambulatorium For Internal Diseases of the Medicoclinical Institute of the University of Munich (Prof. v. Bauer). KERSCHENSTEINER.
7. Operation for Senile Cataract. W. MANZ.
8. Results of the Practical Application of the Determination of the Freezing-Point of the Blood and Urine in Renal Diseases. O. RUMPEL.
9. The History of the Physiology of Digestion. SPAET.

1.—Peters believes that **trachoma** is really a reaction of the tissue to the presence of excessive amounts of adenoid tissue, and that it is not correct to exclude it in diagnosis when trachoma granules and scars are absent. In fact, there are cases in which there is a slight increase in the thickness of the conjunctiva, and often a chronic disease of the conjunctiva, a sort of conjunctivitis sicca, that is analogous to trachoma. Peters discusses the difficulty in the diagnosis which he does not believe is simplified by the acceptance of his views. He speaks particularly of the abortive forms, and mentions some family epidemics of acute conjunctivitis that he has studied, in which subsequently some of the members developed trachoma. He thinks it possible that sometimes an epidemic of conjunctivitis may give rise to numerous cases of trachoma, whereas in other places an epidemic due to the same cause gives rise merely to catarrh, and only because there is little lymphoid tissue. Of course, these views presuppose that the actual specific etiological factor of trachoma is much more widely distributed than is generally accepted. In support of this view he mentions the fact that in certain parts of Germany trachoma is a relatively rare disease among the well-to-do and occurs with great frequency among the lower classes. Direct contagion seems to be comparatively rare. On the numerous occasions in which Peters saw conditions that would have rendered this contagion easily possible, they were apparently not followed by the development of the disease. He, therefore, is rather skeptical regarding the possibilities of an effective prophylaxis. The best measure is probably the removal of the adenoid tissue in the very earliest stage of the process, and this will require thorough and extensive examinations in those districts in which trachoma is common. In regard to the etiology he believes that the diplobacillus discovered by Morax, Axenfeld and himself grows readily upon trachomatous membranes without particularly changing the character of the tissue, with the exception of a slight inflammation. The Koch-Weeks bacillus produces unquestionable proliferation of tissue that is exceedingly obstinate, and, therefore, its presence renders the disease much more serious than it otherwise would be. There is, however, no particular reason why it cannot be regarded as a mixed infection. [J. S.]

2.—Merkel has administered fairly large doses of **boric acid** to various patients, giving one or 2 gm. in a liter of water, to be taken in the course of 24 hours. The usual results were increase in the elimination of urine, and some gastro-intestinal disturbances, either loss of appetite, pain in the stomach or diarrhea. These effects sometimes did not appear for several days. Altogether, of 11 patients with this affection, 7 suffered seriously from gastric disturbances. As the quantity of boric acid ordinarily employed for the preservation of food would probably exceed 2 gm. per day, hence it is readily seen that this remedy might produce injurious effects. Merkel has found that it is perfectly possible to keep various meat preparations, such as sausage, without the addition of boric acid. [J. S.]

3.—Kehr reports the following case: A man, 53 years of age, had had pain in the abdomen lasting for 8 days. Later he had a second attack in which there was diarrhea and nausea, but no pain. This was followed by jaundice which was persistent and progressive. He lost weight; the gall-bladder became distended; the liver was enlarged, but otherwise he was in fairly good condition. An operation was accordingly performed, the gall-bladder found to be distended with clear fluid, a stone was found in the cystic duct, and a **tumor just at the junction of the cystic and hepatic ducts.** This was sharply limited and, therefore, extirpated. The details of the operation are interesting but too long to abstract. The end of the hepatic duct was inserted into the duodenum, the wound closed and the patient made a good recovery. Kehr then discusses the literature of this condition and attempts to give a clinical picture of carcinoma of the gall-ducts. The differential diagnosis from gall-stone is difficult. He gives the following table of the chief differential symptoms:

Carcinoma.	**Gall-Stone.**
More common in men.	More common in women (5 to 1).
Pain and colic often absent.	Colic usually present.
Jaundice gradually developing and finally intensified and diffuse.	Jaundice variable; often disappearing.
Feces gray in color.	Feces brown or gray.
Duration of disease about 6 months.	Duration of disease many years; in some cases more than 12.
Fever and chills are rare.	Fever and chills common.
Cachexia pnonounced.	Cachexia when the disease has lasted a long time and cholangitis, etc., is present.
The gall-bladder is large and palpable (80%).	The gall-bladder is small and not palpable (80%).
Ascites is a confirmatory symptom.	Ascites is rare.
Splenic tumor is of no significance.	Splenic tumor of no significance.

Kehr believes that in view of his case we should discard the belief generally held that in cases of carcinoma operation should not be performed because it is possible to extirpate even carcinoma of the choledochus. Even if radical operation cannot be performed, a palliative operation, restoring communication between the gall-passages and the ducts, may give the patient relief. In regard to the technique of the operation he makes certain general observations. In no case should an operation upon the biliary passages last more than one hour; therefore, in order to hasten matters, a long incision is first made to render the field of operation accessible. He prefers suture to Murphy's button. It is important when the gall-bladder is removed to cover the exposed portion of the liver with a tampon, because a considerable amount of bile is continually extruding from the torn biliary radicles. The tampon should be left in position as long as possible. If, for any reason, the bile flows into the stomach, causing biliary vomiting, the patient should be laid upon the right side and gastric lavage employed. Although his patient has not been sufficiently long under observation, the possibilities of a radical cure should not be discarded. [J. S.]

4.—Newmann has tested **myogen** in order to determine its value as a nutrient. It is prepared from the bloodserum of freshly slaughtered oxen. It contains 83.25% of albumin, and was tested in the usual way by performing a series of metabolism experiments. It was found that it is easily borne by the organism, is easily assimilated, although it does not appear to be quite as effective as meat. It is prepared for the market in 2 forms, either the myogen powder or *myogen kakes*. The latter contains about 25% albumin, 50% carbohydrates, and has a much more agreeable taste. [J. S.]

5.—See editorial.

6.—A brief statistical report of various forms of disease observed in the Ambulatorium for Internal Diseases of the Medicoclinical Institute of the University of Munich for the year 1902, in charge of Professor von Bauer. [J. S.]

7.—Manz continues his article upon **senile cataract.** He calls attention to the improvements introduced by Jacobsohn and von Graefe, although the loss in eyes was still from 2% to 6%. The chief danger still remained sepsis.

The operation of von Graefe became more generally accepted, and the introduction of asepsis and antisepsis reduced the loss in eyes very considerably. Manz had never been willing entirely to discard iridectomy in the operation for cataract. He finally discusses the advantage of using a bandage after the operation. [J. S.]

8.—Rumpel continues his article upon **cryoscopy** and mentions several cases in which the prognosis and treatment were distinctly influenced by the results of his investigations. In one case the freezing-point of the blood was —0.55°, although the urine contained pus and there was a large renal tumor on the left side. The left kidney was extirpated and found to be tuberculous. The patient died later of pulmonary tuberculosis and the right kidney was healthy. In another case there were tubercle bacilli and pus in the urine, and a tumor in the region of the right kidney. The freezing-point of the blood was —0.61°. The patient suddenly died, and at autopsy it was found that both kidneys were diseased. This method is of value in cystitis, in prostatitis and in all cases in which there is tumor of the kidney. It is of the greatest value in determining whether or not surgical intervention should be employed. [J. S.]

9.—Spaet calls attention to the fact that certain ancient writers, particularly an unknown author of the first century after Christ, and Galen, had realized that a peculiar reaction takes place in the stomach whereby the specific character of albumin is destroyed. [J. S.]

BERLINER KLINISCHE WOCHENSCHRIFT.

February 2, 1903. (40 Jahrgang, No. 5.)

1. The Value of Otitic Symptoms in the Diagnosis of Fracture of the Base of the Skull and Other Head Injuries. STENGER.
2. Casuistical Contributions to the Knowledge of Tabes Incipiens. GEORG FLATAU.
3. The Struggle Against Tuberculosis as a Disease of the People. JULIUS KATZ.
4. Atypical Typhoid Fever. C. A. EWALD.

1.—As hearing is affected in almost all severe **injuries of the head, the ear symptoms**, from their sort and severity, permit a diagnosis of the kind of injury present. The flow of cerebrospinal fluid from the ear points to probable fracture of the base of the skull; the flow of blood, however, occurs in many other head injuries. After the injury functional symptoms alone remain, disturbances of hearing, vertigo and localized paralyses. With the tuning fork, bone conduction is shorter on the diseased side; when high tones are not heard, there is probably labyrinthine disease. There may also be fainting spells, nystagmus, unilateral as a rule, and purely neurotic symptoms. In a number of cases the condition is a neurosis, though the skull may have been injured some time before. This **traumatic neurosis** can be referred to no anatomical changes in the cerebrum, yet functional examination shows disease of the ear with psychical disturbances. This is a traumatic neurosis based upon aural disease. [M. O.]

2.—Flatau reports 7 cases of **incipient tabes**. Some cases showed paralyses, hypalgesia, hypesthesia, pupillary inequality, pain, absent knee jerks, or absent tendo Achillis reflex with knee jerks still present. Yet the diagnosis of incipient tabes is justified in these cases, when the conditions exist for some time, permitting repeated examinations. In one case, examined one year afterward, all symptoms had disappeared; but in all other cases outspoken tabetic symptoms appeared later. The presence of syphilis always aids in the diagnosis. Out of 100 patients examined, the tendo Achillis reflex was absent in 2 bilaterally, and unilaterally also in 2 cases. [M. O.]

3.—Katz, who gives many statistics showing the constant increase of **tuberculosis** in the people, urges the value of climate in treating phthisis. **He advises the colonization of tuberculosis patients in a good climate**, such as is found in German Southwest Africa. [M. O.]

4.—**Typhoid fever** is no longer found always in the old, typical, classical form, **atypical cases predominating nowadays**. The diagnosis may be especially difficult during the first week of the disease, though the Widal reaction, diazo-reaction, finding the bacilli in the feces or spots, may settle the diagnosis at some time in the disease. The temperature is generally irregular, often like acute **miliary** tuberculosis, and to complicate matters the Widal reaction may repeatedly prove negative. Bacilli may only be found in the feces late in the disease, and the diazo-reaction is present about as often as it is absent, or symptoms may simulate acute endocarditis, as in a case reported, beginning with a severe chill, followed later by thrombosis in the left leg; in this case positive Widal reaction was only obtained on and after the fifty-third day. Other patients have a chill as with croupous pneumonia. There may be constipation, hemorrhages or diarrhea, resembling membranous colitis sometimes, as in a case reported. Nervous symptoms may be very severe, or totally absent, and very odd eruptions, even up to bullæ and pustules, have been noted. Ewald orders baths, sponges, ice bags locally, and quinine, and gives liquid diet only, to save the stomach and intestines. [M. O.]

VIRCHOW'S ARCHIV.

Band 168. Heft 3.

12. Contribution to the Comparative Morphology of the Colorless Bloodcells. J. MEINERTZ.
13. Morphological Changes of the Bloodcells, Especially of the Erythrocytes in Poisoning with Toluylendiamin. E. SCHWALBE & J. SOLLEY.
14. Heteroplastic Bone Formation; Experimental Investigations. C. SACERDOTTI & G. FRATTIN.
15. Frambesia and Similar Diseases of the Tropics. M. GLOGNER.
16. A Contribution to the Casuistry of Syphilitic Disease of the Vascular System. S. ABRAMOW.
17. Contribution to the Histology of the Seminal Vesicles With Remarks Upon Lipochrome. AKUTSU (Japan).
18. The Function of the Spleen. R. HEINZ.
19. Transition of Blood Poisons to the Fetus. R. HEINZ.
20. The Transition of the Embryonal Nucleated Red Bloodcells Into Nonnucleated Red Bloodcells. R. HEINZ.

12.—Meinertz has made a series of investigations upon the **white bloodcells of various animals**, employing reptiles, fish, crustaceans, insects and worms. The blood was always smeared upon coverglasses, fixed by heating at a temperature of 120° and stained in various ways. The detailed results of these investigations cannot be given satisfactorily in an abstract. In almost all the animals investigated a considerable number of different cell-forms were present. Meinertz gives the results of his experiments in brief form as follows. In the white bloodcells of all animals peculiar bodies are found, usually appearing as granules, but occasionally as small rods, which possess a peculiar affinity for certain groups of stains. The distinction between the cells that contain these bodies and those that do not contain them is not sharp. There are many transitional stages. However, there are certain fishes and other low animals in the leukocytes of which these granules are not found. In the blood of nearly all forms of animal life a cell is found that has a round nucleus, and a small basophilic cell-body without granules; this is similar to the lymphocyte of human beings. Meinertz does not believe that the granules have any specific function, but their great variety indicates that in each case they must be of considerable individuality. In a postscript Meinertz combats Hesse's view that granules are really essential constituents of the protoplasm and are to be regarded as elementary organs of the cells. He himself believes that there are not sufficient facts at hand upon which to base this contention. [J. S.]

13.—Schwalbe and Solley have performed a series of experiments upon dogs, rabbits and guinea-pigs, in order to determine what **changes occurred in the red bloodcorpuscles after poising with toluylendiamin**. The poison was introduced subcutaneously, and in one case with the food. The various forms were recognized, that is to say, acute, subacute and chronic. The blood was examined in various ways, particularly in pith sections prepared according to Arnold's method. Fresh blood and also dried and fixed smears were stained with various substances. Only the morphological changes were recorded. These were found to be protrusion and partial constriction of portions of the bloodvessels, the ordinary changes of degeneration, the appearance of granules and of nuclei in the red bloodcells; finally the associated changes in the white cells were also studied. Certain changes convinced the authors that the resistance of the erythrocytes was reduced. The blood-placques appeared to be more numerous than in normal blood, and the degenerative processes were not unlike those found in coagulation. In some cases, although the anemia was profound, the morphological changes were slight, and therefore it seemed not unlikely that the cells showing the least resistance had been completely destroyed. An interesting change was that, when the fresh blood was stained with sodium-chloride-methyl-violet solution, nearly all the cells showed blue granules. Basophilic granules were also found. It seems to be definitely shown that these are not the remnants of the nucleus. The changes in the leukocytes were general increase in the number of eosinophile cells and the appearance of other cells with red granules. In conclusion, they state that the pathological changes are similar to those found in the cells during coagulation. [J. S.]

14.—Sacerdotti and Frattin have performed a number of experiments upon rabbits, cutting off the circulation in one kidney and then displacing the organ beneath the skin. They found that, after a certain number of days (75 to 85), the kidney was reduced in size and often gave crepitation when cut. This crepitation was due to the formation of lamella of bone which seemed to surround the urinary tubules. Sometimes medullary substance was also found. They conclude that **in organs which normally contain no osteogenetic tissue, bone with medulla can be produced experimentally.** [J. S.]

15.—**Frambesia** is a disease of the skin characterized by an eruption of round excrescences, usually appearing on the face, and not infrequently in the cavities of the mouth and nose, that gradually increase in size, may become confluent and are often surrounded by a hyperemic zone. Later necrosis occurs, and a grayish-yellow, sometimes offensive, crust is formed upon it. When this is removed, red excrescences can be seen beneath it. When, either as a result of remedies or time, the papule disappears, it leaves a small pigmented area that in the course of months becomes entirely depigmented. A scar is never formed unless the papule has been injured and caused to ulcerate. Other forms of this disease have been described. In Peru, for example, the so-called verruga Peruviana or maladie du Carion is a severe disease with prodromal symptoms, such as vertigo, headache, pain in the limbs, cough commencing with chill, etc. Patients frequently vomit, have diarrhea and bleed from the nose, and tumors of the skin may develop. The hemorrhages may be severe enough to cause death. In other cases the patients have coma, delirium, rapid pulse and respiration, and often icterus. The temperature may be normal or elevated. The patients are anemic, the spleen and liver are enlarged, and the lymphglands, lymphfollicles and Peyer's placques are enlarged. It appears that this disease has certain essential differences from frambesia or Yaw's, and there is some reason to suppose that the Brazilian bubo is also a different disease. Glogner had an opportunity of excising 6 nodules from 4 patients. The tissue was hardened in Müller's fluid, and upon histological examination showed proliferation of the connective tissue, enlarged and dilated bloodvessels, some extravasation of blood and proliferation of the epithelial cells which seemed to be fairly well preserved. There were some large cells with oval nuclei that evidently had been derived from the connective tissue. In 8 cases which he investigated there appeared to be a slight or considerable increase in the lymphocytes of the blood. No bacteria were found, neither were there any objects that resembled blastomycetes. [J. S.]

16.—Abramow reports the case of a patient affected with syphilis who developed hemiparesis and subsequently died in a convulsion. He examined numerous arteries and found infiltration of the adventitia with round cells and sometimes also of the media. He also mentions another, in which he had an opportunity of examining the vessels of the brain and found them sclerosed, and a third patient in whom there was enlargement of the liver, weakness of the heart and some symptoms at the apices of the lung. At the autopsy of the third patient tuberculosis of both apices was found. Examination of the numerous bloodvessels showed changes in them which were apparently not due to tuberculosis. He believes that the second case represents a gummatous disease of the adventitia, and there was probably the same disease in the first patient, which extended to the intima. In the third case the changes in the aorta were also apparently due to syphilis. He believes that **syphilis may cause disease of the intima or of the adventitia**, that the proliferation from the site of infection may destroy the continuity of the vessels, while the elastic tissue is not really a new formation, but only a product of the fibrillation of the old internal elastic membrane, and syphilitic disease of the vessels is not confined to the central nervous system but also involves other organs. [J. S.]

17.—Akutsu has made a careful study of the **histology of the seminal vesicles,** paying particular attention to the muscular layers, the form and arrangement of the epithelial cells, the question of the existence of glands, the occurrence of elastic fibers and pigment. He finds 3 layers in those cases in which the vesicle is well developed, in others only 2 layers, and that the latter is far more common. Epithelial cells have a cylindrical or cubical form, according to the condition of the vesicle. When there is a slight protrusion in the wall of the vesicle they are usually higher. Nearly always they occur as a single layer. These epithelial cells have a secretory function, but special glands do not exist. In the connective layer and in the subepithelial layer some elastic fibers are found. Apparently they begin to appear about the time of puberty, and increase up to 30 years of age. The deposit of pigment in the seminal vesicles always occurs after puberty. It is present in the connective tissue cells as well as in the muscles and epithelial cells. Usually the pigmented muscle cells are found in the neighborhood of the submucosa. The quantity of pigment depends upon various conditions, such as age, disease, etc. This pigment is lipochrome and should be regarded as metabolic. [J. S.]

18, 19, 20.—Heinz experimented upon a number of animals by removing the spleen and then poisoning them with various blood-poisons. There did not appear to be any difference between normal animals and those from whom the spleen had been removed. In animals killed with p-amido benzoic acid ester it was found that each red corpuscle developed a small projection which entered the wall of the splenic capillaries. Finally this was broken off and the red bloodcell continued in the current. The function of the spleen in taking up destroyed red bloodcells is apparently easily performed by the bone-marrow, lymphglands, etc.; also the function of the spleen in the formation of red bloodcells appears to be unimportant, that is to say, the animals from which the spleen had been removed developed new cells quite as readily as the others. In fact there is little reason for believing that the spleen in normal conditions forms blood, and much reason for supposing that the blood is formed in the bone marrow. When, however, much new blood is to be formed, some of it may arise in the spleen. All bloodcorpuscles are apparently formed from erythroblasts, and this, in addition to being found in the bone, may, under extraordinary circumstances, be lodged in other organs where they proliferate. Heinz has killed a number of pregnant rabbits with various blood-poisons and found that, if the poison was administered in the latter half of pregnancy, the blood of the embryo showed exactly the same changes as those of the mother. Otherwise it showed no changes at all. He has also studied the changes that occur in the nucleated embryonal corpuscles before they become nonnucleated erythrocytes. He observed the blood of embryo rabbits and found that transitional forms showed distinctly that the nucleus was not expelled from the cell, but was gradually dissolved in it, and in this manner disappeared. [J. S.]

DEUTSCHES ARCHIV FUER KLINISCHE MEDICIN.

Band 73.

Festschrift in honor of Geheimrath Professor A. Kussmaul.

1. A Retrospect of the Work of Adolf Kussmaul. W. FLEINER.
2. Clinical Experience in the Treatment of Perityphlitis. C. BÆUMLER.
3. The Diagnosis of the Hour-Glass Stomach. C. EWALD.
4. Remarks Upon Biliary Colic. C. GERHARDT.
5. The Gastric Juice and the Cramp Conditions in Chronic Ulcer of the Stomach. J. KAUFMANN.

6. Three Epidemics of Dysentery in Barmen in the Years 1899 and 1901. H. KRIEGE.
7. The Action of Carbonic Acid upon the Digestion of the Stomach. F. PENZOLDT.

1.—Kussmaul's first important work was a prize-essay upon glaucoma. In this he furnished satisfactory proof that the retina was transparent. In the course of this study he attempted to construct an ophthalmoscope, but was unsuccessful. He received the prize and much praise for his paper which included a valuable discussion of the question: Why the Interior of the Eye is Dark. In 1850 he commenced his contributions to medical literature which were destined to be so numerous and so important. It is impossible to give a complete list of these. Among the earliest were articles upon acute articular rheumatism, the contagiousness of dysentery, stomatitis and typhoid fever. In the latter he expressed himself in favor of expectant treatment. In 1856 an article upon biliary colic appeared. In 1855 he became Privatdocent. At first he devoted himself to experimental and literary studies, paying particular attention to certain peculiar results of disturbances of the circulation of the blood. Later he prepared an article upon rigor mortis, and another upon extrauterine pregnancy. He then moved to Erlangen, where he published a book upon the Psychology of the Newborn. He then studied chronic mercurialism, and this was followed by a series of works upon renal disease and some interesting pathological cases, including one in which a thorn, that had been swallowed, was found at the autopsy in the heart cavity. In 1863 he was called to Freiburg as professor of medicine. Here he devoted himself at first to various vascular conditions, including embolism of the mesenteric artery, and the description of a disease that had not previously been recognized: Periarteritis nodosa. He then devoted himself to diseases of the liver and biliary apparatus and, later, of the pleura, discussing the advantages of thoracentesis. In the late sixties he commenced to take an active interest in diseases of the stomach. On July 22, 1867, for the first time, he washed out a patient's stomach. In 1869 his article appeared upon the treatment of gastrectasia by means of the stomach-pump. From that time he published a series of articles upon gastric disorders, but found time to become interested in vaccination, bulbar paralysis, tetany, the paradoxical pulse which he discovered, diabetes and aphasia. A footnote to this article calls attention to an article of Kussmaul's that appeared as late as 1902. [J. S.]

2.—Bäumler claims that the statistics of large hospitals and the experience of physicians with large practices indicate that **the majority of cases of periptyphlitis do not require operative intervention**, although in many cases in which relapses occur operation in the interval may be desirable, and in all those in which suppuration exists, surgical intervention is called for at once. Recently surgeons have combated this view. In order to arrive at some definite conclusion, Bäumler has studied all the cases occurring in the medical clinic at Freiburg since the year 1876. He prefers the designation "perityphlitis" to that of "appendicitis," because, at the time the physician is called in nearly all cases, the inflammation that started in and around the appendix has spread to the cecum. He does not believe that an inflammation restricted to the mucous membranes of the appendix will give definite symptoms by which a diagnosis can be made. He mentions some cases of very acute peritonitis in which operation would have been useless. He has statistics of 187 cases: 124 males with 8 deaths, and 63 females with 6 deaths, giving a total mortality of 7.5%. Of these cases 14, of whom one died, were transferred to the surgical side for operation. More than 2/3 of the patients were between the ages of 15 and 25 years. He describes in detail the cases of all patients who died. In some of these there was sepsis from metastasis. The most important point in the prognosis of these cases appears to be the time in the course of the disease at which they come into the hands of the physican. In regard to the treatment, he does not believe that mere constipation is of itself dangerous. Laxatives or enemata to relieve this symptom may sometimes have a very bad effect. He mentions the case of a girl of 21, in whom laxatives apparently caused an increased tendency to perforation, giving rise to general peritonitis and death. He believes that the most important treatment is the subcutaneous injection of morphine which quiets peristalsis and relieves the pain. Among the symptoms Bäumler calls particular attention to the fact that tenderness over McBurney's point is not so common as many have maintained. It is remarkable how frequently a perityphlitic tumor will disappear. Bäumler admits that probably, if all cases could be seen in the early part of their development, the removal of the appendix would be the best treatment. However, few patients ever do come to the hands of the physician at once, and rarely will consent to operation at first, and the relatives of the patient often object to the operation, while he himself appears to be so well. Operation, however, must be insisted upon whenever there is pus or a necrotic area, when there is increase in the symptoms after the formation of the primary tumor; when there is increase in the temperature, and the frequency of the pulse; and when there is edema of the subcutaneous connective tissue. He calls attention also to the value of the leukocyte count in the diagnosis. [J. S.]

3.—**The diagnosis of hour-glass contraction of the stomach** is based upon the following points: (1) Water poured into the stomach through the stomach-tube cannot be obtained again; this symptom also occurs in incontinence of the pylorus; (2) toward the end of the stomach washing, after the water has returned completely clear, it may suddenly again become turbid; this also occurs in ordinary stomachs; it may be due to a spasm of the entrance of the pylorus. (3) During inflation of the stomach one part first extends and then the other: The first part to dilate may be either the pyloric or the cardiac; this may also occur in incontinence of the pylorus, or in cases of hour-glass contraction it may be absent if the cardia is behind the ribs. (4) During peristalsis of the stomach the 2 parts may be distinctly observed. This last symptom, however, often fails. Ewald, in addition, suggests the use of the gastrodiaphane. When it is employed, the cardiac end may be distinctly illuminated, whereas the pyloric portion remains entirely dark. If a thin rubber bag is introduced into the stomach and inflated, when the stomach is of normal size, it will be found in the median line and easily pushed to the right; in cases of hour-glass contraction it remains in the left hypogastric region, and the pyloric portion of the stomach is not distended. He describes 2 cases, the first occurring in a woman, 36 years of age, who, at the age of 16, had had symptoms of gastric ulcer. Later there were symptoms of gastric dilatation and pain and pressure in the stomach. She was profoundly emaciated, the gastric juice showed excessive acidity, and there was a history of vomiting of solid food 12 hours after ingestion. When the stomach was inflated it was found to be quite large. Gastrodiaphany, however, gave a very limited area of illumination. At the same time there was a splashing sound to the right and downward in the area that had been previously inflated. Only a small quantity of the water introduced into the stomach could be obtained. Operation showed a typical hour-glass contraction of the stomach due to an ulcer upon the small curvature. The patient made a complete recovery. The second patient, a woman, of 44, had gastric disorder since the age of 2 years. She had had repeated hemorrhages from the stomach. The stomach contents contained no free HCl., but a deficit of 15. The results of the physical examination were the same as in the previous case. In addition, the introduction of the rubber balloon showed that it occupied a much more limited area than could be inflated. At the operation in this case hour-glass contraction was not discovered, but anastomosis was performed between the dilated stomach and the duodenum. The patient again had a severe hemorrhage and died. At the autopsy extensive contraction was found near the cardiac end of the stomach, There was an ulcer on the smaller curvature. The author also mentions the case of a woman, 52 years of age, who had attempted suicide 2 years previously by drinking acid, and from that time had suffered from gastric disorders. A tumor was found in the abdomen near the umbilicus and a second tumor slightly to the right. At the autopsy a carcinoma of the lesser curvature, and swollen glands in the lesser omentum were found. There was some contraction of the stomach as a result of these tumors. This was not a case of typical hour-glass contraction of the stomach. [J. S.]

4.—Gerhardt reports the following case. A woman, 63 years of age, had had pains in the limbs, developed icterus and then had repeated attacks of pain. In a particularly severe attack the **pain** was felt **on the left side.** The liver was slightly enlarged, and there were some large hemorrhagic papules on the inner side of the left arm. Later the patient passed a **gall-stone** the size of a cherry-stone. This patient had movable kidneys on both sides, and Gerhardt suggests that perhaps the congested left kidney was the cause of the left-sided pain. He reports another case, that of a woman with kyphoscoliosis, in whom this pain was also present, and whose left kidney was distinctly movable. [J. S.]

5.—Kaufmann reports the case of a man who had symptoms of nervous dyspepsia. There was hyperacidity and diminution of starch reaction. There was some blood in the stomach-contents. The patient rapidly grew worse in spite of bismuth treatment. There was retention of stomach-contents, and finally he developed **tonic cramps in the extremities.** Several days later, one hour after washing out the stomach, there was sudden severe pain in the gastric region, symptoms of collapse, and intense rigidity of the abdominal muscles. Four hours later operation was performed, and perforation was found in an **ulcer on the anterior surface of the stomach.** A portion of the stomach, including this ulcer and the pylorus, was resected, and gastroduodenal anastomosis performed. During the subsequent rectal alimentation the patient complained of burning in the stomach which was combated by the administration of alkalis. The ulcer proved to be an adenocarcinoma. For some time the patient improved, then symptoms of stagnation again occurred, and he finally died. During the latter period of his life there was again a tendency to tonic cramps. The author suggests that in this case the tonic spasms were possibly caused by the excretion of large quantities of chlorine in the gastric juice. [J. S.]

6.—Kriege reports 3 interesting epidemics of **dysentery.** He believes that the bacillus discovered by Kruse is the cause, but, at the same time, that we must accept a certain amount of individual predisposition. The statistics that he has obtained indicate that the disease is more common among the poor than among the rich. It is most common in the first 5 years of life; it then becomes relatively common after 60 years of age. The mortality is greatest before 5, and after 60 years of age. The disease appears to be more severe in adults than in infants. The mortality was 11% in general, but in the hospital, where presumably the average severity of the cases was greater, it was 16.4%. The characteristic symptoms were almost invariably present. Fever, however, was often lacking, and the temperature was not abnormally high. In 2 patients there was severe polyarthritis, in neither of them suppuration occurred. In one patient there was peritonitis, and in another pyemia. Phlegmonous infiltration, decubitus and abscess were observed. In 3 cases abortion was produced, and in 2 others pregnancy was not disturbed. Occasionally albuminuria was present, but rarely nephritis. A careful study of the geography of the town, which lies in a narrow valley, showed that every year the area extended in which dysentery was common. Certain houses appeared to be particularly predisposed. For example, in one house there had been cases during each of the 3 epidemics, and 66 houses had suffered during 2 epidemics. Only 16 times were the same families affected in the 67 houses, so that the infection was not in the family, but in the house. In one case a man, his wife and 5 children were attacked by the disease; one daughter escaped and she had had the disease 2 years before. Three persons had dysentery twice. A certain amount of protection is, therefore, obtained by an infection. The cause of the first epidemic could not be determined. The cause of the spread of the epidemic appeared to be chiefly direct contagion. It is curious that this did not appear to be recognized by the general public, and but few precautions were taken. There also seemed to be a certain amount of transmission as a result of carelessness in washing infected clothing and bed linen. The method of combating the contagion consisted in distributing literature to the people, careful disinfection of the infected spots and of the wash (it was found that the antiseptic solution was sometimes only applied after the laundry work had been completed), and, whenever possible, the isolation of the patients, although this was exceedingly difficult, and not more than one quarter of the patients could be persuaded to go to the hospital. In several cases it could be determined that convalescents had carried the epidemic to other regions. [J. S.]

7.—Penzoldt, in order to determine **the effect of carbonic acid upon gastric digestion,** has performed the following investigation: On alternate days test-breakfasts, consisting of a roll and either spring water or carbonated water, were taken. At varying intervals, from a quarter to half an hour, the gastric contents were expressed and examined for lactic acid, hydrochloric acid, albumin, peptone and sugar. The experiment terminated when no food could be obtained from the stomach by expression; there was no acid reaction of the contents, and washing showed the stomach to be empty. In addition, a series of experiments was made in a similar manner, in which a test-meal consisted of 250 gm. of beefsteak, and half a liter of spring water or carbonated water were substituted for the test-breakfast. Examination of the carbonated water showed that each liter of water contained about 2 liters of gas. The results showed that, when carbonated water was employed, the secretion of acid commenced earlier and reached a higher degree than when the spring water was employed. The gastric digestion is more active, and, therefore, the acid curve descends more abruptly. Penzoldt believes it possible that we may find reason to use carbonated waters more freely in gastric disease, and that there is no reason why they should not be administered liberally in febrile states. [J. S.]

(To be Continued.)

ZEITSCHRIFT FUER HEILKUNDE.

November, 1902. (Volume 23, No. 11.)

1. The So-called Tumors of the Auditory Nerve.
FRITZ HARTMANN.
2. European Chyluria.
KARL FRANZ and KARL VON STEJSKAL.

1.—**Peculiar tumors** have been described in the recess between the pons and cerebellum, generally close to the auditory and facial nerves. They are easily removed by peeling them out and on examination show various histological conditions. Hartmann collected 23 cases from the literature and reports in full 3 case-histories of patients whom he has observed. Patients varied between 30 and 55 years of age, and two-thirds were women. The cause was mainly congenital, yet in 3 cases the condition followed traumatism. The symptoms included loss of hearing, headache, vertigo, fatigue in the extremities, and finally marked nervous deafness. General tumor symptoms followed. The localizing symptoms were of value in diagnosis. The illness lasts 2 to 8 years, ending fatally unless operated upon. Operation is advised, especially peeling out the tumors from their surroundings. Since writing this article Hartmann has seen another case. [M. O.]

2.—**Chyluria** is the passage of urine which is milky from the presence of chyle, the fat from the intestine. In the tropics this is due to filaria in the blood and urine, but no parasites are found in the cases reported in Europe. Franz and von Stejskal have collected 41 cases, most patients being middle aged, and some of them pregnant. In 3 men traumatism was considered a cause. In some cases the urine was chylous all the time: in others only at times; in still others, only the day-urine was affected. After reviewing the subject fully, they conclude that this exists as an independent affection; besides, bloodcorpuscles are found in the urine in Europe as in the tropics. From their experiments, which are given in detail, they find that there is a **distinct relation between the amount of fat in the intestine and the chyluria**, but this is quite independent of any fat injected subcutaneously. Alimentary glycosuria occurs early after increasing the sugar in the chyle. Besides, mononuclear leukocytes are found in chylous urine in large quantities. Many details follow.

[M. O.]

ZEITSCHRIFT FUER KLINISCHE MEDICIN.

Bd. XLVII., Hefte. 3 and 4.

1. The Experimental Production of Parasitic Myxomycetes-tumors by injecting Plasmodiophora Brassicæ. W. PODWYSSOTZKI.
2. On Inclusions in Vesical Tumors. L. MICHAELS and C. GUTMANN.
3. The Newer Contentions in the Realm of Hematology. A. PAPPENHEIM.
4. Anticomplements and Anti-amboceptors of Normal Serums and Pathological Exudates. H. T. MARSHALL and J. MORGENROTH.
5. On the Chemical Constitution of Chlorotic Blood. F. ERBEN.
6. A Case of Adams-Stokes Disease. B. LEWY.

1.—The general conclusions from the work reported are, that it is possible to produce a parasitic myxomycetes-tumor and that this tumor is of mesodermic origin and resembles chiefly a perithelial infectious granuloma. The spores of Plasmodiaphora brassicæ are very eagerly taken up by the macrophages, and cause the latter to exhibit increased activity and amytotic division of the nucleus. Within the cells the parasites are entirely dissolved by the protoplasm of the cells, so that they become scarcely noticeable, the greater part of the spores being destroyed, their fat being first of all assimilated. Some of the parasites show proliferative changes; and it is not impossible that the parasites that are in this way set free in the stage of the myxameba cause further infection of the lymphatic and perivascular spaces. In such cases empty capsules may be found in the cells that have been first infected. The dead parasites do not cause the tumors that are produced by the living parasites. The work of the author was not finished, because of his change of location.

[D. L. E.]

2.—Three patients are reported in whom there were multiple tumors arising from the epithelium and presenting, clinically and pathologically, benign characteristics. In 2 patients the tumors were found unexpectedly. There were no metastases. In these tumors were found objects that were chiefly extracellular—but some were also partly intracellular—and that were not identical with any of the inclusions previously described. With eosin-hematoxylin they were colorless, markedly refractive balls, of a diameter of about 10 microns, and the smallest had a diameter as small as one micron. Acids and alkalis did not alter them. Part of them gave an iron reaction. They presented some resemblance to the objects described by von Leyden.

[D. L. E.]

3.—Pappenheim gives a long discussion of the questions that have recently arisen in connection with hematology. He first gives a discussion of the genealogical history of the bloodcells and refers them all to an origin in mothercells in the bone marrow. He says that the various forms of cells develop from these mothercells, but that the development always follows the same course, the different cells, as found in the circulation. not being derived from each other. He then discusses at length the recent views concerning leukemia, and insists upon the correctness of his own view, which is opposed, in several points, to that of Ehrlich and to Pincus's modification of Ehrlich's view. Pappenheim believes that a leukemic change in the blood is always dependent upon disease of the bone marrow, and he divides his cases as follows: (1) Lymphocytic leukemia. (a) Ordinary cases. In these there occurs a pseudoleukemic change in the glands, and this is followed by a lymphoid degeneration of the bone marrow. The latter is followed by leukemic blood changes. (b) Cases without changes in the glands. In these there is, in the beginning, a lymphoid degeneration of the bone marrow, and then the blood changes of leukemia. (2) A mixed-cell leukemia. In this there occurs, first, a change in the bone marrow without preceding pseudoleukemic changes. There is then the change in the blood and eventually there may be alterations in the glands. [D. L. E.]

4.—Marshall and Morgenroth report a series of studies concerning the unity or diversity of the antibodies in normal serum. They find that human serum is capable of protecting human bloodcorpuscles from hemolysis, and that the serum of other species is capable of affording the same protection, although the serums of different species differ. They also find that the serum of human blood has antihemolytic action when added to the serums that are hemolytic for the corpuscles of other species. Pathological exudates were also examined and were found to possess, in general, the same effects as the previously examined serums. One exudate was of considerable importance, because it reduced the hemolytic action upon ox-blood by the amboceptor of the serum of a rabbit treated with ox-blood or the complement of guinea-pig serum. This case was of particular importance, because it showed the accuracy of the technique that makes it possible to determine quantitatively 3 different substances present in a serum. The authors conclude with a critical discussion of the investigations of Besredka and of that author's conclusions. His most important erroneus conclusions were that all the amboceptors produced by immunizing any species by the injection of bloodcorpuscles are alike; and that the hemolysis of foreign blood species by normal serums depends upon the presence of a single alexin, and not upon the presence of a complex hemolysin composed of amboceptor and complement. The authors refer to their own work and to other recent papers of the Ehrlich school, as demonstrating that Besredka is wrong in both these statements. They believe that his view of the question is such as to interfere seriously with the progress of serumtherapy. They refer especially to the recent successful work of Schrieber and Schiller and of Römer, who have obtained successful antiserums for therapeutic purposes by using mixed serum from several species of animals, following the suggestion of Ehrlich and Morgenroth that it would be wise to develop, for therapeutic purposes, serum consisting of mixed serum from animals that differ as largely as possible in their receptors. [D. L. E.]

5.—Erben gives his results from a very painstaking and elaborate study of the blood in some cases of chlorosis. The general conclusions are that the proteids are decreased, as a result of the decrease of the hemoglobin, the relation of the albumins to the globulins being normal, and the fibrin being increased; the fat is increased; the lecithin is decreased in the serum and the total blood and increased in the red cells; the cholesterin is decreased; phosphoric acid, potassium and iron are decidedly decreased and calcium and magnesium increased. The sodium chloride of the serum was not increased, although this is apparently the case. These results are discussed in relation to the question as to whether chlorosis is a disease of blood destruction or imperfect blood formation, and Erben decides that the only facts that can be considered to favor the theory of increased blood destruction are the high potassium-content of the serum and the high fat-content of the red cells; but these facts can be explained in other ways, and the facts that the serum was free from iron and that lecithin and phosphoric acid of the serum were reduced speak strongly against the possibility of any marked increase in the blood destruction. [D. L. E.]

6.—Lewy reports an extremely interesting case in full detail. It occurred in a man of 73, who, without definite cause, began to have convulsive attacks associated with very slow pulse; indeed, in many of the attacks there was complete absence of the pulse for many seconds, sometimes for about half a minute. The course of these attacks is described with great care, several instances being referred to in which very brief attacks, lasting from half a minute to a minute, occurred as often as 40 times in an hour and a half. Various kinds of treatment were tried, atropine being relied upon for some time because of its usual physiological effect. However, all treatment was practically without avail. The man had improved somewhat from his most serious condition, but he finally died. An autopsy was not obtained. The symptoms of an attack of the Adams-Stokes syndrome, which Lewy considers to be of importance, are slowing of the pulse or actual cessation of the heart-action, the occurrence of sweating, coldness of the skin, loss of consciousness, mydriasis, movements of the eyeballs, tonic and clonic convulsions of the voluntary muscles of the extremities, gritting of the teeth, Cheyne-Stokes breathing and outcries. Sweating in the attack has not previously been described. In this patient it was a very striking symptom. [D. L. E.]

THE DUBLIN JOURNAL OF MEDICAL SCIENCE.

January, 1903. (Third Series, No. 373.)

1. A Case of Lymphadenoma Associated With Recurrent Fever. HENRY T. BEWLEY and J. ALFRED SCOTT.
2. The Control of Consumption by the Public Health Authority. T. PERCY C. KIRKPATRICK.
3. Bettws-y-Coed as a Health Resort. JAMES DOUGLAS MACDONOGH.

1.—Bewley reports a case of **lymphadenoma associated with recurrent fever** and quotes Dr. Shaw, who states that (1) lymphadenoma with recurrent fever is not a special form of disease; (2) such cases are due to a terminal infection occurring at any time during the last year of life of some patients affected with lymphadenoma; (3) the nature of the bacterial invasion is different in different cases, and in some cases proof of a bacterial invasion is wanting; (4) in a considerable number of patients there is great constitutional disturbance with elevation of temperature, rigor, vomiting and diarrhea, anorexia and malaise; (5) in other patients the superficial lymphatic glands, and even the spleen, become very tender and enlarged during the attacks; (6) the skin over the enlarged glands may become reddened and show an increase of local temperature; (7) the prognosis is, as a rule, hopeless, and the duration of life after the onset of the periodic attacks of fever averages about 7½ months, but may be as much as 12 or 14 months. [T. M. T.]

2.—Kirkpatrick's statistics show that Ireland has an increasing mortality from tuberculosis, while all the other countries have a diminishing one. In 1900, phthisis caused 10,076 deaths out of a total of 87,606, or a rate of 225.6 per 100,000. This, he thinks, is due purely to the dilatory way consumption is fought in the country. His advice is that (1) A voluntary notification of consumption cases should be made; (2) education of the public in general and of the patient and his friends in particular, in the nature of the disease; (3) treatment of the patient's surroundings; (4) supervision; (5) provision of isolation hospitals, and (6) protection of the food-supply from contamination by the tubercle bacilli. [T. M. T.]

THE GLASGOW MEDICAL JOURNAL.

January, 1903. (Vol. LIX, No. 1.)

1. A Retrospect and Prospect in Obstetrics and Gynecology. J. NIGEL STARK.
2. A Case of Diphtheria Complicated by Acute Endocarditis of the Mitral Valve. JOHN WAINMAN FINDLAY.
3. An Old Stethoscope. JOHN F. FERGUS.
4. Faculty of Physicians and Surgeons, Glasgow; Presentation to the Faculty of the Portrait of the Secretary and Librarian, Alexander Buncan, B. A., LL. D.

2.—Findlay reports a case of **diphtheria complicated by acute endocarditis of the mitral valve**, and from its study he concludes as follows: (1) That the child developed endocarditis during an attack of diphtheria; (2) that such a complication is extremely rare; (3) the evidence of bacteriologists suggests, in spite of the fact that the diphtheria bacillus has been found in the vegetations of endocarditis, that this complication probably results from some organism other than the bacillus diphtheriæ itself, which only perhaps predisposes the tissues to succumb; (4) the most probable microbic offender in this case was the versatile and ubiquitous pneumococcus; (5) it is impossible to say how far the serum itself may have been responsible for causing the endocarditis. [T. M. T.]

THE EDINBURGH MEDICAL JOURNAL.

January, 1903. (Vol. XIII, No. 1.)

1. A Contribution to the Study of the Local Distribution of Cancer in Scotland. W. G. AITCHISON ROBERTSON.
2. Rheumatoid Arthritis as a Cerebrospinal Toxemia. R. LLEWELYN JONES.
3. Syphilis and Life Insurance. BYROM BRAMWELL.
4. Sensations in Drowning. JAMES A. LOWSON.
5. Softening About the Right Calcarine Fissure, Associated with Left Hemianopia. J. ARTHUR PERDRAU.

1.—Robertson, in his paper on the local distribution of cancer in Scotland, quotes the various opinions of the authorities as follows: High death-rate from cancer is invariable in districts in which there are large rivers which seasonably overflow their banks. The districts are geologically composed of alluvium and subsoils of clay and every variety of age and formation. The district in which cancer mortality is low embraces regions in which the rocks belong to the old palaezoic formation and especially to the carboniferous limestone period. [T. M. T.]

3.—Bramwell believes that the **longevity of syphilitics** who were otherwise healthy when they presented themselves for insurance is on the average shorter, probably considerably shorter, than their longevity would have been if they had not had syphilis. If a history of syphilis is given we should consider: (1) The physique and constitutional tendencies; (2) the family history, (tubercle, gout, insanity, etc.); (3) the habits, especially as regards alcohol; (4) the occupation, and (5) the circumstance and surroundings of the proposer. [T. M. T.]

4.—Lowson's experience of the **sensations in drowning** were: A great pain produced in the chest and which increased at every effort of expiration and inspiration; he says it seemed as though he were in a vice which was gradually being screwed up tight until he felt as if his sternum and spinal column must break. The "gulping" process became more frequent for about 10 efforts. The pressure after these "gulpings" seemed unbearable, but gradually the pain seemed to ease up as the carbonic acid was accumulated in the blood. At the same time the efforts at inspiration with their accompanying "gulps" of water occurred at longer and longer intervals. His mental condition, if anything, seemed to be more acute. Before finally losing consciousness the chest pain had completely disappeared and the sensation was actually pleasant. [T. M. T.]

5.—Perdrau reports a case in which (1) the patient exhibited definite clinical evidence of left hemianopia: (2) there was a small area of softening at the apex of the right cuneus and adjoining portion of the ingual convolution, the proper nervous tissue being replaced by connective tissue rich in cells; (3) the softening was due to thrombosis occurring in the right parieto-occipital artery, which was markedly atheromatous. [T. M. T.]

THE SCOTTISH MEDICAL AND SURGICAL JOURNAL.

January, 1903. (Vol. XII, No. 1.)

1. On Certain Forms of Menstrual Suffering, and the Action of Potassium Permanganate Therein. STEPHENSON.
2. Syphilis and Life Insurance. J. J. GRAHAM BROWN.
3. Notes on Two Cases of Cancer of the Cervix at the Fifth Month of Pregnancy Treated by Panhysterectomy; with Remarks on Treatment of Cancer During Pregnancy. N. T. BREWIS.
4. Points in Early Diagnosis and Treatment of Acute Intestinal Obstruction, With Illustrative Case. H. M. W. GRAY.

1.—To be abstracted when concluded.

2.—Brown, in his paper on syphilis and life insurance, suggests the following questions to be asked an applicant for life insurance who has a previous history of syphilis: (1) When did he consult a physician in the matter? (2) What was the character and position of the primary sore? At what date did it first appear? (3) What were the characters and approximate dates of the secondary symptoms? (4) Get a full description of the treatment adopted. What was its duration? (5) Find out how long the applicant has been free from any symptoms of the disease. (6) Have there been any tertiary manifestations? (7) Is he now leading a steady life? (8) Find out his habits in regard to alcohol. (9) Ascertain whether he has any special liability to rheumatism or other constitutional disease. (10) Do you consider this life insurable? If so, do you think an extra rating necessary and to what extent? [T. M. T.]

3.—Brewis considers the **surgical treatment of pregnancy** complicated by **cancer of the cervix** under 2 heads: (1) Those cases in which the disease is confined to the uterus and which offer a reasonable hope that by surgical means the mother may be cured of the disease, and the child, if it has reached a viable age, have its life saved; (2) those cases in which the disease has extended beyond the uterus and which afford no hope that the mother can be cured of the disease, but in which our efforts are directed chiefly to saving the life of the child. [T. M. T.]

4.—Gray's opinion is that, in cases presenting symptoms of **intestinal obstruction** and in which the history and examination do not point to fecal impaction, operation should not be postponed longer than 24 to 36 hours. The most important symptoms for guidance are: (1) More or less sudden onset of vomiting; (2) absence of flatus or feces per rectum (after the bowel has been thoroughly cleaned by enema); (3) recurrent and more or less severe colicky pain, which pain can be also brought on by manipulating the abdomen or by the application of cold to its surface. [T. M. T.]

LA PRESSE MEDICALE.

December 24, 1902.

1. The Serotherapy of Typhoid Fever. CHANTEMESSE.
2. The Ferments of Milk. P. NOBECOURT and P. MERKLEN.

1.—Treated editorially.

2.—Will be abstracted when concluded.

Society Reports.

PHILADELPHIA OBSTETRICAL SOCIETY.

Meeting held February 5, the president, Dr. J. M. Fisher, in the chair.

Dr. C. S. Barnes read a paper on the **etiology of eclampsia**, the cause of which is not known. Several theories were presented, that of mechanical irritation and the so-called pressure theory. The condition has been called reflex, while efforts to prove its uremic origin have failed. The rational conclusion is that eclampsia is an auto-toxication, the toxins probably being animal alkaloids. The toxemia is ascribed to the excess of urea-forming substances in the system. The commonly accepted theory is that this toxemia is the result of a vice of constructive metabolism. There is strong ground for the belief that the liver is the most important excretory organ and that the urea index is significant of the functional activity of the liver, rather than of the kidneys. Some writers have concluded that the function of the thyroid gland, normally enlarged in pregnancy, is to regulate and control metabolism. Very many predisposing causes have been given. The most plausible cause of the convulsion is that the poisons circulate throughout the system, including the brain and cord, until, the toxins accumulating, there comes a time when the equilibrium of the nervous system can no longer be sustained. Emphasis was laid upon the predisposing causes so that the physician, observing them, may employ successful prophylactic treatment.

Dr. Wilmer Krusen discussed the **treatment of eclampsia**, dividing it into prophylaxis, treatment of the convulsions, treatment during intervals and after-treatment. In the prophylaxis, the urea excretion should be carefully watched. Should it fall below 1½%, calomel and caffeine are advised. If there is high arterial tension, he gives nitroglycerine. Thyroid extract, saline solutions and potassium iodide may all be of value in the prophylaxis. In the treatment of the convulsions he uses chloroform, sometimes with oxygen, and ice-bags applied to the head and neck. Between convulsions venesection should be performed and injections of normal salt solution given. Morphine is also given hypodermically. Hot air and hot water baths should not be given. If eclampsia comes on during the last month of pregnancy, abortion should be induced. Cesarean section is only advised when something prevents vaginal delivery. Mechanical dilatation of the cervix under rigid antisepsis is the best method of procedure. Delivery should be as rapid as possible, and in the after-treatment absolute rest, with attention to all excretions, is necessary.

Dr. R. C. Norris emphasized the fact that attention must be paid to the functional activity of the liver of the pregnant woman as well as to that of her kidneys. Not only should the urine be examined regularly, but the patient must be seen frequently. The prophylactic treatment is the most important. He especially recommends lavage of the intestines. In the treatment chloral and veratrum viride are of great value in some cases, especially those associated with anemia. Venesection should not be done in every case. When there is edema of the lungs, injections of salt solution should never be given. He only gives morphine in aggravated cases. He reported a case of Cesarean section performed for eclampsia. He also emphasized the value of saline purges. Dr. Stricker Coles believes that 90% of the cases of eclampsia can be prevented. He described 3 clinical forms of the disease. He also recommended the use of veratrum viride in 10 m. doses, repeated if necessary.

Dr. J. C. DaCosta thinks that more than 90% of cases can be prevented if the patient is treated in time. Many cases of eclampsia are due to neglect of the patient. He also relies mainly upon venesection in the treatment. Dr.

L. J. Hammond believes the changes in the liver to be the result of a primary nephritis and, therefore, advises decapsulation of the kidney. Dr. Hopkins has used the Stroganoff treatment in 5 cases without mortality. He considers eclampsia an acute infectious disease, rarely lasting over 48 hours. The Stroganoff treatment combines the use of chloral with that of morphine. Dr. G. M. Boyd prefers chloral and morphine in the treatment and dislikes the use of veratrum viride. Dr. D. E. Longaker laid great stress upon the medical treatment of eclampsia, esecially the use of veratrum viride. Chloral and bromides come next in value and are closely followed by elaterium.

Dr. Barnes, in closing, said the chloroform must be given before the convulsion in order to be of value. He reported several cases, stating that he believed the toxemic cases to be more dangerous than those in which nephritis had previously existed. Dr. Krusen stated that he did not use venesection in anemic women. Morphine is of value. He does not see why decapsulation of the kidney may not be effective in these cases. Stroganoff has achieved wonderful results with his treatment, far superior to American statistics. Dr. Krusen does not use chloral or bromides.

MANHATTAN DERMATOLOGICAL SOCIETY.

Meeting held February 6, Dr. L. Weiss in the chair.

Dr. W. S. Gottheil presented a child, 2 years of age, with well-marked **ichthyosis.** There was a peculiar exfoliation at the site of a recent vaccination. He has been using sulphur ointment. Dr. Bleiman stated that mild cases apparently get well. Dr. Gottheil also presented a man, showing typical **acne varioliformis** on the face, scalp and forehead. The Finsen light was advocated as treatment. He then showed a man of 50, with a raw, red, excoriated dorsal surface of his hand, following exposure to X-rays. Dr. Gottheil called it **Röntgen dermatitis.** A lesion near the angle of his eye looked like **lupus erythematosus.** Drs. Oberndorfer and Sobel considered the face lesion **lupus vulgaris;** that on the hand was now tubercular. Dr. Bleiman stated that local obliterating endarteritis accounted for failure of the reparative process.

Dr. A. C. Geyser presented a woman, aged 35 years, unmarried, with a hard **tumor of the right breast,** with little or no pain, slight axillary adenitis and retracted nipple. Upon X-rays the breast diminished in size, and the tumor became movable and softer. Drs. Abrahams and Weiss called it **carcinoma;** Drs. Gottheil and Oberndorfer, **sarcoma.**

Dr. A. Bleiman showed a girl of 8 years, with a **deeply excavated ulcer on the margin of the tongue.** Dr. Gottheil considered it a traumatic ulcer, dependent upon dental caries. Dr. Sobel stated that the same variety of bacilli which causes dental caries is responsible for ulceration in the mouth. Drs. Oberndorfer and Weiss considered it a simple ulcer dependent upon irritation.

Dr. I. P. Oberndorfer showed a case of **primary syphilitc pigmentation** in a man with undoubted signs of acquired syphilis. The pigment stains were noted on the neck, shoulder and arms; they were not preceded by any exanthem. Dr. R. Abrahams showed a man who had a **chancre** 13 weeks ago, in whom no secondary manifestations have appeared. The present eruption was the first one observed since the chancre, a small papular eruption which he called **lichen syphiliticus.** These cases were considered rare syphilitic manifestations.

Special Article.

TROPICAL DISEASES.

EIGHTH LECTURE IN A COURSE ON TROPICAL DISEASES.*

By CAPTAIN CHARLES F. KIEFFER,
Assistant Surgeon, U. S. Army.

Gentlemen: We will study to-day the filariæ and the diseases caused by these parasites. This group is very extensive and complicated, and we will be able to do little more than review the subject in a very superficial manner. It has not been very long since the entire knowledge and teaching of these parasites was included under the heading filaria sanguinis hominis. Demarquay first described the filaria, in 1863, in a case of chylous dropsy of the tunica vaginalis. It was found by other observers in chyluria, and, finally, Lewis, in 1872, demonstrated it in the peripheral circulation. Later studies have shown that the filariæ are very widely distributed, indeed, throughout the animal kingdom and in man. As in uncinaria, the broad rule seems to hold true that man is not infected by the species infective to the lower animals, although the filaria inmitis of the dog has been twice found in man. The studies, particularly of Manson, have classified an extensive list of the filariæ peculiar to man. The list is incomplete, however, particularly with reference to the identification of the parent worms. For you must understand that this class of parasites goes through two corporeal and one extracorporeal phases. First of all, there is the ingestion of the worms, probably in infected water. They emigrate to the lymphatic vessels, particularly the central lymphatic, the thoracic duct, and there develop into adult forms. The females produce an enormous number of embryos which find their way through the thoracic duct into the general circulation. The intermediate host is the mosquito. The embryos are sucked into the mosquito with the blood. In the stomach of this insect they pass through an ecdysis, penetrate the stomach wall and are finally found encysted in the thoracic muscles, very much as are trichinæ in man. When the mosquito dies, the young filariæ escape into the water and are again infective for both animal and man, thus completing the cycle. We have then the parent worm, the normal habitat of which is in the lymphatic system; the embryo, normally found in the blood circulation, and the extracorporeal or mosquito stage of the parasite.

The principal varieties that affect man are as follows: Filaria nocturna, filaria diurna, filaria perstans, filaria Demarquaii, filaria Ozzardi, filaria Magalhæsi, filaria inmitis and filaria Loa. Of this large group the filaria nocturna and the filaria perstans are the only ones known to cause definite pathological conditions.

Filaria Nocturna. This is the parasite originally described as filaria sanguinis hominis. When examined in a drop of the peripheral blood, it is found as a minute transparent worm, about 1-80 inch in length and about the diameter of a red bloodcorpuscle. If examined in a slide ringed with vaseline, to keep the blood from drying, it is seen to be in

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Eighth lecture, delivered at the Jefferson Medical College, Philadelphia.

most active motion. So fast at first, as to make the demonstration a little difficult, the only obvious appearance being a rushing, swirling disturbance of the red bloodcorpuscles. When the movements slow down, the worms can be readily seen and studied. They are present, sometimes, in very great numbers. The embryos have a fine, transparent sheath or sac, that is somewhat longer than the body of the embryo itself. In addition to the rapid snake-like movements, as the slide cools the embryo can be seen in violent movement within this sheath or skin. These movements seem directed at freeing itself from the covering, and sometimes the actual ecdysis of the worm may be observed. The empty sheaths are very commonly seen in the blood specimens and may be very confusing to you, if this point be not borne in mind.

The most striking feature of the filaria is its periodicity. It is found only at night in the peripheral circulation, hence the name filaria nocturna. Beginning at six o'clock in the evening, a few filaria may be demonstrated. As the hours pass, they are found in constantly increasing numbers, until, by midnight, they are fairly swarming in the blood taken from the lobe of the ear or the finger tip. After this hour they gradually diminish until by daylight they have entirely disappeared from the peripheral circulation. It has been shown that they retire to the larger vessels, particularly the lungs. What the cause of this periodicity may be is very difficult to say. Observation seems to point to the diurnal ebb and flow of physiological activity, that precede and follow sleep, as the cause, since it has been shown that this periodicity may be reversed by causing the patient to sleep in the daytime. When this is done, the parasite is found during the day and not at night. So it seems clear that the periodicity follows the active working period of the day, although it is not entirely dependent on the sleeping state, since the parasites appear some hours before sleep and persist some hours after waking.

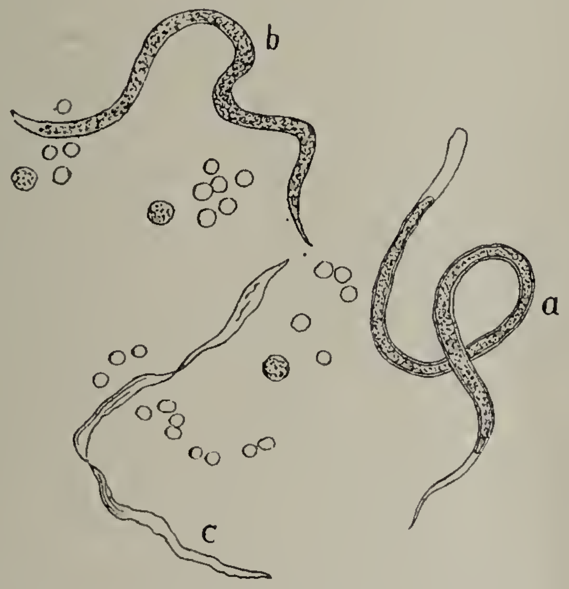

Fig. 1. Filaria nocturna; a. normal parasite; b. parasite escaped from sheath; c. empty sheath.

The microscopical demonstration of the worms in suspected blood is comparatively easy. It should be drawn near midnight, at the time when the parasites are most numerous. Take a large drop of blood and make a thick, coarse spread. You may then simply dry the slides in air, without covers, or, if you desire to study the parasite in motion, you will cover the blood drop with a cover slip and ring it with vaseline. In such a preparation, the filariæ will retain their motility for days. If you desire to make the filariæ more conspicuous, you may use one of the means well known to you of decolorizing the red bloodcorpuscles, as washing the film in distilled water, without previous fixation, or washing in dilute acetic acid. If now you treat the spreads with a watery solution of fuchsin or methylene blue, you will find the parasites and white cells conspicuously stained. Remember, these worms are quite large and an inch objective will be ample for the search and demonstration.

The mosquito is the intermediate host. When a mosquito sucks blood containing these filariæ, the parasites escape from the sheaths, while the blood is still in the stomach of the insect. Thence they rapidly pass to the thoracic muscles. In this location, in from six to seven days, the metamorphosis from embryo to the young of the adult forms takes place. About this time the female mosquito deposits her eggs in water and dies. The minute filariæ emerge as young parent worms, 1-16 inch long. When swallowed, the worms penetrate the stomach, entering the lymphatics and finally develop into the adult form. The particular mosquitoes known to act as host are the culex fatigans and culex tæniatus; in the Philippines, the anopheles Rossii and the anopheles costalis.

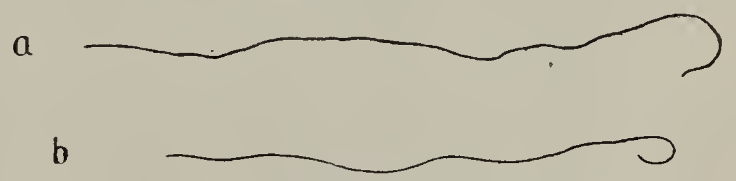

Fig. 2. Filaria nocturna, parent form (F. Bancrofti); a. female; b. male, actual size.

The filaria Bancrofti, the adult form of the parasite with which we have been dealing, is a long, delicate, nematode worm. It is from three to four inches in length and about the thickness of a coarse hair or bristle. The sexes are distinct and can be crudely recognized in the dead specimen by the tail of the male worm being more sharply recurvated than that of the female. The habitat of the parent worms is the lymphatic system; commonly in the thoracic duct, although any portion of the peripheral lymphatics may be invaded. There may be only one worm of each sex, or there may be many. They are commonly found coiled together in a tight mass in the lymphatic trunks.

The geographical distribution of the filaria nocturna is very extenive. It has been found in all tropical and most subtropical countries. Its southern limit of observation is Brisbane. In the United States it has been found in Mobile, New Orleans and as far north as Charleston. In some tropical countries its distribution is very extensive. In the Samoan Islands from 10% to 50% of the inhabitants are said to be infected; in the Friendly Islands, 32%. Small communities may show as high as 70% of the total population infected.

The filariæ cause no symptoms in the large majority of cases. The embryo filariæ, as far as we know, are innocuous. When symptoms develop, they are due, not to the embryo, but to the parent worm or an immature product of the parent worm. The diseases produced can be divided into two broad classes: those which are due to lymphatic varix from stasis, and those due to edema from lymphatic obstruction. The parent worms, if present in any number, may plug the thoracic duct or one of the larger lymphatic trunks; or, through the elaboration perhaps of some toxin, they initiate a lymphangitis with thickening and occlusion of the duct or other lymphatics from inflammatory changes. What follows is a retrograde movement of the lymphcurrent, an attempt at compensatory circulation, precisely analogous to the changes seen following operations for the ligation of important arterial trunks. The result is engorgement of some portion of the lymphatics and the development of a peculiar group of phenomena, chiefly lymph scrotum, lymphatic groin glands, varix of the pelvic or lumbar lymphatic trunks, or of the lymphatics of the bladder or kidney. Secondary to these may follow rupture of the varicose ducts, with escape of chyle. Then we have chyluria, if the escape be into the bladder or kidney; chylocele, if the rupture be into the tunica vaginalis, or chylous ascites, if it escape free into the abdominal cavity. Generally speaking, these lesions are due to lymph stasis. We must now study the second group in which lymph stasis is associated with lymphangitis followed by obstruction, resulting in the formation of the solid edema and the tremendous hypertrophies of the affected tissues we know as elephantiasis.

Elephantiasis is now commonly accepted as a filarial disease. It must be admitted that the proofs are not absolute, but they are very suggestive. In the first place, the geographical range of the two diseases is identical, and elephantiasis is most common in the areas most severely affected. So too, as pointed out by Manson, lymphatic varix and lymph scrotum not only are found in the same districts as elephantiasis, but very commonly terminate in elephantiasis, or the latter disease may follow the operative removal of lymphatic varices. It is true that the embryo filariæ cannot usually be demonstrated in the blood of these patients. The explanation of this is twofold. Either the embryos cannot pass through the blocked portion of the lymphatic circulation in which the parent female lies, or the female has perished from some injury. The theory of Manson as to the mode of development of elephantiasis is so ingenious and it fits all the known facts in the disease so well that, until a better can be evolved, it serves us very well for an explanation of this peculiar malady.

This theory presupposes that the parent female worm migrates to one of the peripheral lymphatic trunks in the leg, arm, scrotum or breast, for instance. While in this position and comparatively superficial, she receives an injury. This injury is followed by premature parturition and the expulsion of an immature product or the ova. Now these ova, instead of being long and slender like the embryos, are hard and at least five times their diameter. So that, whereas the embryos can pass through the finer lymphatic radicles very freely, these ova cannot, and they block up the smaller lymphchannels. There follows stasis of lymph from the embolism by these ova; secondarily, lymphangitis with thickening and inflammatory deposit. This deposit is, in small part, resorbed when a renewal of the whole processs takes place, there is again inflammation and an added deposit to the first. This latter portion of the theory is substantiated in the clinical phenomena of elephantiasis, which advances by crises, as it were, each additional extension of the deposit being accompanied with inflammatory phenomena and "elephantoid fever."

"Elephantoid fever," so named by Fayrer, is the systemic expression of the lymphangitis, originating either in the filarial varices, such as lymph scrotum, or in tissues already the seat of elephantiasis. The attacks recur at varying intervals of weeks and months. The occluded lymphchannels and tense varices are very prone to inflammatory changes from every slight injury and, the lymphatics being blocked, the products of inflammation cannot be carried away. The attack begins with a rigor and high fever, with all the usual manifestations of febrile disturbance as anorexia, nausea or even delirium. The skin over the inflamed lymphatic areas is hot, tense and red. After persisting for a few days, the attack usually ends in a critical sweat, but always leaves some inflammatory thickening.

The lymphangitis may be so intense as to result in the formation of *abscess.* It is easy to understand how this may happen in these weakened and susceptible tissues. When this accident takes place in superficial lesions, the condition is readily recognized and the treatment is obvious. If it should unfortunately occur in the deeper varices, in the pelvic, lumbar, renal and thoracic lymphatics, there will, of course, be deep-seated pain, perhaps tenderness and rapidly developing sepsis with hectic temperature. Manson thinks that the death of the parent worm is occasionally a factor in the development of abscess, the dead worm being absorbed just as catgut would be in the large proportion of cases, but in some causing suppuration and abscess.

Hematochyluria or chyluria is usually paroxysmal and, as we have learned in the discussion of the pathology, is due to the leakage of chyle into some portion of the genito-urinary tract. The usual location of the leak being either from the lymphatics surrounding the pelvis of the kidney or the lymphatics of the bladder. As I told you before, this phenomenon is intermittent, and its appearance is not usually accompanied with any increase of symptoms. The urine is opaque and varies in color from a milky white to a deep red, in proportion to the amount of blood there may be in it. If such urine be set aside, the whole of it coagulates. In a few hours the clot contracts and is then a firm white or pinkish ball floating in a milky fluid. Microscopically, such urine contains fat, bloodcells in varying amount and, perhaps, filariæ. Chyluria may persist for many years without great deterioration in health. Indeed, the patient, at most, complains of a dull pain in the loins or pelvis. Osler quotes one case in which intermittent chyluria had been present for eighteen years, and the only discomfort was due to the formation of bloodclots in the bladder. Such complication may cause retention in these cases.

No medical treatment is of any avail in this condition. The patient should be put at rest, on dry diet, with as great restriction as possible in the fatty elements of the food. Under this regimen, giving a measure of rest to the lymphatics, the break may heal.

Varicose Groin Glands. A varicose condition of the superficial and deep inguinal glands is usually bilateral. It gives rise to a doughy, soft, painless swelling in both groins. These varices give little trouble, unless lymphangitis should develop, when pain, from tension, may be very severe. These intercurrent inflammatory attacks always cause marked increase in the size of the tumor. Barring lymphangitis, the varices cause little inconvenience. They have been mistaken for the buboes of plague and are commonly mistaken for herniæ. The points of distinction are several. The hernial tumor is commonly tympanitic, the lymphatic varix always flat. The hernial tumor can be reduced suddenly and completely; the lymphatic varix diminishes very slowly and incompletely. It further gives no impulse on coughing. The thing that should always put you on your guard is that your patient has been a tropical resident. This should lead you to an examination of the blood for filariæ. Finally, an exploring needle thrust into the tumor will bring chyle and establish the diagnosis.

Lymph Scrotum. The causation of this condition is the same as the varicose groin glands, only here the varix is situated in the lymphatics of the scrotum. The two conditions may be associated. The swelling in the scrotum is usually bilateral. It resembles varicocele to some extent, and the diagnosis may not be easy. The enlarged lymphatic trunks have a more boggy feel than the varicose veins of the pampiniform plexus. This disease is much more prone to accessions of lymphangitis than the preceding. Owing to the exposed position of the scrotum, the attrition of the clothing and light traumatisms induce inflammation of the lymphatics with much greater frequency, each attack leaving its heritage of proliferated tissue. Consequently, we see a much greater tendency for this form to eventuate in elephantiasis than the varicose groin glands. If the deeper lymphatics, particularly those of the spermatic cord, be involved, we may see an extension of the lymphangitis to the testicle and the formation of what has been known as filarial orchitis.

The treatment of these conditions, surgically, is quite a perplexing question. Ordinarily, no attempt should be made at operative removals. Remember that this varicose condition of the lymphatics, unduly accentuated though it be in any one locality, is but an expression of the effort made by the lymphatic circulation to compensate the obstruction of the thoracic duct. Consequently, the idea that we do not know how much of this necessary compensatory effort may be destroyed in operative procedures should deter us from operating, unless relief is mandatory. A second contra-indication is that these operations may inaugurate a copious lymphorrhagia that can be controlled only with the greatest difficulty, and that may very much exhaust your patient. Finally, rapid development of elephantiasis of the leg or scrotum has frequently followed these operations. A point that you must well understand and that you will do well carefully to explain to your patients. When, however, the tumors become so large as to be a burden to your patient, or when the inflammatory thickening results in great pain, their removal may be undertaken. The operative treatment of varicose groin glands calls for no special technique, excepting the careful ligation of both ends of all the lymphatic trunks. In operation for lymph scrotum, the testicles being held out of the way, you will excise every portion of thickened skin, even if it should leave you no covering for the glands. It will be vastly better to cover in the testicles with flaps raised from the skin of the thigh, or leave them to cover by granulation, than to leave any portion of the elephantoid skin. There is one other point in favor of these operations. In some few cases, the parent female has been found in, and excised with, the enlarged lymphatics, bringing about a definitive cure.

The subject of *elephantiasis* is so extensive that we can do no more than glance at it here. You are all familiar with the horrible and monstrous deformities caused by this disease. I have only here tried to bring to your attention the question of etiology as it is now understood. The common location of elephantiasis is in the legs; next commonly, perhaps, in the scrotum of the male and in the labia of the female. It is also observed in the breast, rarely in the arms or as pedunculated masses in other locations of the body. The size to which these bodies may grow is enormous. Scrotal tumors have been removed exceeding 100 pounds in weight; several, indeed, that were heavier than the patient after removal. A scrotal tumor of fifty pounds is fairly common. These growths spread in the manner described to you in elephantoid fever. With each crisis of fever and lymphangitis there is not only an increase in the size and bulk of the part already affected, but an extension into new territory. The question of operative removal will come up in many of these cases. The removal of the enormous scrotum or the amputation of a gigantic limb is done simply to rid the patient of a drag that has, by its sheer weight, anchored him to his bed or chair for years. The amputation of these limbs shows no increase of mortality over any other class of amputations, and the removal of the enormous scrotal tumors can be done with comparatively little risk. I shall not burden you now with the details of these operations, reserving that for a later and special study. The procedures must be regarded as palliative, unless you may be fortunate enough to encounter the parent worms, in the amputated tissues, when the cure may be regarded as definitive.

As far as any plan of treatment aimed at the destruction of the parasites is concerned, I am obliged to tell you that we have no remedy of even the slightest value. A long list of drugs has been recommended; chiefly, in later years, thymol and methylene blue. The results have been entirely negative. If the harmless nature of formalin injections into the circulation, as recently practised, can be demonstrated, we may have here a means for the destruction of the parasites.

The *filaria diurna* presents some minor differences in structure and appearance. It also presents a periodicity, but, in distinction to the nocturna, it is present in the day time or waking hours. There is some ground for believing that the filaria Loa may be the parent form of this parasite. Nothing is known of its pathological significance.

The *filaria perstans* is common in certain districts in West Africa, occurring in 50% of the population. This parasite is found in the peripheral circulation, at all times, day and night, hence its name. It is considerably smaller than the filaria nocturna. The parent or adult forms have not been demonstrated. The pathological significance of this parasite is obscure. Manson believes it to be the cause of negro lethargy, the Congo sleeping sickness. It possibly is also the cause of craw-craw, an itching pustular affection common on the west coast of Africa. The remaining blood filariæ have no pathological significance so far as we know.

There remains for study the interesting group of filariæ that invade the connective tissues, rather than the lymphatics and the bloodstream. These include the Guinea worm (filaria medinensis), the eye worm (filaria loa), the filaria volvulus and the so-called filaria of O'Neill. The distribution of these filariæ is so localized, however, that their study here is of no interest excepting, perhaps, the Guinea worm, which has been very rarely observed in the United States. Most of these cases were imported, but there have been reported at least two that seem to have developed in this country. Very little is known of the life cycle of the parasite, excepting that the cyclops or water flea acts as the intermediate host. The adult female is only known; the male has not been observed. When fully developed this parasite is cylindrical in form, 2 mm. in diameter and 60 to 80 cm. long. The parasite is probably ingested into the stomach. The female passes into the connective tissues and burrows her way out toward the surface. Usually she tends to the lower extremities. When she reaches the subcutaneous tissue, a vesicle forms which finally becomes a shallow ulcer. At the bottom of this ulcer a small opening is seen from which the pearly pellucid head of the worm may protrude. If a stream of cold water be dropped on the ulcer, the worm protrudes and throws out a few drops of milky fluid that microscopically is seen to be swarming with minute embryos. When the worm has emptied her uterus, she either spontaneously emerges or dies, in which latter case the ulcer heals, the worm becomes encysted and may then be felt as a fine fibrous cord under the skin. The old plan of treatment was to catch the protruding end of the worm, fasten it to a small, smooth stick and, by making a turn or two daily, gradually wind her out. Frequently, in such attempts at extraction, the worm was torn and a swarm of embryos liberated in the subcutaneous tissues. This accident was commonly followed by severe local infection and sloughing, even by death. More recent plans of treatment are, either to excise the worm bodily, or to kill her by a subcutaneous injection of a few drops of a solution of mercuric chloride. If the worm be showing at the base of the ulcer, the bichloride may be injected directly into it.

Original Articles.

OCCLUSION OF THE SUPERIOR TEMPORAL ARTERY OF THE RETINA IN A YOUNG ANEMIC GIRL.*

By G. E. de SCHWEINITZ, A. M. M. D.,
of Philadelphia.

The following case is presented as a contribution to the literature of alterations in the vessels of the retina which result in stoppage of the bloodcurrent.

L. L., aged 15, of American parentage, came for examination on September 21, 1900, on account of an area of indistinct vision in the right visual field, which had existed for about two weeks.

History: The patient is one of a family of three children, an older and a younger brother being perfectly healthy. Her father died as the result of an accident; her mother is living and in good physical condition. The patient has always been in comfortable surroundings and has received the most judicious care, leading a typically healthful existence. She has had no recent illness, and, as far as is known, her bodily and mental functions have been entirely normal. Two weeks prior to her visit for consultation she was lightly struck on the right eye with the end of a finger, but, with the exception of slight temporary discomfort, no evil result followed this trifling accident. Eight years before this time her eyes had been examined and found to be perfectly normal in all respects; a similar result was found seven years later, or twenty months prior to her present ocular disabilities.

Examination: The patient was a well-formed girl, of good physical development, and gave no external evidence, except some pallor of the skin and lips, indicating constitutional disturbance. V. of R. E.=6/9, unimproved by glasses: pupil reactions normal The ophthalmoscope revealed the following conditions: The media were clear: the nearly round disc was exceedingly pallid on its temporal side, its upper, lower and nasal edges being obscured by a yellowish-white edematous cloud. The veins were distended, carried very dark blood, and here and there they were slightly but distinctly indented by the overlying arteries, which were about normal in size, but carried rather pale blood. From the margin of the nervehead to a point one disc's diameter distant, the upper temporal branch of the superior division of the central artery was converted into a white cord, in the center of which a faint red line, representing apparently a much-diminished bloodstream, could be detected. Beyond this point the occluded vessel was nearly hidden by a yellowish-white exudate, somewhat larger than the surface of the papilla, egg-shaped and faintly tinged with pigment along its lower margin, just beyond which there was a small, flame-like hemorrhage, and another one above the superior temporal vein. Near the center of the exudate the vessel divided, the one branch passing upward over the accompanying vein, which it slightly indented at the point of crossing. The other branch passed slightly downward and outward to the macular region, decidedly compressing the descending branch of the upper temporal vein and beyond existing as an interrupted and broken vascular channel. The central macular area was redder than the surrounding eyeground, but was not a cherry-spot. Beyond and below this were a few pigment flecks and fine white dots. The accompanying illustration by Miss Washington portrays the appearances just recited. (Fig. I.) The visual field was obliterated in its lower and inner quadrant: elsewhere it was normal. (Fg. II.) V. of L. E.=6/5; pupil reactions normal; except for slight rarefaction of the choroid the fundus was normal.

The patient was referred for physical examination to her physician, the late Dr. F. A. Packard, who reported that a thorough investigation failed to find evidence of disease in the heart or general bloodvessels. The pelvic viscera and their functions and the urine were normal. The examination of the blood was made by Dr. Robert N. Willson, who reported: "The blood showed no evidence of malaria; but considerable poikilocytosis. The red bloodcells numbered 3,850,000 (77%) per cmm., leukocytes 4,600 per

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*Paper read before Ophthalmic Section of the College of Physicians.

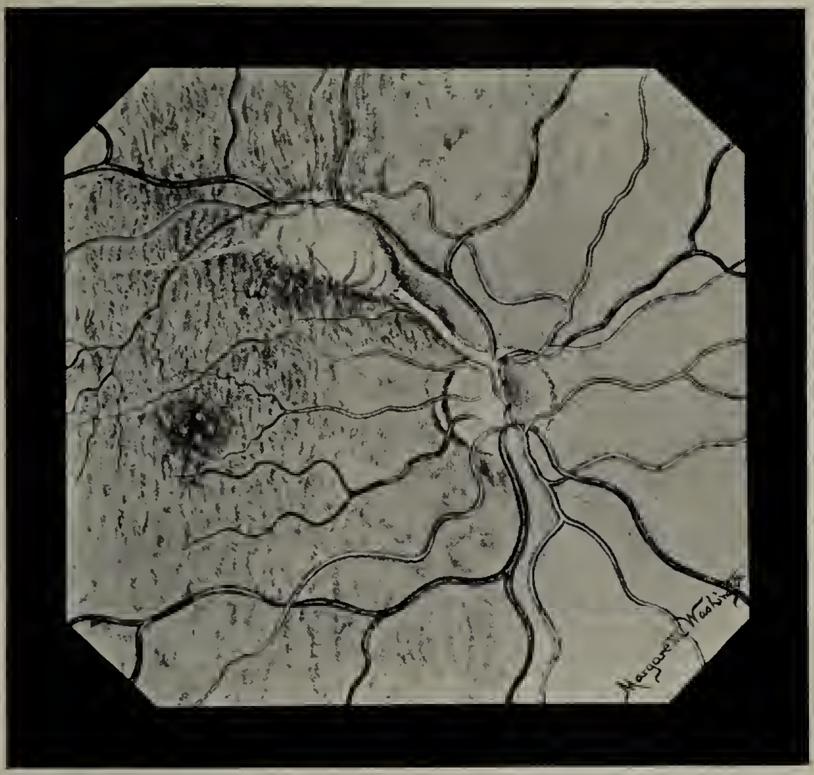

FIG. I.

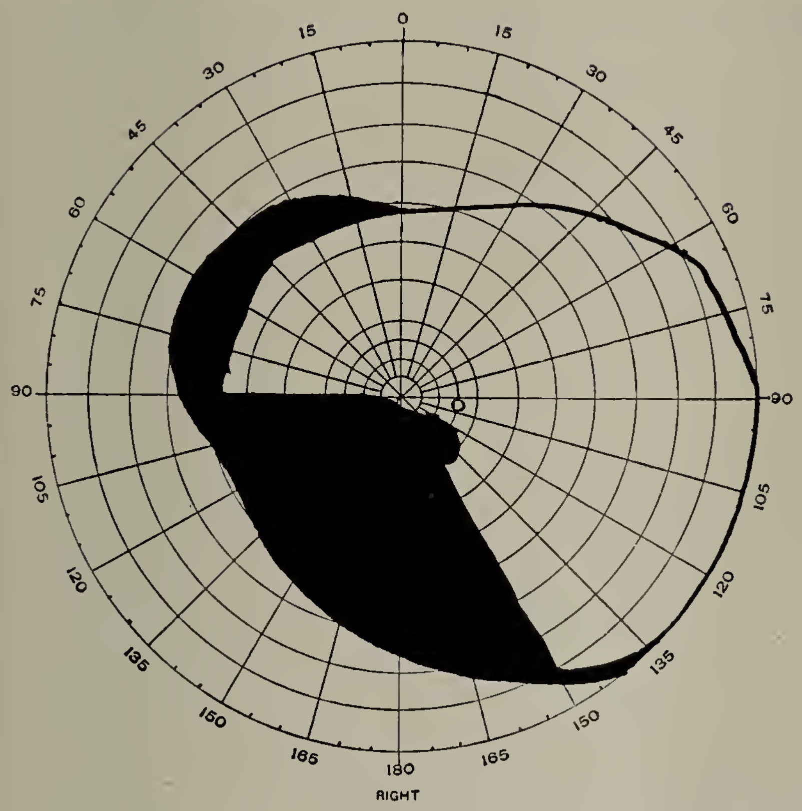

FIG. II. Visual field. obliteration of lower and inner quadrant.

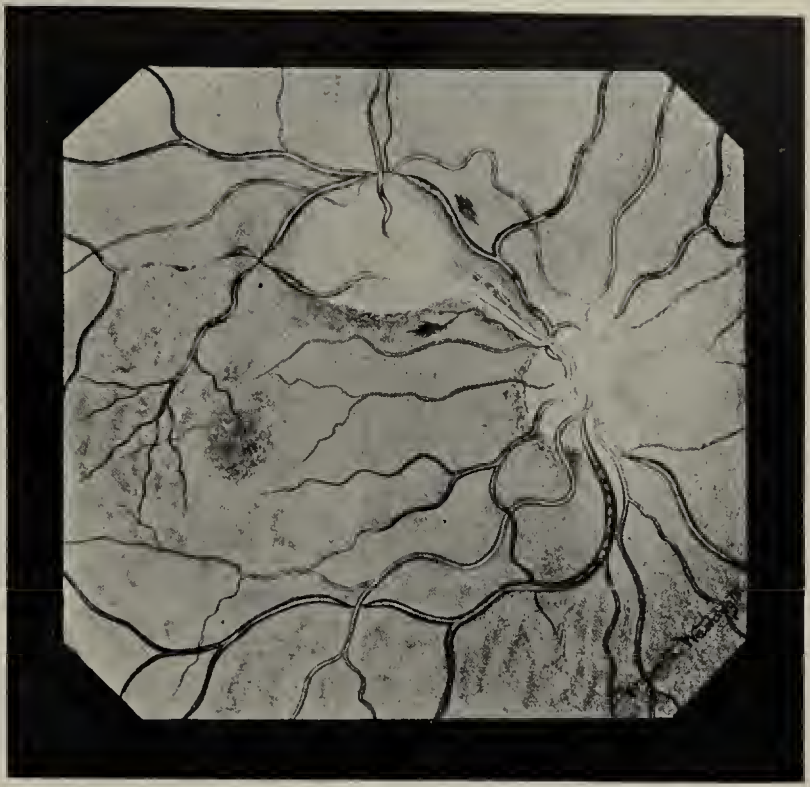

FIG. III.

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cmm.; hemoglobin 75 to 80%." The condition, then, as revealed by the bloodcount, was one of simple anemia of marked grade. The treatment consisted in remedies to combat this condition, especially iron and arsenic; of alteratives, particularly sodium iodide to promote absorption of the exudates; and of nitroglycerine to improve the caliber and tension of the vessels. In one month the vision had risen to 6/7.5, and there was a marked diminution in the size of the exudate; the small hemorrhages had disappeared. The bloodcount was now 4,800,000 red cells per cmm., and the hemoglobin had risen to 85%. Two months later the red bloodcells were 5,500,000 per cmm.; white bloodcells 8,000 per cmm.; hemoglobin 85%.; in other words, practically normal blood. Vision had now risen to 6/5, and there was still greater decrease in the exudate, but no change in the occluded vessels. The visual field remained as at the first examination.

Nine months later central vision was 6/5; the visual field unchanged, and the ophthalmoscopical appearance as follows: The borders of the disc, fringed with a faint choroid rim, were everywhere visible, and the color of the disc had much improved. The veins had diminished in size and approximated that which is normal and showed much less markedly the points of indentation at the crossings of the overlying arteries. The occluded vessel had become converted into a white cord in which no sign of a bloodcurrent was visible. In place of the exudate there was an area of atrophy, fringed with pigment, exposing the sclera and crossed by flat choroidal vessels, giving somewhat the impression of a so-called coloboma. Beyond this area the broken and interrupted vessel had changed into a fine white cord which was gradually lost in the periphery of the fundus. The upper branch before noted was no longer visible. The accompanying illustration (Fig. 3) by Miss Washingtonton portrays the appearances of the fundus at that time.

The patient was again examined on December 15, 1902, and the eyeground found to be in a condition very similar to the one just described, the chief change being that the area of atrophy was more decided and deeper, its edges sharpened and the pigment not only along the margins but deposited within the atrophic region, which was crossed by choroidal vessels. The appearances now, even more than before, resembled the so-called pseudo-coloboma of extrapapillary situation. The only remnant of the upper temporal branch of the superior division of the central artery consisted of a faint white cord; its ramifications were entirely lost. The visual field remained, as before, defective in its lower and inner quadrant.

Remarks. Evidently the ophthalmoscopical lesions in the case under consideration consisted of an occlusion of the upper temporal branch of the superior division of the central artery and beyond a large area of exudate, and beyond this again interruption of the branch curving above the macular region, followed still later by complete conversion of the larger stem of the vessel into a white cord and disappearance of its peripheral ramifications, associated with gradual subsidence of the exudate and the formation of a lozenge-shaped area of atrophy and pigment heaping. The exudate would seem to have been caused by the obstruction of the vessel and not the obstruction of the vessel by the exudate, because the latter lies beyond the position of the greatest disturbance in the vascular channel.

As has been particularly pointed out by Haab and also noted by other authors, in obstruction of a branch of the central artery hemorrhages are often absent, or present, as in this case, only in insignificant degree; in other words, the blindness of the affected area is not due to hemorrhagic infarction. Central vision was preserved because, in the first place, as Hirsch (quoted by Haab) has proved, the bloodsupply of the retina may be divided into three regions, any one of which may be functionally obliterated without affecting macular vision, unless the macular region is principally supplied by the superior or inferior main branches instead of from the macular arteries. In the second place, the macular arteries were perfectly patulous. The obstructing lesion in this case depended upon endarterial changes, which may in turn have caused a thrombosis, or may have been sufficient to cause an obliteration of the vessel walls without such a formation. We know from recent investigations, notably beginning with those of Haab and his pupil Kern, that many, if not the majority, of so-called embolisms of the retinal vessels really depend upon thrombosis, and we know further that such thrombosis may be brought about by endarteritic changes, and, as Welt has shown, independently of such changes by reduced or altered bloodpressure and a tendency to coagulation of the blood and fatty degeneration of the intima.

It seems fair to assume from the ophthalmoscopical picture in this patient that independently of the exact localized lesions, now several times described and portrayed, there were indications in the general vascular tree of alterations in the coats of the arteries. Quite distinctly was that sign present which in recent times has so much been dwelt upon by Marcus Gunn, Raehlmann, Friedenwald, myself and others, as a sign of change in the retinal vessel and its wall, namely, an impeded venous circulation where an artery with increased density depending upon some change in its coat crosses it. Such indentations were distinctly to be seen in several places in the patient's eyeground, and we know that in many of these vessels microscopical examination has shown hyaline degeneration of the wall, alteration in the intima and sometimes thickening of the adventitia. I have some specimens in my collection, taken, to be sure, from an adult, in which there were no other signs in the retina except these indentations in which there is distinct hyaline change in the affected vessel wall. In the present instance one might assume, as more probably present, alterations in the intima, particularly fatty change.

The question now presents itself, what caused this condition in a patient young in years and with a perfectly clean family history, so far as can be ascertained?

The appearance may be explained, in the first place, by alteration, probably of the inner coats of the retinal vessels, most manifest at some particular point, and as the usual constitutional causes of such alterations are lacking, it is possible only to say that they depended upon undiscovered nutritional disturbance; and, in the second place, by alteration in the bloodpressure or the composition of the blood itself or both. In the present instance alteration in the bloodpressure may have existed, but there was no organic change of the blood. There was, however, a high grade of simple anemia. In the third place, the slight blow upon the eye may have been an exciting cause.

It is true that simple anemia and chlorosis are not ordinarily regarded as potent in determining ocular lesions, Haab going so far as to say that in these states, namely, anemia and chlorosis, the eye symptoms, aside from asthenopia, are unimportant. He refers, however, to alterations in the caliber of the vessels, blanching of the papilla and particularly to the optic neuritis which has so often been described with chlorosis.

Dr. C. F. Clark considers small retinal hemorrhages as accidental conditions in simple primary anemia and states that in chlorosis, by which I presume he refers to the simple anemia most often seen in young girls, retinal hemorrhages are never seen. This statement is not in accord with my own experience. In other words, I have observed at least two cases of pronounced simple anemia in young patients with retinal hemorrhages, and, as is well known, Gowers, though admitting the rarity of hemorrhage in simple anemia, thinks it may take place, but only when there is an absolute deficiency in the number of red corpuscles. Saundby and Eales, in their well-known collection of cases of simple anemia, found one patient with hemorrhages near the disc and several others with spots which indicated the presence of former hemorrhages. Evidently in ordinary simple anemia, whether of the chlorotic type or not, retinal changes may sometimes be found.

It is not entirely irrelevant in this connection to refer to the interesting fact that primary thrombosis of the cerebral sinuses and veins may occur in connection with chlorosis and anemia, as pointed out by Brayton Ball and other authors. Indeed, Welch says that chlorosis must be given a leading place among the causes of spontaneous thrombosis of the cerebral veins in women.

Finally, I may revert once more to the similarity which the lesion that has resulted from this condition has to the so-called pseudo-coloboma, and some forms of extrapapillary coloboma of small size, or, if you choose, to areas to which we sometimes give the name atrophic retinochoroiditis. The evident inference is that such a vascular change may explain a lesion of this character. It will be remembered that Mr. Lindley Johnson tried to interpret the extrapapillary colobomata of his collection by assuming that they represented areas which had been occupied by nevoid growths of the choroid in intra-uterine life which had become absorbed. A process, such as I have described this evening, especially if affecting a number of vessels, followed by an exudate such as this picture shows, and absorption such as this exudate underwent, would result in a very similar lesion.

COLLECTIVE INVESTIGATION CONCERNING THE VALUE OF SILVER-NITRATE INJECTIONS IN THE TREATMENT OF PULMONARY CONSUMPTION.

By THOMAS J. MAYS, A. M., M. D.,
of Philadelphia.
Visiting Physician to the Rush Hospital for Consumption.

About a year ago I was enabled, through the courtesy of the medical press, to extend an invitation to the medical profession to test the efficacy of the silver nitrate injections* in the treatment of pulmonary consumption. Personally I had no misgivings in regard to the utility of this remedy, since it had given me ample satisfaction in a large hospital, dispensary and private practice, extending over a period of four years, but I desired to submit it to the ordeal of a collective judgment on account of my conviction that no therapeutic agent can be called truly successful until it has passed the exacting crucible of general clinical experience. In consonance with this feeling I present herewith the following report, which is the first response to my appeal, and which comprises the condensed histories of fifty-five cases of consumption, given according to sex, age, stage of the disease, duration of the disease, length of time under observation, number of injections given, influence of injections on (*a*) cough and expectoration; (*b*) night-sweats; results; remarks of reporter and name and address of same.

An analysis of the gross results of the cases recorded shows the following:

Whole number of cases reported, 55.

Number arrested	11	(20%)
improved	22	(40%)
not improved	7	(13%)
died	15	(27%)

Gain in weight of 24, total number whose weight is recorded, 259 lbs.

Average gain, 10 lbs.

Whole number of incipient cases, 15.

Number of these arrested	7
improved	8
died	0

Gain of 7, all whose weight is given, 88 lbs.

Average gain, 12 lbs.

Whole number of advanced cases, 22.

Number of these arrested	5
improved	10
not improved	4
died	3

Gain of 11, all whose weight is given, 139 lbs.

Average gain, 12 lbs.

Whole number of far advanced cases, 18.

Number of these arrested	0
improved	4
not improved	2
died	12

Gain of 5, all whose weight is given, 33 lbs.

Average gain, 7 lbs.

Comments. In analyzing the therapeutic effects of silver in these cases, the question naturally arises as to the mechanism through which this agent produces the improvement that it is assumed to bring about. Through what medium does it allay cough and expectoration, ease pain and distress in the larynx, check vomiting, improve the appetite, relieve hemoptysis and ameliorate many other morbid pulmonary manifestations? It may be said, and this fact is well illustrated in these cases, that of all the symptoms of phthisis which are influenced by the silver injections, none shows this earlier and to better advantage than cough and expectora-

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*DIRECTIONS: Select for injection a point immediately over, or slightly behind, the pulsating carotid artery in the neck, between the angle of the jaw and the clavicle. Lift the skin between the thumb and forefinger of the left hand and puncture only immediately through the skin. Inject five minims of a 2½ per cent. solution of cocaine hydrochlorate, detach the syringe from the needle and let the latter remain in the puncture. Wash out the syringe with water, draw a 2½ per cent. solution of silver nitrate into the syringe, attach the latter to the needle and throw in 5 minims of same. Or if cocaine nitrate can be secured mix 6 grs. of this and 6 grs. of silver nitrate with half an ounce of water and inject 10 minims. This is a preferable method, but as yet there is very little cocaine nitrate on the market. As a rule, most of the injections should be given on the side below which the affected lung is located.

No.	Sex	Age	Stage	Duration of disease.	Time under observation	No. of injections given	Influence of injections on: Cough and expectoration	Night-sweats.	Weight G. or L.	Termination	REMARKS OF REPORTERS.	Names and addresses of reporters.
1	F.	—	F. adv.	—	—	—	Not stated	Not stated	Lost	Died	Case No. 3 was incapacitated from work. Six months after treatment began he resumed work, having regained his former weight; I know of nothing that will better allay the harrassing cough than these injections.	F. W. Frankhauser, Readi g, Pa.
2	F.	—	F. adv.	—	6 weeks	—	Improved	Not stated	Lost	Died		
3	M.	—	Incip.	—	3 weeks	—	Improved	Ceased	Gained	Improved		
4	M.	—	Adv.	1 year	2½ months	5	Improved	Improved	Not stated	Died	P. M. examination of case 5 showed that both lungs were filled with caseous and broken down areas. Ileum ulcerated. I treated five other cases with the injections and all did well, but unfortunately I lost my notes of these. One of them, a young fellow with very acute symptoms and very much distressed made what seemed a perfect recovery.	A. B. Dundore, Reading, Pa.
5	M.	—	F. adv.	11 years	2 months	5	Improved	Improved	Not stated	Died		
6	F.	23	F. adv.	—	3 weeks	—	Improved	Improved	Lost	Died	Cough was paroxysmal and was much relieved.	William R. Cochran, Knoxville, Tenn.
7	M.	42	F. adv.	—	8 weeks	—	None	None	L. 3 lbs.	Died	Rapidly retrograded.	
8	M.	30	F. adv.	—	2 weeks	—	Improved	Abated	L. ¾ lb.	Died	Laryngeal phthisis. Pain in larynx and congestion of arytenoids diminished after injections.	
9	M.	24	Adv.	—	5 weeks	—	Improved	None	G. 3 lbs.	Improved		
10	M.	24	Incip.	—	11 weeks	—	Decid'dly imp.	Abated	G. 12½ lbs.	Improved	In all of these cases the most marked effects of the injections were the slowing of respiration and lessening of cough. Unfortunately, most of the cases had a hopeless outlook, but the two incipient cases improved surprisingly rapidly.	
11	F.	22	Incip.	—	14 weeks	—	Improved	Improved	G. 11 lbs.	Improved		
12	M.	42	F. adv.	8 years	—	3	Improved	—	—	Unimproved	Cough lessened, and after the first two injections felt better, but lost ground afterward.	Wilbur T. Little, Canon City, Colorado.
13	M.	46	Adv.	5 years	—	3	Unimproved	—	—	Unimproved		
14	M.	37	F. adv.	2 years	—	4	Unimproved	—	—	Unimproved		
15	M.	28	Adv.	4 years	—	4	Improved	—	—	Improved	P. states that cough was noticeably diminished after 1st. and 2nd. injections. Gained little in weight.	
16	M.	25	Incip.	8 months	—	4	Improved	—	—	Improved	First six weeks gained in weight and expectorated less. Then stomach gave out and he lost.	
17	F.	26	Adv.	—	6 months	13	Improved	Improved	Stationary	Arrested	On account of abscess being produced in the neck by first two injections, the remainder were made in the infraclavicular space of the affected side. She spent previous winters in Colorado without relief.	Otis Orendorf, Yates Center, Kan.
18	M.	25	Incip.	—	1 week	1	Improved	Improved	Stationary	Improved	Had lost 30 lbs. in flesh. Spent some time in Texas and California before injections were begun.	J. P. Geppert, Cincinnati, Ohio.
19	M.	—	Adv.	Years	3 weeks	3	Improved	Improved	G. 11 lbs.	Improved	Acne of her face also markedly improved since injections were given.	
20	F.	37	Adv.	—	—	—	Improved	Improved	Not stated	Improved		
21	M.	45	Adv.	2 years	1 year	—	Improved	Improved	Not stated	Improved	Has been well and able to attend to business for months.	
22	F.	25	Incip.	18 months	6 months	9	Improved	Improved	G. 10 lbs.	Arrested	A good recovery.	M. A. Morin, Wrightstown, N. J.
23	F.	—	F. adv.	Some time	6 weeks	4	Improved	Improved	Same	Improved	Been in bed several months. Is up now, on account of the relief which the injections give to her cough and expectoration and she begs to have them repeated.	W. Sylvester Cobb, Corning, New York.
24	M.	42	Adv.	Some time	2 months	3	Improved	Improved	G. 5 lbs.	Arrested	This patient has been at work for two years and is practically well. My experience with the injections is very favorable in other cases.	A. H. Boyer, Bridesburg, Phila.
25	M.	38	F. adv.	4 years	2 months	2	Improved	—	G. 7 lbs.	Died	After first injection marked improvement in cough, dyspnea, etc. was noted.	E. B. Sharp, Camden, N. J.
26	M.	19	Incip.	6 months	3 months	5 or 6	Improved	—	Not stated	Improved	Excepting a slight cough, this patient is well.	
27	M.	34	Incip.	4 years	4 months	3	Improved	—	Not stated	Improved	Able to lead a very active business life.	
28	F.	34	Adv.	1 year	5 months	24	Improved	Abated	Not stated	Improved	Besides the relief to the cough and expectoration, the injections greatly benefited the dyspnea on account of which she was unable to lie down before. Strength greatly improved.	
29	F.	33	F. adv.	2 years	3 months	8	Improved	Abated	Not stated	Died	Injections from beginning followed by less cough, better appetite, loss of hectic, gain in strength and was able to do light work for 8 months, when she died of tubercular perititonitis.	G. H. Franklin, Hightstown, N. J.
30	F.	30	F. adv.	—	3 months	9	Improved	Abated	G. 6 lbs.	Died	Much improved for four or five months when she developed general tuberculosis.	
31	F.	36	F. adv.	Some time	2 months	5	Improved	Abated	Not stated	Died	Was confined to bed when injections were begun. Improved, and in 2 months she was able to do housework. Followed this for 8 months when grip developed and was fatal.	

No.	Sex	Age	Stage	Duration of disease.	Time under observation	No of injections given.	Influence of injections on :			Termination	REMARKS OF REPORTERS.	Names and addresses of reporters.
							Cough and expectoration	Night-sweats.	Weight G. or L.			
32	F.	37	Adv.	2 years	2 months	6	Improved	Abated	G. not stated	Died	Much improved for a whole year with very little cough and no expectoration. Died then from diarrhea and general tuberculosis.	Geo. H. Franklin, Hightstown, N. J.
33	F.	29	Adv.	1 year	6 weeks	6	Improved	Improved	G. 3 lbs.	Improved	Improved much in general health and remains practically well after supporting her family for two years.	
34	M.	50	Adv.	2 years	4 months	5	Abated	Abated	G. 25 lbs.	Arrested	When injections were begun, previous treatment was continued. Fever, cough and night-sweats abated at once, and the whole aspect changed. Feels well after a lapse of 3½ years.	
35	M.	52	Adv.	1 year	4 months	4	Improved	Improved	G. not stated	Died	After first injection cough lessened, he ate more and gained in weight for 10 months after injections.	M. H, Brown, Morgantown, W. Va.
36	F.	24	F. adv.	2 years	6 months	4	Improved	Improved	G. at first	Died	She was very anxious to get the injections for they benefitted her cough a great deal and made her feel more comfortable. General strength decidedly improved.	
37	F.	28	Incip.	3 years	1 year	5	Abated	Abated	G. not stated	Arrested	All her symptoms disappeared.	
38	F.	28	Incip.	10 months	4 months	5	Abated	Abated	G. not stated	Arrested	Continues well 3 years after injections were begun.	
39	F.	30	Incip.	6 months	3 months	2	Abated	Abated	G. not stated	Arrested	Was unable to follow his vocation of mining before he received the injections. He is well now, 2½ years after. All my patients say they can take deeper and fuller breaths after the injections. In addition I have used the injections on a number of people with a hard, persistent nonphthisical cough on which cough medicines have no effect, and, as a rule, all got well in a short time. It does not matter whether the patient has incipient or far-advanced phthisis, the injections do good.	
40	M.	42	Adv.	—	5 weeks	3	Improved	Improved	Loss 6 lbs.	Same	General tone was bad. Lived in a lodging-house, had bad food and poor hygienic surroundings.	Thomas A. McGoldrick, Brooklyn, N.Y.
41	F.	24	Adv.	—	3 weeks	3	Much improv.	Had none	G. 3½ lbs.	Same	Gastric distress after food, also vomiting, entirely relieved. Appetite and general strength improved.	
42	M.	36	Adv.	—	1 month	4	Improved	Improved	Same	Same	Appetite and general strength improved.	
43	F.	48	Adv.	—	3½ weeks	3	Improved	Decidedly improved	G. 1 lb.	Same	Vomiting ceased, appetite, chest pain and general strength much improved. All these patients were poorly fed, their medication was simply placeboes unless otherwise stated, and, with these facts in mind, the method of treatment has made upon me a good impression. In addition to the above, there are five other dispensary cases which were under observation too short a time to give much value to their results, yet, in every patient but one, there was improvement in symptoms and weight, and that one did not lose.	
44	M.	20	F. adv.	18 months	4 months	3	Unimproved	Worse	L. 28 lbs.	Died	Went from bad to worse.	Chas. H. Wilson, Vineland, N. J.
45	F.	18	Incip.	5 months	3 months	6	Improved	Improved	G. 10 lbs.	Improved	Vomiting ceased.	
46	M.	18	Incip.	5 months	2 months	6	Improved	Improved	G. 20 lbs.	Improved	Six severe attacks hemoptysis. Vomiting ceased. Able to do light housework now.	
47	M.	23	Adv.	1 year	5 months	5	Improved	Improvéd	G. 30 lbs.	Arrested	Bedfast when injections were begun. Vomiting ceased, and general strength improved greatly. I am much pleased with the injections and have treated 2 other cases not here included.	
48	F.	40	F. adv.	1 year	2 months	5	Improved	Improved	G. 5 lbs.	Improved	Before injections were begun she lost flesh rapidly, night-sweats, no appetite, severe cough and profuse expectoration. All these symptoms improved greatly, and she is able to do work.	S. T. Thompson. Danville, Pa.
49	F.	21	Adv.	1 year	2 months	3	Ceased	Ceased	G. 7½ lbs.	Improved	No other medicine was given.	
50	F.	26	Adv.	18 months	3 months	11	Improved	Ceased	G. 25 lbs.	Arrested	In two last patients abscesses developed.	
51	M.	40	Incip.	10 months	2½ months	12	Improved	Improved	G. 21½ lbs.	Greatly improved	No medicine beside the injection. "I am surprised at such a marked improvement in so short a time."	S. W. Abbott, Lawrence, Mass.
52	F.	28	Incip.	1 year	3 months	8	Improved	Improved	G. 11½ lbs.	Greatly improved	All the symptoms were very favorably influenced by the injections. Vomiting ceased and strength much improved.	D. Cassady, Denver, Col.
53	M.	20	Incip.	9 months	2 months	3	Ceased	Ceased	G. 13 lbs.	Arrested	Anorexia changed into voracious appetite.	J. A. Packinson Athens, Tenn.
54	F.	22	F. adv.	—	3 months	5	Improved	Improved	G. 12. lbs.	Improved	Was weak and emaciated and seldom out of bed. Now she is able to do light housekeeping.	W. P. Zimmerman, Zimmerman, S. C
55	M.	35	F. adv.	2 years	1 year	9	Improved	Improved	G. 5½ lbs.	Improved	Also treated a number of asthmatics with very favorable results. Reported in Philadelphia Medical Journal.	H. T. Baas. Taboro, N. C.
Two cases of asthma.	F.	28	—	—	—	2	Improved	Improved	—	Improved	This patient had been "suffering severely for months and her condition baffled treatment that relieved most all other cases. Two injections afforded marvelous relief. The neck was much swollen, but the relief was so great that it was a comfort."	N. G. Burnham, 708 14th St., Denver, Col.
	M.	26	—	—	—	1	Improved	Improved	—	Improved	First injection was followed by relief and ability to sleep, and he was otherwise much improved. If such relief can follow, it is a great boon for this class of sufferers.	

tion. Let us, therefore, briefly inquire into the physiology of cough and into the possible way in which it may be relieved.

Cough and Expectoration. Cough is a reflex act. Any irritation of the sensory fibers of the pneumogastric nerve as, for example, the collection of catarrhal material on the surface of the bronchial tubes, or inflammation of the deeper structure of the lungs, is transmitted to the ganglion or to the root of this nerve, whence it is reflected back to the lungs through its motor filaments, and there manifests itself in the complex phenomena of expulsive contraction which we know as cough. In order to study the varied and manifold morbid conditions to which disorder of the pneumogastric may give rise, among which cough is generally prominent, it is important briefly to study the origin, course and distribution of this nerve. It may be said to arise from two nuclei, one of which is situated in the lower half of the floor of the fourth ventricle, the other in the oblongata near the olivary body. In the jugular foramen, through which it emerges from the skull, is the ganglion of its root which gives off the *auricular* branch, and this supplies the membrana tympani and the external ear. A short distance below this point is the ganglion of the trunk. Here the pneumogastric anastomoses freely with the spinal accessory and receives filaments from the sympathetic and hypoglossal, and from the upper part of this ganglion the pharyngeal nerves are given off. The superior laryngeal nerve, which supplies sensation to the mucous membrane of the larynx, epiglottis and base of the tongue, also arises from this ganglion. The next branch which is given off is the recurrent or inferior laryngeal, which is the motor nerve of all the intrinsic muscles of the larynx, except the cricothyroid, which receives its innervation from the superior laryngeal nerve. Before the pneumogastrics enter the lungs, they form the anterior and posterior pulmonary plexuses in connection with the sympathetic, and from thence their fibers run along the bronchial tubes, the pulmonary arteries and throughout the lung tissue. On the outer surfaces of the bronchial tubes, as well as in the texture of the lung, are found a large number of small ganglia in connection with these nerve fibers. The nerves of the pleural coverings are also derived from the pulmonary plexuses, and those fibers which are distributed to the pulmonary pleura are also supplied with ganglia.

Not all these anatomical regions are equally sensitive to external or untoward stimuli. Thus Kierner, Koths and others have shown that in the respiratory tract the larynx possesses the greatest impressibility, while the trachea and bronchial bifurcation are less sensitive, the bronchial walls still less so, while the alveoli have very little sensibility. The pulmonary pleura is especially sensitive and very liable to cause cough.

In addition to the above the pneumogastric distributes branches to the heart, stomach, liver, intestines, spleen, kidneys and suprarenal capsules.

It is evident from what has been said that irritation coming from the ear, larynx, trachea, bronchi, lungs, pleura, heart, pharynx, stomach, liver, intestines or from any organ that is supplied by the fibers of the vagi, is liable to produce and excite cough; and that we may, therefore, have ear cough, laryngeal cough, bronchial cough, pulmonary cough, whooping cough, pleural cough, heart cough, pharyngeal cough, gastric cough, liver cough and intestinal cough. Another cough is what may be called the cough of fatigue. This occurs especially in those who possess a family-tendency to phthisis. They cough when they are tired by reason of physical or mental overwork, or when depressed by incidental diseases, like colds, headache, injury, loss of appetite, worry or by excesses of any kind. A cough of this character is in all probability due to excessive waste of nerve force which reflects itself actively through the pulmonary branches of the vagi.

It being taken for granted that cough is mainly a nervous act, and one which is the expression of some irritation of the pneumogastric nerve, it may be asked according to what therapeutic principle is the relief of cough usually brought about? This may be accomplished, first, by that agency which is most commonly resorted to, viz.: by narcotizing the nerve with morphine, codeine, heroin or some other nerve sedative, and thereby making it less sensitive to any source of irritation; and, second, by raising or elevating the tone of the depressed nerve, by the administration of strychnine or the application of counterirritation to the skin over the nerve or in its neighborhood. The first is a temporary method, but there are cases in which it must be carried out. When it has to be applied for a long time, however, it results in more harm than good and may lead to a disastrous end. The second is, therefore, the more reasonable and logical method. Strychnine is one of our best remedies in chronic cough. Its therapeutic value in this respect consists in raising the tone and strength of the nerve, thereby diminishing its irritability and making it less susceptible to the influence of disturbing agencies. The application of mustard over the vagi in the region of the neck very often allays cough and is frequently all that is needed to assuage the paroxysm of whooping cough in children. Vaccination in the arm, a seton in the neck or in the subclavicular spaces, and a blister behind the ears are old but often effective remedies in stubborn cough. It is very probable that all these agents exert their curative influence reflexly through the medium of the pulmonary nerve supply. This opinion is in entire accord with the experience of Landouzy (*Le Progrès médical*, Nov. 27, 1880) who recommends the hypodermic injection of a syringeful of distilled water in the subclavicular or cervical region to allay the cough of phthisis. He evidently believes, too, that the good effect on the cough is brought about through the influence of the nervous system, for he says that the irritation of the nerve endings which is caused by the water is carried to the nervecenters and diffused to the respiratory and other nerves, and hence the cough ceases.

In this connection it is interesting to note that case 17, in the above table, on account of the first injection in the neck having caused an abscess, the subsequent injections, eleven in number, were given in the chest wall with excellent effect on the cough.

In view of the foregoing observations there can be very little doubt that the silver nitrate injection given in the neck directly over the vagus produces a certain degree of stimulation which disseminates itself throughout all the ramifications of this nerve and relieves cough by virtue of promoting the tone and resistance of this structure. That the silver injections possess the power of alleviating cough is well shown in the above table. Thus, in 55 cases, in which the condition of the cough is described, cough and expectoration were not improved in 3, improved in 44, and ceased entirely in 6 cases.

As a rule, the silver injections are much superior to opiates and medicines of that class for the purpose of relieving cough, since they act promptly and effectively without producing any systemic disturbance, and, moreover, their influence is more permanent. In a number of the above-tabulated cases it is reported that the cough yielded immediately after the first injection was given, and that several patients in an otherwise hopeless condition asked for the injections on account of the relief which they afforded to the cough. One of the reporters, Dr. Brown, says: "I have used the injections on a number of people who had a hard and persistent nonphthisical cough, on whom cough-medicines had no effect, and, as a rule, all of them improved and got well in a short time." In my own experience I also met cases of cough (see *Boston Medical and Surgical Journal*, Jan. 16, 1902) which were not amenable to all the ordinary cough medicines at my command, but which yielded at once to the silver injections. Two interesting cases of asthma are also reported above as having been greatly benefited by the injections.

Vomiting. Vomiting is always a serious factor in the history of phthisis and is difficult to overcome. In five of the reported cases in which this symptom was noted, the injections improved it in three and checked it entirely in two. My own experience, which is in harmony with this, taught me that this symptom is either entirely relieved or abated in most of the cases in which it is found.

Night-sweats. Another striking instance of relief which the injections afford to the symptoms of phthisis is shown in the number of cases in which the night-sweats were favorably influenced. Thus, in 42 cases in which this symptom was noted, in one it remained unimproved, in 27 it was improved and in 14 it ceased altogether.

General Strength.—Notwithstanding the difficulty of explaining the manner in which the injections improve the general strength, the fact remains that this is frequently brought about, sometimes in a remarkably short time. In exceptional instances this holds true in far advanced cases, as is shown in those numbered 36 and 54. In cases 10, 11, 34, 36 and 51 it is stated that the improvement in general strength was decided and rapid.

Gain in Weight. The increase in flesh deserves some consideration, although this is only recorded in 24 cases, of which 7 were in the incipient, 11 in the advanced and 5 in the far advanced stage. Their total gain was 259 pounds, or an average of 10 pounds each—of which the incipient cases gained 88 pounds, or an average of 12 pounds; the advanced cases 139 pounds, or an average of 12 pounds; the far advanced cases 35 pounds, or an average of 7 pounds each. The increase in weight, like the gain in strength, is not readily accounted for; yet any one who has had some practical experience with the injections can testify that this occurs and sometimes to an unexpected degree.

Conclusion. Taking a general survey of the above collection of cases, and the therapeutic results which have been obtained through them, I think it is plainly evident that the silver nitrate injections possess a decided antagonism to the pathological and complex process which we know as pulmonary consumption. It must be borne in mind, however, that in forming an estimate of the action of a new remedy it is comparatively easy to overrate its virtues and to ignore the efficacy of other influences that enhance its final effects. But making due allowance for all such weaknesses, we have in this collection a confirmation of the results** which were obtained by myself with the silver injections employed in a large number of cases more than four years ago, differing from mine in the fact that they are more forcible, because they emanate from a number of independent observers in whom the personal equation was entirely eliminated. In conclusion, I trust that this research into the clinical action of silver nitrate in the treatment of phthisis will merely be an entering wedge into this inviting field of therapeutics and will induce many others to take up the work and develop its possibilities.

SOME POINTS ON THE MANAGEMENT OF INFECTIOUS DISEASES.*

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Since no satisfactory definition of contagious diseases which differentiates them from infectious diseases has been formulated, I prefer to speak of the management of infectious diseases.

I shall briefly consider what may be done, and what should be done, by attending physicians and by local boards of health.

Diagnosis.—Before beginning the therapeutic treatment of a disease, it is a great advantage, to say the least, to have a correct diagnosis. It is still more important in the management of infectious diseases to gain as early as possible a clear comprehension of the exact nature of a case suspected to be, or which may be, that of a dangerous, infectious disease. When called to a case which excites the least suspicion that it may be that of a dangerous infectious disease, the physician should not forget that he, just then, is standing in a momentous position, a mistaken diagnosis may precipitate a disaster; his correct judgment may save lives and his own reputation. In this position two serious mistakes are very often made: One is, while harboring the suspicion of an infectious disease, not to take precautions in the way of isolation, temporary, at least; the other is the making of a final diagnosis at the first visit.

While the profession should, and does, generally recognize its moral and legal obligation to protect

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**For full exposition of same see my work on Consumption, Pneumonia and their Allies, published by Messrs. Treat & Co., New York City.

*Read before the meeting of the Maine Medical Association, Portland, June 5, 1902.

the public through a correct diagnosis and otherwise, it should be united solidly in demanding from the State some aid in diagnosticating infectious diseases, which are now wanting in our State, but which are greatly needed. In the brief period of a decade and a half the advance of laboratory methods and the appreciation by state and municipal legislative bodies of the value of laboratory help have left us in this State in a humiliating position. Without a bacteriological laboratory it is impossible for us to do work which is first class. While the State Boards of Health of every other New England State, and of many other States, and the municipal boards of most of the cities of much size have their own hygienic laboratories, our State suffers the discredit of offering no help of this kind to us—physicians, local boards and State Board—who are expected to guard the public from the danger of infectious diseases.

Notification.—Unless the local board of health knows of the existence and the location of cases of infectious diseases, they cannot, of course, put into operation the measures which are required to prevent the spread of infection. The law, very properly, therefore, requires the attending physician to notify the local board of health, not only when he knows, but when he has good reason to believe, that any person whom he is called upon to visit has an infectious disease. The notifiable diseases are pulmonary tuberculosis or consumption; diphtheria, or membranous croup; scarlet fever, typhoid fever, measles, whooping-cough, cerebrospinal meningitis, smallpox, cholera and typhus fever.

Unless cases of these diseases are reported to the local board of health, no efficient measures against the spread of infection are observed in 90% or more of the cases, and the defaulting physician sometimes puts himself in the position of an accessory to homicidal results.

As to the question whether the State can, without compensation, require reports of infectious diseases, it has again and again, in various States, been decided by the courts that without pay the State may call upon physicians to contribute this mite in the interest of the public health and safety, and that, to refuse or to neglect it, constitutes a misdemeanor for which the prescribed penalty may be applied.

Isolation or Quarantine.—The law provides that this part of the public-health service shall be in the hands of the local board of health, together with all which is needed to render quarantine effective—the furnishing of lodging, nurses, medical treatment and guards, when these are necessary, and deciding when persons and places may safely be released from quarantine. In the determination of this last question the public-health service has reason for gratitude to the profession for co-operative advice, nevertheless, when advised that a diphtheritic or scarlatinal patient may be discharged from quarantine after a week's illness, the board may well sit in judgment on that opinion, and very often does so, even if composed of persons from the farm and the workshop. The necessity of establishing a quarantine, in many cases, and the period when it may safely be raised, in a still larger number of cases, is determined positively only by the help of the laboratory.

Pulmonary Tuberculosis.—In the list of infectious diseases which are dangerous to the public, pulmonary tuberculosis occupies the first rank. It is doubly dangerous when a pretty prompt diagnosis is not made. Hundreds of lives, I think it is safe to say, are sacrificed every year in this one State through dillydallying with the diagnosis. Sometimes it is sheer inability to make a diagnosis, and sometimes it is the lack of moral courage to utter an unpleasant truth or fear of scaring the patient. That is a policy which is not very creditable nowadays, when it is known that a large percentage of persons with consumption is curable if they are frankly told early the nature, or the probable nature, of their disease and are urged and encouraged to make an intelligent fight for life. In this disease the hygienic laboratory would render valuable aid when its findings are positive, and would help to save many lives; but treatment, rational and modern, is often indicated before a positive diagnosis is available or possible.

Pulmonary tuberculosis is a notifiable disease. There are strong and urgent reasons why cases should be reported to the local board of health. On the part of the local board, patients are not to be quarantined, houses are not to be placarded. The local board is merely to make a record of the case, and assure itself that the patient and his associates are not left in unblissful ignorance that, in the absence of a few precautionary measures, he is a serious and dangerous source of infection. The attending physician, when one is in attendance, is preferably to decide how and to whom the necessary instructions are to be given. Local boards receive instructions to this effect from the State board. The record of the local board of health is an indication of where—in what houses—there may, in the future, be an urgent need of sanitary work. Without trustworthy disinfection, houses occupied by consumptives should not be vacated and moved into by other families, and furniture, clothing and other articles used by them should not be allowed to go to rummage sales or any other sales.

The instructions received by local boards are to the effect that the householder who owns his own house, shall, when a death from consumption occurs in his family, be advised to disinfect his house, and be aided in doing so; but, when a house or rooms which have been inhabited by a consumptive person, have been vacated by the death of the patient, or the removal of the family, the local board of health should insist upon the thorough disinfection of the house or rooms, before occupancy by another family.

The sanitary precautions which the patient should be taught to observe are the disinfection of the sputum or, better, its destruction with fire. But few chemical disinfectants can be trusted to destroy the vitality of the tubercle bacillus in sputum; perhaps only lysol and carbolic acid—five ounces of lysol, or seven ounces of carbolic acid to the gallon of water. Even with these the invariable destruction of all of the infection in fresh sputum cannot be expected. It is, therefore, much better to arrange for the deposit of the sputum in paper spit-cups, which are to be burned together with their contents. Corrosive sublimate solution should never be used for the disinfection of fresh sputum, but as a disinfectant of infectious dust in rooms which have been occupied by consumptives, the 1:1000 solution is efficient, and may be used for washing floors or other surfaces which may be infected.

Since Flügge and his assistants have shown quite conclusively that there is some degree of danger to other persons near the coughing consumptive and in the same room with him, the consumptive patient should be instructed to refrain from hard coughing as much as possible, and while indoors to hold before his mouth, during the act of coughing, something to arrest particles of sputum which may be sprayed into the air—a handkerchief used for this purpose alone and frequently boiled, or a piece of paper to be burned before it has been used long.

Diphtheria.—Efficient work in the control of diphtheria must go hand in hand with the work of the bacteriological laboratory. In many cases, which may or may not be diphtheria, a positive diagnosis cannot be made without the help of the bacteriologist. Again, during or after the convalescence of the patient the bacteriologist, and no one else can say just when it is, or is not, safe to raise the quarantine. Too short a period, and other persons are endangered. On the other hand, every day of quarantine beyond the necessary time limit, entails serious inconvenience to the family, unnecessary expense, and often expense for the town.

The following are from the rules which were adopted by the Conference of State and Provincial Boards of Health at last year's meeting.

"Specimens should be taken at once by the health officer, or attending physician, from nose and throat of such suspected case, and sent to an approved bacteriological laboratory for examination.

"During the time between the sending of the specimen and the receipt of the report, strict isolation of the patient should be maintained.

"Whenever the presence of the bacillus of diphtheria is in any manner reported by an approved bacteriologist, the house should forthwith be quarantined and a plainly printed notice of the quarantine, including the name of the disease, posted in a conspicuous place thereon, and a guard stationed, if necessary.

"It is the duty of the attending physician or local health officer to take and forward to the State Board of Health, or other approved bacteriological laboratory, specimens from the throats of those exposed to diphtheria, and, pending a report thereon, to see that isolation is maintained.

"It is the duty of the health officer to place in quarantine all those who, after exposure to clinical diphtheria, are reported from the laboratory to be infected with the bacillus of diphtheria.

"With proper disinfection quarantine should be removed from those houses in which diphtheria has been diagnosed when synchronous cultures taken from the noses and throats of all persons quarantined have been pronounced to be free from diphtheria bacilli by a bacteriologist, approved by the State Board of Health.

"After the laboratory diagnosis of diphtheria has been given, it shall be the duty of the health officer to see that specimens from both nose and throat of the patient are forwarded by himself or the attending physician to a laboratory approved by the State Board of Health, at least once a week after clinical symptoms have subsided, until negative reports for both nose and throat are obtained.

"Those who have been brought in contact with diphtheria patients, and in whose throats diphtheria bacilli have been found, may be released from quarantine when both nose and throat cultures, on examination by a bacteriologist approved by the State Board of Health, no longer show the presence of diphtheria bacilli.

"When the diphtheria bacillus exists for a period of more than three weeks after the disappearance of all throat symptoms, the bacillus should be isolated in pure culture and its virulence tested upon guinea-pigs, at the request of the health officer. If the bacillus is not found virulent, quarantine may be released. As these experiments will take from five to ten days, later specimens ought to be sent to the laboratory, since they may show the absence of all diphtheria bacilli before complete determination.

"All specimens sent to the laboratory should be reported upon, in writing, by the bacteriologist upon the morning following their receipt, provided, however, that such report should be made by telegram upon request, at the expense of the person making the request.

"In country districts, where it is not possible to use the laboratory findings as a means of regulating quarantine, those suffering from diphtheria should be quarantined for a period of not less than four weeks from the appearance of the disease."

The isolation of persons infected with diphtheria should be efficient. The children of poor parents should not be allowed to die for the want of antitoxin; when the parent cannot pay for it, it should be furnished promptly by local boards at the expense of the town. Disinfection should be done by agents and processes which have been proved by competent and unbiased persons to be trustworthy; not with disinfectants which have been shown to be uncertain, or which have no one to vouch for their efficiency save their manufacturers or the bacteriologists and chemists employed by them. If sulphur fumigation is possibly allowable for smallpox, it should never be trusted in work against diphtheria.

Scarlet Fever.—The bacteriological laboratory is not yet accepted as an aid in diagnosis, though some rather recent investigations have raised the hope that the bacteriological diagnosis may not be far in the future. The two most potent factors in the spread of scarlet fever are: (1) Mild cases which do not come to the knowledge of physicians and health officers; and (2) the failure to maintain isolation until the very end of the period of desquamation, until the hands and feet are entirely smooth.

Typhoid Fever.—In the diagnosis of typhoid fever it seems strange that there are practitioners who fail to recognize the fact that very atypical cases of that disease are of rather frequent occurrence. The correct diagnosis of these mild and atypical cases of typhoid fever is of prime importance in the prevention of the spread of this disease. A hygienic laboratory, when we get one, will come to be used more and more as an aid to a positive diagnosis, and since it has been determined that the persistence of the typhoid bacillus in the urine is prolonged in many cases, bacteriological tests would serve as an indication of the length of time during which convalescents should be required to observe precautions, the most important of which is the sterilization of the urine.

While we are undoubtedly right in teaching that typhoid fever is most frequently spread by means of infected water- and milk-supplies, we perhaps have failed to give due weight to some other etiological factors. About one of these, fly-borne infection, our military experience during and following the Spanish-American War taught us a lesson. Hand infection, that is, the transmission of infection by the hands of persons who care for the sick and at the same time prepare or set forth the food for other members of the family should not be forgotten. We recognize the danger to washerwomen who handle the dry clothing which comes from the typhoid patient, yet we deny the infectiousness of the air of the typhoid sick-room. In this we are not in accord with many foreign authorities, who maintain that, in the sick-room of the typhoid fever patient, there is a considerable degree of danger of direct infection. Personally I believe that this is true when the clothing or bedding of the patient becomes soiled with the fecal or urinary discharges and is not removed before drying.

The main things in the prevention of the communication or extension of typhoid infection, directly or indirectly, are cleanliness and disinfection. The fecal and urinary excreta should be disinfected in no uncertain way immediately after their passage and before their final disposal. A very frequent shortcoming in the disinfection of typhoid excreta is the neglect of the time element. Efficient disinfection of typhoid stools with chemical agents requires exposure to the action of the disinfectant solution of four hours at least, and then disinfection is not complete unless scybala are broken and an intimate mixture of disinfectant and the material to be disinfected is insured by stirring. When circumstances permit, the discharges may be disinfected in half an hour or less by the addition to the typhoid discharges of at least four or five times their bulk of boiling water and covering immediately, or with fire, using a tight sheet-iron base slightly turned up at the edges. As the bacillus of typhoid fever sometimes retains its vitality a long while when buried in the ground beyond the action of light and air, I should regard the deep burial of typhoid stools, disinfected or undisinfected, as inadvisable.

Smallpox.—In view of the frequency with which smallpox is confounded with other diseases, we may well say that the first important requisite for the prevention of its spread is more care in making the differential diagnosis, particularly between smallpox and chickenpox.

Two reasons for these frequent mistakes may be adduced:

One is that many physicians fail to recognize the fact that the type of the disease widely prevalent for some years has an unusually large percentage of mild cases, even irrespective of vaccination, and that the eruption, in the mildest cases, bears considerable resemblance to that of chickenpox.

Another reason is that the clinical history of the cases, particularly of the period of invasion and of the early period of eruption is not carefully learned, but the diagnosis is based upon the appearance of the eruption alone. In a group of cases lately observed by me the eruption was decidedly atypical in many of them, but the clinical history was perfectly typical of smallpox.

There is not a single point taken alone upon which it is safe to base a differential diagnosis between chickenpox and smallpox in its mild or modified form; but when a case is found with a history of about three days' illness with headache and feverishness, and perhaps backache, followed by an eruption which, in most cases, comes out on the forehead or face and wrists first, and which, if you do not observe it yourself, the description of the patient or of his friends indicates was at first macular, then papular and followed by a marked amelioration of the febrile symptoms, you have good reason to believe or suspect that you have a case of smallpox on hand.

Above all things, when called to a suspicious case, ample time should be taken in making the diagnosis. It is sometimes necessary to wait a day or two before a final, positive diagnosis can be made.

In the sanitary management of the present type of smallpox more than half the battle is won when a correct diagnosis is made.

The next step is the prompt isolation of every suspicious case, temporarily at least, until a definite diagnosis can be made. Suspects, pending positive diagnosis, should never be put into rooms with cases of smallpox.

The next move, made as speedily as possible, should be the vaccination of all exposed persons. Here every hour of delay counts against the chance of heading off the disease in those persons who may already have the infection in their system. It makes the health officer sick at heart to find a case which has for some days been suspected of being smallpox, and yet not a move has been made toward the isolation of the patient or the vaccination of exposed persons. Further information on the management of outbreaks of smallpox may be found in Circular No. 71, issued by the State Board of Health.

Pneumonia.—Many outbreaks of pneumonia have shown themselves so unmistakably communicable that physicians should not leave the attendants and other members of the family wholly in ignorance of the possibility of danger. The necessary precautionary measures relate to the care of the sputum and are the same as have been given for pulmonary tuberculosis. Such precautions, followed by the disinfection of the rooms, bedding, and other articles which have served the pneumonia patient, are now rigorously observed in some hospitals.

Influenza, or Grippe.—Epidemiological and bacteriological study of this disease has placed this among the dangerously infectious diseases and, in the light of what we know now, it is clearly the duty of physicians and of health officers, to inculcate, so far as is practicable, the need of greater care against needlessly spreading the infection. If this is done, many lives would be saved and much suffering would be averted. The same measures relating to the sputum and recommended for pulmonary tuberculosis and pneumonia are advisable in grippe.

Whooping Cough and Measles.—The mortality-rate following the prevalence of these two diseases indicates the need of notions different from those which generally prevail among the laity, and perhaps among many physicians, regarding the danger from them. While scarlet fever was the cause of three hundred and sixty-seven deaths in Maine during the years 1892 to 1900 inclusive, measles caused three hundred and thirty-one deaths and whooping cough six hundred and three during the same time. In the one year, 1900, there were eighty-four deaths from measles and ninety-nine from whooping cough. Both of these diseases are very dangerous to infants during their earlier months and years of life. Of the ninety-nine persons who were destroyed by whooping-cough, sixty-two were infants under one year of age, and ninety-five were under five years of age. While the incidence of measles is not so marked during infancy, forty-three of the eighty-four deaths were of children under five years of age. One thing is apparent, that families in which there are children have the right to demand that the infection of these diseases shall not be forced upon them. All infectious pupils and all persons from houses in which there are cases of whooping cough or measles should be rigorously excluded from the schools. While the head of the family, the bread-winner, may, under reasonable precautions, be allowed to continue his work, the other members of the family who would be likely to carry infection should not be allowed to run about unrestrictedly or to visit other houses. This, with proper disinfection, is the very least which common sense should dictate.

THE TREATMENT OF TROPICAL DYSENTERY WITH SULPHUR.

By T. H. WEISENBURG, M. D.,
of Philadelphia.
Registrar to the Nervous Wards in the Philadelphia Hospital;
Formerly A. A. Surgeon, U. S. Army.

Recently Dr. Stengel[1] called the attention of the medical profession to the treatment of dysentery with sulphur. As the literature of the subject is limited, I desire to record the following facts: In the town of Buena Vista, Island of Marinduque, P. I., there is a large effervescing sulphur spring which has quite a traditonal reputation among the natives of the community. It is said that drinking of this water would stop diarrhea of any kind. It is possible even now to buy water from this spring in any drugstore in Manila.

Acting on the suggestion of Major W. W. Wotherspoon, Sixth U. S. Infantry, then commanding the Thirtieth U. S. Infantry, we started a camp and transported to it all of our dysentery cases. I do not remember the exact number, but there were, I think, three acute and about fifteen chronic amebic dysentery cases. In the absence of a microscope no microscopical examination was made, but they were undoubtedly of the amebic type. The treatment adopted was as follows: In the acute cases the patients were kept as quiet as possible, all medication was withdrawn, a milk diet was enforced; they were made to drink the sulphur water exclusively and given a bath in the sulphur spring every morning. The water was not unpalatable, tasting somewhat like Tan-San. In two of the patients an immediate improvement was noticed. The stools became less in number, the tenesmus was decreased and in about a week all the patients were allowed to get up. In a month they were discharged cured. The third patient, an acute case, improved during the first two days, but his stomach became unretentive, he vomited the sulphur water and he was put back on medicinal treatment. This patient, as was found out subsequently, was a "Vino" fiend, and, therefore, was finally sent to Manila.

Sulphur Spring. Roof made of bamboo and nipa leaves. Stones in foreground yellowish in color from deposits of sulphur.

For the fifteen chronic cases a more vigorous treatment was adopted. The patients were allowed to take moderate exercise, were fed on milk, eggs, fish, beef and vegetables, took a bath twice daily and drank sulphur water. The improvement was very noticeable. Every patient gained in weight and strength—in the tropics a remarkable fact in itself—the stools became less in number and firmer in consistency, and all were discharged cured in periods that varied from three to six weeks after treatment was begun. I had no opportunity to follow the subsequent course of the disease in these patients, so that I am not able to state how permanent the results were. In some of them an increase in the number of stools for the first few days was observed, but this soon disappeared. Some showed a tendency to stomachic disarrangement, so that the amount of sulphur was decreased, and water from a hot spring, situated about half a mile above, was partly substituted. The temperature of the hot spring was about 220° F., and the sulphur spring 92° F. An analysis made of the water of the latter spring showed a large percentage of sulphur.

General James Franklin Bell, who visited the camp with his staff, pronounced it the largest effervescing

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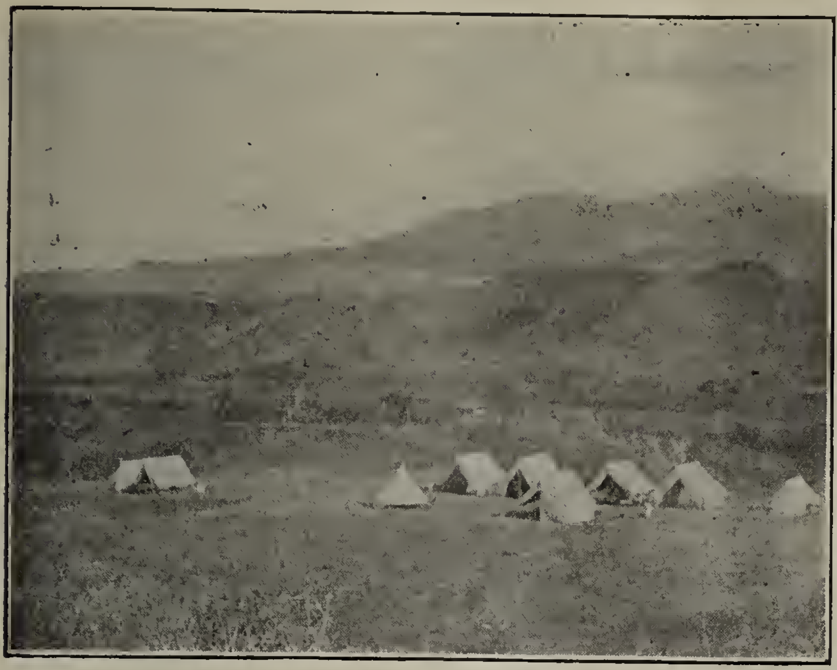
[1] Proc. Phila. County Med. Soc., 1902, p. 57.



Camp "Mogpog," Buena Vista, Isle de Marinduque, P. I.

sulphur spring in his knowledge. A report was made at the time to the Chief Surgeon of the Division of the Philippines of the results obtained.

It may also be interesting to record that Dhobie itch, the ever-present skin malady of the tropics, disappeared rapidly as a result of the baths.

ARCHIV FUER VERDAUUNGSKRANKHEITEN.

Bd. VIII., Hefte 4 and 5.

1. Concerning the Production of Hydrochloric Acid and the Motor Activity of the Normal Human Stomach. H. KORNEMANN.
2. On the Fate of Carbohydrates in the Intestines of the Suckling. I. HEDENIUS.
3. An Exprimental Contribution Concerning the Pathogenesis of Gastric Ulcer. (Conclusion.) R. DALLAVEDOVA.
4. On the Absorption of the Alkaline Iodides, Sodium Salicylate, Chloral Hydrate and Strychnine in the Stomach. VICTOR OTTO.
5. Investigations Concerning the Extent of the Albumin-Digesting Power of the Stomach-Contents of Normal Persons and of Persons with Gastric and Intestinal Disease, with a Critical Comparison of the Hammerschlag and Mett Methods. (Conclusion). RUDOLF SCHORLEMMER.

1.—The author has made a study of the gastric acidity, determining the free HCl and the total acidity and total HCl at various periods after taking a test-meal, and at the same time, comparing the conditions found with the degree of gastric motility. He presents tables to show his results. The absolute total HCl rose rapidly, began to fall decidedly at the end of about 50 minutes and nearly disappeared after about 2 hours. The percentage of total HCl followed the same course, although the stages appeared somewhat later. The free HCl ran a course similar to that of the total HCl. The total acidity was similar in its course, but the stages were reached later than with the HCl. The contents of the stomach decreased rapidly in amount for about an hour and then much more slowly. The results were obtained with 2 persons only. [D. L. E.]

2.—There has been much discussion as to the occurrence of digestion of carbohydrates in the intestines of infants, some authors maintaining that the results apparently indicated that any such digestion is in large part due to bacterial fermentation, while others think that carbohydrates are well digested. Hedenius goes thoroughly over the literature and then describes some results that he obtained with various forms of carbohydrate-foods in infants. He reaches the conclusion that in late infancy, after giving free quantities of carbohydrate, little carbohydrate can be found in the feces; and that the feces do not become especially acid, the latter point indicating that the carbohydrates do not ferment excessively. He found that a child, about 2 months old, rapidly showed an increase in its power of digesting carbohydrates. In general, he found that with the simple preparations less carbohydrate and less acid are obtained in the feces than when more complicated carbohydrate-mixtures are used. [D. L. E.]

3.—The author concludes his contribution with the statement that he believes he has positively demonstrated that necrotic ulcerative changes in the gastric mucosa occur in direct relation to experimental injuries of the abdominal sympathetic. Damage of the celiac plexus or of the splanchnic in the wall of the stomach produces necrotic, hemorrhagic and ulcerative changes that have the distinctive necrobiotic characteristics of ulcer of the stomach in human beings. [D. L. E.]

4.—The results of the work reported served, in the author's belief, to show that potassium and sodium iodide are moderately well absorbed by the stomachs of guinea-pigs and rabbits, but very poorly by the stomachs of cats and dogs. Sodium salicylate is absorbed within an hour by the stomachs of guinea-pigs and rabbits, and is not absorbed for from 3 to 6 hours by the stomachs of cats and dogs. All 4 kinds of animals absorbed chloral hydrate rapidly by the stomach. Strychnine is not absorbed by the stomachs of guinea-pigs and rabbits. It is absorbed by the stomachs of cats and dogs and causes a rapid and fatal poisoning. A comparison of the results with these different substances in the various animals is very striking and interesting. The author concludes that von Mering was not justified in believing that, owing to his results obtained with dogs, the same conditions hold good in human subjects. [D. L. E.]

5.—The conclusion that Schorlemmer reaches, as the result of his extensive work, is that Mett's method is the best for practical work and gives excellent results. In order to have results that can be properly compared with each other filtrates of stomach-contents that have an equal content of HCl should be used, since the amount of HCl and that of the filtrate, the character of the albumin, the period of digestion and the temperature are all of importance in relation to the result. Shaking the test increases the activity of the peptic digestion. Roth's figures for the albumin-digesting power of normal persons are too small. No parallelism can be determined, in general, between the HCl and the pepsin; but, as a rule, more pepsin is secreted in hyperacidity and less in anacidity. The milk-curdling ferment and pepsin do not run parallel in quantity. A coincident reduction of the milk-curdling ferment and HCl may be seen in cases of anacid gastritis and carcinoma. The ferment that persists longest in spite of pathological changes is pepsin. Pepsin determinations are of importance because they provide therapeutic indications, and they also indicate, in case pepsin is entirely or almost entirely absent, that there are severe destructive lesions of the stomach. [D. L. E.]

Vulvitis Impetiginosa in Young Children.—In the *Bulletin Médical*, (December 27, 1902), Carrière reports the detailed case-histories of 3 little girls with impetiginous vulvitis. These children were disposed to attacks of impetigo of the skin, which, like the vulvitis, also began with slight fever. The vulvitis in its course resembled impetigo, even containing the same staphylococci in the fluid of the vesicles. Impetigo of the skin complicated one case, and in another it followed inoculation of the arm with fluid from the vulva. The inguinal glands were swollen in all cases. In the treatment he used hydrogen peroxide locally and iron protiodide and cod-liver oil internally. [M. O.]

Health Reports.

Health Reports: The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon-General, U. S. Public Health and Marine-Hospital Service, during the weeks ending February 28 and March 7. 1903:

SMALLPOX—United States.

CALIFORNIA:	Berkeley.	Feb. 16-25.	1	
	Los Angeles.	Feb. 14-21.	3	
	Sacramento.	Jan. 25-Feb. 7	4	
	San Francisco.	Feb. 15-22.	12	1
COLORADO:	Denver.			
DISTRICT OF		Feb. 7-21.	30	
COLUMBIA:	Washington.	Feb. 14-28.	6	1
ILLINOIS:	Chicago.	Feb. 21-28	17	1
INDIANA:	Elwood.	Feb. 22-Mar. 1.	3	
	Evansville.	Feb. 21-28	4	
	Indianapolis	Feb. 14-28.	57	16
	Jeffersonville	Jan. 1-31.	1	
	Jeffersonville	Feb. 1-28.	5	
IOWA:	Davenport.	Feb. 21-28.	4	
KANSAS:	Douglas County	Jan. 1-31.	2	
			imported	
	Wichita.	Feb. 21-28	1	1
KENTUCKY:	Lexington.	Feb. 21-28.	1	
	Newport.	Feb. 21-28.	1	
LOUISIANA:	New Orleans.	Feb. 21-28.	2	
			imported	
MAINE:	Biddeford.	Feb. 21-28.	3	
MASSACHUSETTS:	Boston.	Feb. 21-28	2	
	New Bedford.	Feb. 21-28.	1	
	Boston.	Feb. 21-28.	1	
MICHIGAN:	Grand Rapids.	Feb. 21-28.	14	
	Marquette	Feb. 21-28.	1	
	Menominee.	Feb. 14-21	1	
	Port Huron.	Feb. 21-28.	5	
NEBRASKA.	Omaha.	Feb. 21-28.	3	
NEW JERSEY;	Camden.	Feb. 21-28.	5	
	Jersey City.	Feb. 22-Mar. 1.	3	
NEW YORK:	Buffalo.	Feb. 21-28.	1	
	New York.	Feb. 21-28.	4	
	Yonkers.	Feb. 20-27.	1	
OHIO:	Cincinnati.	Feb. 20-27	11	1
	Cleveland.	Feb. 21-28.	7	2
	Dayton.	Feb. 21-28.	1	
	Hamilton.	Feb. 21-28.	2	
PENNSYLVANIA.	Altoona.	Feb. 21-28.	6	
			imported	
	Dunmore.	Feb. 21-28.	3	
	Erie.	Feb. 21-28.	5	
	Johnstown.	Feb. 21-28.	3	
	McKeesport	Feb. 21-28.	2	
	Norristown.	Feb. 21-28.	1	
	Philadelphia.	Feb. 21-28.	37	1
	Pittsburg.	Feb. 21-28.	19	6
			4 cases imported	
	Pottsville.	Feb. 21-28	4	
SOUTH CAROLINA:	Charleston.	Feb. 21-28.	7	
TENNESSEE:	Johnson City.	Feb. 21-28.	7	
	Memphis.	Feb. 21-28.	5	
UTAH:	Salt Lake City.	Feb. 14-28.	39	
			1 case imported	
WISCONSIN:	Greenbay.	Feb. 22-Mar. 1	1	
	Milwaukee.	Feb. 14-28.	11	

SMALLPOX—Foreign.

BARBADOS:		Jan. 31-Feb. 13.	9	1
BELGIUM:	Antwerp.	Jan. 31-Feb. 7.	2	
	Brussels.	Jan. 31-Feb. 7.		6
CANADA:	Winnipeg.	Feb. 7-14.	1	
CANARY ISLANDS:	Las Palmas.	Jan. 24-Feb. 7.	69	2
ECUADOR:	Guayaquil.	Jan. 31-Feb. 7		1
FRANCE:	Marseille.	Jan. 1-31.		37
	Paris.	Feb. 7-14.		1
GREAT BRITAIN:	Birmingham.	Feb. 7-14.	16	
	Dublin.	Feb. 7-14.	4	
	Glasgow.	Feb. 13-20.	1	
	Leeds.	Feb. 7-14.	16	1
	Leith.	Jan. 31-Feb. 7.	1	
GREAT BRITAIN:	Liverpool.	Feb. 7-14.		6
	London.	Feb. 7-14.	1	1
	Nottingham.	Feb. 7-14.	2	
INDIA:	Bombay.	Jan. 27-Feb.3.		28
	Calcutta.	Jan. 24-31.		1
ITALY:	Palermo.	Jan. 31-Feb. 14.	11	
JAMAICA:	Duan Vale.	Feb. 1	Present	
JAPAN:	Kagawa Ken.	Jan. 29.	Present	
	Yamaguchi Ken.	Jan. 29.	Present	
MEXICO:	City of Mexico.	Feb. 8-15.	6	2
NETHERLANDS;	Amsterdam.	Feb. 7-14	3	
RUSSIA:	Moscow.	Jan. 24-Feb. 7.	9	3
	Odessa.	Jan. 18-25.	5	
	St. Petersburg.	Jan. 31-Feb. 7.	29	9
	Warsaw.	Jan. 31-Feb. 7		1
TURKEY:	Smyrna.	Jan. 25-Feb. 1		1

YELLOW FEVER.

COLOMBIA:	Cartagena	Feb. 9-15		2
	Panama.	Feb. 11-18.	2	
ECUADOR:	Guayaquil.	Jan. 31-Feb. 7		21
CUBA.	Havana.	Feb. 14-21	1	1
	Imported from S. S. Esperanza from Progreso.			
MEXICO:	Coatzacoaloos.	Feb. 7-14.	1	1

CHOLERA.

INDIA:	Calcutta.	Jan. 24-31.	53	

PLAGUE—Foreign.

INDIA:	Bombay.	Jan. 27-Feb. 3		551
	Calcutta.	Jan. 24-31.		97
	Karachi.	Jan. 25-Feb. 1	26	19
MEXICO:	Mazatlan.	Jan. 24-31	46	31
	Mazatlan.	Jan. 31-Feb. 7	43	22

SMALLPOX—United States.

CALIFORNIA:	Los Angeles.	Feb. 7-14.	3	
	Sacramento.	Feb. 7-14.	2	
	San Francisco.	Feb. 8-15.	2	
FLORIDA:	Jacksonville.	Feb. 14-21.	3	
GEORGIA:	Atlanta.	Dec. 31-Feb. 13	62	4
INDIANA:	Elwood.	Feb. 15-22	6	
	Evansville.	Feb. 14-21.	6	
	South Bend.	Feb. 14-21.	2	
IOWA:	Des Moines.	Jan. 1-31.	10	
KANSAS:	Wichita.	Feb. 7-14.	1	
KENTUCKY:	Lexington.	Feb. 14-21.	3	
MAINE:	Biddeford.	Feb. 14-21.	4	
MARYLAND:	Baltimore.	Feb. 14-21.	1	
MASSACHUSETTS:	Boston.	Feb. 14-21.	10	
	New Bedford	Feb. 24.		1
MICHIGAN:	Detroit.	Feb. 14-21.	29	
	Grand Rapids.	Feb. 14-21.	14	
	Marquette.	Feb. 7-21.	10	
	Menominee.	Feb. 7-14.	1	
	Port Huron.	Feb. 14-21.	8	
MISSOURI:	St. Louis	Feb. 8-22.	26	
NEBRASKA:	Omaha.	Feb. 7-14.	3	
NEW HAMPSHIRE	Manchester.	Feb. 14-21.	2	
NEW JERSEY:	Camden.	Feb. 14-21.	9	
NEW YORK:	Buffalo.	Feb. 14-21.	1	
	New York.	Feb. 14-21.	3	
OHIO:	Cincinnati	Feb. 13-20.	20	
	Cleveland.	Feb. 14-21.	6	2
	Dayton.	Feb. 14-21.	7	
PENNSYLVANIA:	Erie.	Feb. 14-21.	7	
	Johnstown.	Feb. 14-21.	1	
	McKeesport.	Feb. 14-21.	2	
	Philadelphia	Feb. 14-21.	25	6
	Pittsburg.	Feb. 7-14.	12	3
	Reading.	Feb. 16-23.	1	
SOUTH CAROLINA	Charleston.	Feb. 14-21.	3	
	Greenville.	Feb. 7-14.	2	
TENNESSEE:	Memphis.	Feb. 14-21.	2	
	Nashville.	Feb. 14-21.	1	
UTAH:	Salt Lake City	Feb 7-14.	20	
WASHINGTON:	Tacoma.	Feb. 9-16.	1	
WISCONSIN:	Greenbay.	Feb. 15-22.	1	

SMALLPOX—Foreign.

AUSTRIA:	Prague.	Jan. 24-31.	5	
BELGIUM:	Antwerp.	Jan. 24-31.	8	1
	Brussels.	Jan. 24-31.		4
GERMANY:	Hamburg.	Jan. 31-Feb. 7.	3	
GREAT BRITAIN:	Birmingham.	Jan. 24-Feb. 7.	14	1
	Dublin.	Jan. 31-Feb. 7.	2	
	Leith	Jan. 24-31.	2	
	Liverpool.	To Jan. 31.	176	13
	London.	Jan. 31-Feb. 7.	4	
	Manchester	Jan. 31-Feb. 7.	36	
	Nottingham.	Jan. 31-Feb. 7.	4	
	Sheffield.	Jan. 24-Feb. 7.	5	1
	Sunderland.	Jan. 17-24.		1
INDIA:	Bombay.	Jan. 20-27.		14
	Calcutta.	Jan. 17-24		2
RUSSIA:	Odessa	Jan. 11-18.	2	
	St. Petersburg.	Jan. 24-31.	88	20
	Warsaw.	Jan. 3-17.		7
	Warsaw.	Jan. 24-31.		2
SPAIN:	Corunna.	Jan. 31-Feb. 7.		1
URUGUAY:	Montevideo.	Dec. 1-31, 1902.	9	3
	Montevideo.	Dec. 31-Jan. 7.	9	2

YELLOW FEVER.

MEXICO:	Vera Cruz.	Feb. 7-14.	4	

PLAGUE—Insular.

HAWAII:	Honolulu.	Feb. 12.		1

PLAGUE—Foreign.

INDIA:	Bombay.	Jan. 20-27.		455
	Calcutta.	Jan. 17-24.		76
	Karachi.	Jan. 11-26.	54	41
MEXICO:	Mazatlan.	Jan. 17-24.	51	27

CHOLERA—Foreign.

INDIA:	Bombay.	Jan. 20-27.		1
	Calcutta.	Jan. 17-24.		48

A Rare Form of Epigastric Hernia.—Vialle (*Archives de Médecine et de Pharmacie Militaires*, January, 1903) reports the case of a soldier with an epigastric hernia, containing the gall-bladder, which was adherent to the neck of the hernial sac. A radical operation was performed, the gall-bladder replaced and sutured, and the wound closed. The results were excellent. Such a condition is very rare.

[M. O.]

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THERAPEUTISCHE MONATSHEFTE.

January, 1903. (17 Jahrgang, No. 1.)

1. A New Urine Separator. GARRE.
2. The Treatment of the Acute Infectious Diseases. J. WERNITZ.
3. The Antitoxin Treatment of Diphtheria. POVL HEIBERG.
4. A Reply to the Previous Article. MAX KASSOWITZ.
5. The Cure at Brückenau. HERMANN NEUMANN.
6. The Basis of the Various Methods of Treating Phthisis. HUGO WEBER.
7. Clinical Experiences with Perdynamin. G. SIEFART.
8. Drugs in Vapor Form for Inhalation and Disinfection. M. SAENGER.
9. Rectal Excretion Through the Vagina. JOSEF PROCHNOW.
10. The Prophylaxis of Carcinoma. HEINRICH MOHR.

1.—Garrè describes an **instrument which has been devised by Dr. Luys**, of Paris, for collecting the urine from each kidney separately, **a urine separator**. It resembles an ordinary catheter, yet there is a piece of thin rubber at the curve between the 2 sides, each a miniature catheter in itself. After introduction, the urine in the bladder is evacuated, the rubber septum is drawn up, dividing the bladder into 2 equal halves and, as the urine from each kidney enters the bladder from the ureter, it can be withdrawn through either tube of the catheter, each side having a separate opening. Thus the urine from each kidney is collected for examination separately. Then the rubber is allowed to contract, and the instrument is easily removed. A case of right-sided pyelonephrosis with pregnancy was diagnosticated with this instrument. It is easily sterilized by boiling, after which the disinfected rubber septum is attached. [M. O.]

2.—**In the treatment of sepsis and the infectious diseases, Wernitz gives enemata of normal salt solution**, not only to allay the dryness of the mucous membranes, etc., but to increase the excretion of all secretions, thus increasing the elimination of infectious material. This is much less painful than hypodermoclysis or the intravenous infusion of normal salt solution. Nor is there any danger to the heart from enemata. He uses a Hegar irrigator, with a lukewarm 1% salt solution. The irrigations are continued until clear water returns, the lower bowel being thoroughly cleaned out. This takes about an hour and is repeated in an hour or two. As much as one liter of fluid is used each time, some of it being absorbed after each irrigation. Great improvement follows if the treatment is continued for some time. All symptoms disappear, and the patients beg for a repetition of the enemata, as they cause great relief. In acute sepsis he gives 10 irrigations; in less severe cases fewer enemata will be necessary. Wernitz gives the organism as much fluid as it can absorb. There is but one objection to this treatment, the great amount of time needed. [M. O.]

3.—In answer to a previous article by Kassowitz, Heiberg gives hypothetical statistics of a city to show that, in spite of the fact that **diphtheria antitoxin**, when used, reduces the mortality about one-half, the **mortality continued to increase** year after year during 10 years, being greater in each succeeding year. [M. O.]

4.—In reply Kassowitz quotes Marfan's statistics to show the presence of 2 forms of diphtheria in Paris, one benign, the other malignant, antitoxin only having a pronounced effect upon the former. This may also explain **the lack of influence of antitoxin upon the absolute mortality from diphtheria** since the introduction of the antitoxin treatment. [M. O.]

5.—Brückenau, a little over 1000 feet above sea level, has an idyllic situation upon the mountains, yet well sheltered from raw winds. It is a spot for rest under good climatic, meteorological and hygienic conditions. There are 3 springs and an establishment for mud and mineral baths. The great effect of drinking the waters is diuresis. The presence of **potassium bicarbonate** increases its **diuretic power**. Thus it is that **the cure at Brückenau is of value in nephritis, cystitis, hematuria, etc., diseases of the female genitals, chlorosis, anemia, neurasthenia, etc.** Several case-histories show an exceptional influence in **pleurisy**. These waters are also good when taken at home, bottled. [M. O.]

6.—Tubercle bacilli can never be destroyed by inhalation or other local treatment. Creosote is only of value when given in small doses, so that the digestion is not disturbed. Treatment with tuberculin, absolute rest and exercise all have some disciples. But all depend upon a **good digestion and good food** in their effect on the phthisical process. Here, especially, the patient, not the disease, should be treated. For **increased assimilation alone will overcome** phthisis. When the lungs contain much venous blood, i. e., much carbon dioxide, phthisis rarely occurs. Food must be ingested and digested, that the tissues may contain carbon dioxide. Therefore levulose should be given. [M. O.]

7.—Siefart gave **perdynamin, an organic preparation of iron**, to women who had lost varying quantities of blood, followed by very rapid improvement. He advises it, therefore, **in gynecological patients with sudden, severe anemia.** It has a pleasant taste. From his patients 4 suffered from hemorrhage with abortion, 3 from atony with parturition and 4 from myomata. Perdynamin is also recommended at the menopause for preventing the occurrence of any irregularities at that time. [M. O.]

8.—**Drugs in vapor or gas can reach the deepest parts** of the respiratory passages. This is accomplished either by heating the drug, passing a current of air through it, or, suddenly decreasing atmospheric pressure, by suction. Saenger describes an apparatus by means of which drugs can be employed in vapor form, for inhalation and disinfection. Very little of the drug is needed. The apparatus is very simple in form, and is well understood from the diagrams. [M. O.]

9.—In a woman, aged 48 years, with **carcinoma of the rectum**, Prochnow **incised through the vagina and perineum**, and thus excised the tumor wholly. A stitch abscess developed, followed by the formation of a **vaginorectal fistula**, through which the feces were passed. The great advantage of this operation was that the field of operation was plainly visible; the disadvantage was the vaginorectal fistula which unfortunately resulted. [M. O.]

10.—Will be abstracted when concluded.

February, 1903. (17 Jahrgang, No. 2.)

1. A More Comfortable Mode of Administering Quinine Subcutaneously. AUFRECHT.
2. The Diuretic Effect of Theocin. MEINERTZ.
3. The Influence of Camphor When Morphine Has Been Withdrawn. ALBRECHT ERLENMEYER.
4. The Treatment of Ileus. A. SCHULZE-VILLINGHAUSEN.
5. A Report on Further Success in the Treatment of Cancer with Cancroin. ALBERT ADAMKIEWICZ.
6. Pyelitis and Pyelonephritis Following Gonorrhea. BERNHARD MARCUSE.
7. The Treatment of Phthisis. JOSEF MARGONINER.
8. The Scientific Prescription of Mud-Baths at Franzensbad in the Treatment of Gynecological Diseases. NENADOVICS.
9. Brine Soap in Dermatology. BARDACH.
10. The Sulphur Waters of Preston Canada, and Landeck, Germany. OSTROWITZC.
11. Carbolic Acid, Lysol and Lysoform. FRANZ NAGELSCHMIDT.
12. Rose's Treatment of Gastroptosis. W. N. CLEMM.
13. The Prophylaxis of Carcinoma. HEINRICH MOHR.
14. An Old Surgical Procedure. A. NAGELI-AKERBLOM.
15. The Effect of Boric Acid and Borax as Preservatives. OSCAR LIEBREICH.

1.—Aufrecht employs **subcutaneous injections of quinine hydrochlorate in the treatment of croupous pneumonia.** As the hydrochlorate of quinine is very slightly soluble in water, he advises **adding urethan to the solution**, by this means making much less water necessary. Therefore an injection of a small amount of the solution can now be given, when formerly it was necessary to inject a large quantity of fluid. Besides, the solution made with urethan will keep unchanged. He gives 7½ grains at an injection, varying from once a week to twice a day, in pneumonia and puerperal fever. Many statistics to show the value of the treatment in croupous pneumonia are given. [M. O.]

2.—Meinertz has collected 23 case-histories of patients to whom theocin was given for its **diuretic effect.** This was promptly noted in 6 cases of heart disease, 7 cases of kidney disease, 4 cases of pleurisy and one each of cirrhosis of the liver, chlorosis, alcoholic gastritis, hysteria, rheumatic polyarthritis, etc. The amount of urine passed increased to from 2 to 5 times what had been excreted previously. A certain height of bloodpressure seems necessary for the theocin to exert its diuretic influence. There is no doubt that the various diuretics cause varied results in different individuals. Yet theocin has its greatest effect when changes have occurred in the heart and large bloodvessels. The disadvantages of using theocin are nausea, vomiting, anorexia, etc., due directly to the administration of the drug. It is, therefore, best given in tablets, not powders. [M. O.]

3.—Erlenmeyer claims that he advised **camphor in the treatment of the morphine habit,** during the interval in which morphine had been withdrawn, long before Hofmann's work on the subject. Its value is to prevent heart weakness, so apt to supervene when the morphine is stopped. While he has proved this by experiment, with scientific conclusions, Hofmann's work is purely theoretical. [M. O.]

4.—Schulze-Villinghausen reports the case-history of a woman, aged 55 years, attacked suddenly with symptoms of **acute intestinal occlusion.** Making the diagnosis of ileus, he operated, in spite of the great prostration of the patient. **Laparotomy** disclosed a portion of the ileum caught in an opening in the mesentery of the ascending colon. This incarcerated intestine showed complete torsion besides. The operation was not very difficult, although the intestine was knicked, **leaving a fecal fistula** which healed slowly. In such a case, with rather unusual symptoms, making the diagnosis not at all certain, operation is advised as soon as possible. [M. O.]

5.—Will be abstracted when concluded.

6.—That **gonorrhea causes pyelitis and pyelonephritis** may be proved either by direct clinical observation or by finding gonococci in the contents of the pelvis of the kidney. The diagnosis from tubercular pyelitis is, however, difficult. The presence of pyelitis is known by cystoscopy and catheterization of the ureters though it may be hard to differentiate between pyelitis and cystitis. In some cases there are distinctly renal symptoms. The presence of renal epithelium cannot be proved in urine examination. Casts and albumin may or may not be present with pyelitis, depending upon whether the kidney is affected or not. Pyelitis frequently follows gonorrheal cystitis. The treatment of gonorrheal pyelitis consists in irrigating the pelvis of the kidney, which was successful in 4 out of 5 cases reported. Marcuse used an argentic nitrate solution (1-1000) once weekly. This treatment is contra-indicated until after all acute symptoms have disappeared. He believes this local treatment of gonorrheal pyelitis of great value. [M. O.]

8.—**Mud-baths** are of value **in most gynecological ailments,** such as aplasia of the genital, sterility, puerperal conditions, catarrhal metritis, vaginitis, parametritis, tumors of the adnexa, gonorrhea, etc. After describing in detail **the cure at Franzensbad,** both drinking the water and taking the baths, Nenadovics concludes that the mud-baths at Franzensbad should be given under 40°C. The reaction varies with the temperature and should be low with uterine hemorrhage, high with tumors of the adnexa and parametric infiltration. The temperature of the cleansing bath should be lower than that of the mud-bath. The mud-bath should last 20 minutes, the cleansing bath 5. When massage of the organs in the small pelvis is desired, the mud-bath should be very thick. [M. O.]

9.—Bardach long ago advised **soap made from the brine at Kreuznach in the treatment of acne.** This alkaline soap is also of use in ichthyosis, hyperidrosis, eczema, psoriasis, seborrhea, prurigo, pruritus, acne rosacea, lichen, sycosis, scabies, etc. The soap contains sodium iodide and bromide in small quantities. It has also proved of value in **lupus erythematodes.** A number of cases have been successfully treated. [M. O.]

10.—On account of the similarity in the **mineral springs of Preston, Canada, and Landeck, Germany,** Ostrowicz, knowing the value of drinking the former in **diseases of the liver,** rheumatism, gout, nervous diseases, dyspepsia, etc., tried drinking the water at Landeck, where it had only been employed for bathing and gargling before. **Both waters contain sulphur.** He found that the liver decreased markedly in size, as this water was gradually taken, just as in Canada, and the appetite returned. He also advises bottling these waters, as is done at Preston. [M. O.]

11.—Nagelschmidt compares the effects of **carbolic acid, lysol and lysoform,** as disinfectants. Lysoform is the least poisonous; all are equally bactericidal; lysoform does not irritate the skin; it has no odor, and, like formalin, it removes odors which are present. None of the 3 substances attacks metal instruments. While lysol is to be preferred to carbolic acid, **lysoform is even better than lysol.**

12.—Rose believes that **atonia gastrica** could only exist with **gastroptosis,** producing symptoms usually called nervous dyspepsia. He employed an **adhesive plaster dressing** in 100 cases with excellent results. Clemm has carried out his directions in 3 cases, the histories of which are given, also with success. Massage was given first and the dressings then applied. Clemm calls attention to the fact that the dressing should not be applied during menstruation, but that the physician should wait until that has passed. [M. O.]

13.—In a long review of the present stand of **the cancer question,** Mohr describes the theories so far advanced. Until the causes are really known, nothing can be done prophylactically. If it is hereditary, **prophylaxis** can do little. Technically, syphilis should be prevented, as well as repeated mechanical or chemical irritation. All accidents should be prevented, especially skin affections. Cancer of the various parts of the body are described, with the possible methods of contagion. The numerous treatments also receive consideration. The entire literature is cited. [M. O.]

14.—Naegeli-Akerblom shows that the **employment of the trocar in making a counter opening into an abscess,** which proceeding Rahn claims as new, was performed as early as 1747 by Heister, whose work is fully quoted. [M. O.]

15.—Liebreich states that researches show that **boric acid and borax,** which are considered injurious **as preservatives in meat,** are also injurious in other materials. It is, therefore, probable that the use of borax and boric acid will not be permitted in the preservation of other foodstuffs, as the German law already prohibits their use in the preservation of meat. [M. O.]

DIE THERAPIE DER GEGENWART.

February, 1903.

1. The Treatment of Appendicitis. C. BAEUMLER.
2. The Way Fat is Diminished by Obesity Cures. E. H. KISCH.
3. The Effect of Two New Preparations of Arsenic and Phosphorus. R. KOBERT.
4. Clinical Observations upon Agurin. F. MONTAG.
5. A Supplement to the Biedert Cream Mixtures. GERNSHEIM.
6. The Upper Age Limit for the Mechanical Treatment of Congenital Dislocation of the Hip. GEORG MUELLER.
7. The Treatment of Gonorrhea. WALTHER PICK.

1.—Will be abstracted when concluded.

2.—Kisch has constructed a table which shows **the daily loss of weight** in patients undergoing his **obesity cure at Marienbad.** This has an excellent influence upon the patient, who is weighed every morning, naked, after urination. A man of 40, weighing 228 pounds, weighed 210 pounds in 28 days, upon this treatment. Observation has shown that the loss in weight is greatest during the first 3 or 4 days of treatment, due to the sudden change in diet, removal of all fat, and the diuretic and laxative influence of the waters drunk. In from 4 to 6 weeks the patient loses about 6% of his body weight. The fat first disappears from the breasts and neck, then from the chin, face, groins, arms, buttocks and abdominal walls. Muscular power and the pulse must both be carefully watched. The details of the diet and amount of the Marienbad waters to be taken are given in full. [M. O.]

3.—Kobert describes **phosphorus suboxide and triphenylarsinoxychloride.** Phosphorus suboxide, P_4O, is precipitated when ordinary phosphorus is dissolved in an alcoholic alkaline solution to which a dilute acid is added. It also results if anhydric acetic acid is added to a solution of hypophosphoric acid in vinegar. Kobert believes it to be valueless in medicine. Triphenylarsinoxychloride contains 20% of arsenic. It is formed when triphenylarsin in chloroform is saturated with chlorine, the superfluous chlorine being taken up by carbonic acid gas, and anhydrous ether added until the solution becomes cloudy. On standing crystals of triphenylarsinoxychloride form, melting at 171°, soluble in cold water and alcohol. The arsenic seems to be in most stable combination, not even breaking up when sulphuric acid is added. Animal experiments show that this new preparation is the only relatively nonpoisonous combination of arsenic known. It seems of especial use when other preparations of arsenic are not well borne by patients. [M. O.]

4.—Agurin, a new diuretic, is a powder with a somewhat disagreeable taste, given in doses of from 7 to 15 grains 3 times a day. Eleven case-histories are given, to show the immediate increase in the amount of urine passed. It is better than diuretin, but not so good as digitalis. It has no influence on bloodpressure. It seems of especial use in cardiac disease with dropsy, pleural and pericardial effusion. [M. O.]

5.—Gernsheim describes **ramogen,** a paste-like, preserved, artificial preparation, corresponding to the Biedert cream mixtures. A milk **somatose ramogen** has also been manufactured. Case-histories are given to show good results from the use of these preparations, diluted to different strengths. This preparation seems to be especially well digested by infants with whom the Backhaus milk disagrees. It is also excellent as a food for overcoming summer diarrhea, acute and chronic gastro-intestinal diseases. But these preparations are not suited for every child. In some cases buttermilk is much more effective. [M. O.]

6.—Mueller reports a case of **congenital dislocation of the left hip,** in a girl, over 15 years of age, operated upon by his **mechanical method** with perfect success. The treatment lasted over one year. Excellent results were also noted in bilateral dislocation of the hip in a girl of 14, and great improvement followed the treatment in a woman, 28 years of age, and a man, 49 years of age. This **treatment by apparatus** is, therfore, applicable to individuals much older than is the case with any of the other methods of treating congenital dislocation of the hip. [M. O.]

7.—Pick describes the use of **albargin and chromic acid with argentic nitrate** in the treatment of **gonorrhea.** Albargin is a watery combination of argentic nitrate with gelatine, which contains more silver and is less expensive than protargol. It has a neutral reaction, and, like protargol, has none of the unpleasant secondary effects of argentic nitrate. Gonococci rapidly disappear upon its use, and there is no irritation caused. When used in 1-2000 or 1-5000, its value lies in the rapidity of its action and its lack of irritating properties. In subacute and chronic gonorrhea, when antiseptic and astringent preparations prove of no avail. Pick urges the use of chromic acid followed by argentic nitrate, in injection, with an injection of water between. The argentic nitrate may cause burning and subsequent irritation. This method is only indicated when all acute symptoms have disappeared and there is but very little mucous, not purulent, secretion noted. [M. O.]

Detection of Strychnine in the Body.—W. Salant (*Chem. Zeit.*) states that strychnine is destroyed by some compound present in the intestines, or at least converted into a substance as yet unidentified, so that, when as much as one milligram is added to the contents of the intestines, it cannot be detected by the accepted methods, although the same quantity is easily separated from mixtures of matter from other organs and the blood. A search through the literature of the subject showed that, when the contents of the stomach have been separately examined in cases of strychnine poisoning, it has been possible to identify the alkaloid, but in no case were satisfactory results obtained after intestinal matter had been mixed with substances found in the stomach.

SURGERY.

The Value of Blood Examinations Before Operation.—Benjamin (*Northwestern Lancet,* Feb. 1, 1903) offers the following conclusions: The necessary preparation of a patient for operation is too often neglected. The time for preparations is frequently too short. The general state of the patient before operation is as important as the pathology of the local disease present. Many postoperative complications arise that could be avoided by proper preliminary treatment. The leukocyte count and hemoglobin estimate should be employed as an aid to diagnosis and as a basis of treatment in surgical cases before operation. By the blood examination we may be able to confirm our diagnosis made from the clinical symptoms, or we may be able to make a diagnosis of concealed pus when not determined otherwise. We may save our patient's life by delaying operation until the percentage hemoglobin reaches a safe standard or the white count reaches nearer the normal line. We may be justified in operating at once in a case in which the white count is rapidly rising or the hemoglobin is gradually falling.

Final Results After the Mechanical Treatment of Pott's Disease.—In 39 cases of Pott's disease Taylor (*The Post-Graduate,* Jan., 1903) found that the application of spinal support was nearly always promptly followed by relief of pain and other acute symptoms, and by improvement in general health. The disease was cured in 33 cases, and in a considerable number the cure was practically perfect as regards health, figure and function. The results were good as regards deformity in half the cases; 13 cases showed arrest or decrease of deformity. As regards the final amount of deformity, the location of the disease was more important than any other factor, the cervical region being the most favorable, the lumbar next and the dorsal least. It was necessary to continue spinal support in most cases long after the pathological cure, owing to the tendency to increase of deformity from static conditions. Ankylosis is later, rarer, and less extensive than is usually assumed.

A New Method of Treating the Sac of a Congenital Hernia.—The sac of a congenital hernia is extremely difficult to separate from the spermatic cord. Anschutz (*Beiträge zur klinischen Chirurgie,* Band XXXV, Heft 2) utilizes the principle employed in the Doyen-Winkleman operation for hydrocele, that of inversion. After isolating the cord and sac, a small opening is made into the sac and its contents reduced. The neck of the sac is occluded by a purse-string suture. Instead of removing the sac or separating it from the cord it is turned inside out, the testicle being slipped through the small opening which has been made and which may now be closed by sutures. Of 21 cases operated upon, 12 have gone over 2½ years without relapsing.

Drainage of the Pleural Cavity in Empyema.—Brinkman (*Pennsylvania Medical Journal,* Jan., 1903) believes the ordinary drainage tube is often responsible for the continuance of discharge when used to drain the pleural cavity, its mere presence acting as an irritant. Further, the drainage tube may slip into the pleural cavity. Chloroform is the best anesthetic, especially in children. It is safer to evacuate a portion of the fluid prior to the administration of any anesthetic when the amount of fluid is sufficient to displace the heart to a marked degree. Brinkman exposes the ribs by a longitudinal incision, incises the intercostal muscles and inserts a blunt retractor between the pleura and the rib or ribs, leaving the pleura intact. After removal of the bone the pleura is incised in the direction of the skin incision and the pus evacuated. The pleural cavity is now inspected and, if adhesions are found, they may be separated to allow the lung to expand. Irrigation is not employed. The operation is completed by stitching the parietal pleura to the skin, thus affording a large and free outlet for drainage. In order to avoid injury to the diaphragm, the incision in the pleura should be made from above downward, the first finger being introduced into the cavity and reaching its lowest limits. Twenty-two cases have thus far been operated upon. The convalescence lasted from 3 weeks to 5 months.

The Treatment of Sprains.—Gray (*Caledonia Med. Jour.,* Jan., 1903) says there are two distinct varieties of pain following a sprain of a joint. The first pain occurs at the time of injury and is due to the forcible stretching or tearing of the ligaments; this subsides and there is an interval of from 2 to 4 hours during which the joint is fairly comfortable. The secondary pain is due to tension of extravasated blood and effusion of serum. Immediately after a sprain, cold or evaporating lotions should be applied to contract the vessels and limit the effusion. After this, elastic compression by bandaging without reverses may be employed, the part first being covered with several layers of thick absorbent wool. This supports the vessels, limits the effusion, and consequently lessens the subsequent stiffness. To be of use elastic compression must be applied before effusion has taken place. For the tender points which remain after the subsidence of the swelling, blisters may be employed with advantage. If much limitation of motion results, there are adhesions within the joint, and forcible movements should be made under an anesthetic. Cold douching restores the tonicity of the tissues.

A New Method of Shortening the Round Ligaments Intraperitoneally.—Byford (*Annals of Gynecology and Pediatry,* Feb., 1903) describes his operation which consists in folding the round ligaments anteriorly as is done in the Dudly operation, the loop, however, being stitched to the abdominal parietes about opposite or behind and a trifle above the internal ring. The ligament is grasped with hemostatic forceps and pulled out of the abdominal incision until it is drawn as far out of the inguinal ring as possible without doing violence to the tissues. Then a medium-sized catgut suture is passed through the center of the ligament about ¼ inch from the uterine end and the same suture is passed through the ligament about ½ inch from the internal inguinal ring. The suture is then drawn tight and tied like an ordinary ligature except that it includes only half the ligament in its grasp. The inner edges of the loop thus formed should now be touched with a chemical irritant such as Monsel's solution or 1-5000 mercury bichloride in order to destroy the endothelium and secure firm adhesions. The irritant is then wiped off and the irritated edges are sewn together with fine catgut that entirely closes in and covers up the denuded peritoneal surfaces. The end of this fold is then touched with a chemical irritant and stitched forward beside the bladder, about opposite and a little above the level of the external inguinal ring. This will only be a peritoneal attachment and should be rather high because the peritoneum is held in place here rather loosely. Thus there are practically two round ligaments on either side, one going from the uterus partly through the first ligature to the attachment behind the external inguinal ring, and the other from the uterus to the ligature and from there to the internal inguinal ring. The uterine half or ¼ inch is common to both of the newly formed round ligaments.

Carcinoma Developing from Scar Tissue.—Martinelli (*Giorn. dell. Asso. Napol. di Med. e Nat.,* Sept. and Oct., 1902) reports a case of a man, aged 45 years, whose leg had been wounded 20 years before. Recently he again injured the leg, producing a wound which did not heal. A diagnosis of carcinoma, which was confirmed by the microscope, was made and the leg amputated at the knee. Martinelli has collected a number of cases in which carcinoma has sprung from a cicatrix or ulcer. One may theorize that the wound produces local resistance, that the injury stimulates superfluous cells into activity or that the break in continuity of skin establishes an atrium for infection.

Quinine in Inoperable Cancer of the Uterus.—At the last meeting of the Italian Surgical Society (*Il Policlinico, Supplemento Settimanale,* April 12, 1902) Mariani reported 2 cases of inoperable uterine cancer cured by the endovenous injection of quinine (Jaboulay's treatment). He began by injecting a dose of 20 cgm. of quinine hydrochlorate, after a time giving hypodermic injections of 50 cgm. To one woman he gave 35 injections, to the other 30 injections in 3 months; in the latter case the drug was given by the mouth for the last 5 days of the treatment. A fortnight's interval was allowed in the middle of the course. In one case pain and metrorrhagia ceased and the ulcer completely healed; in the other it healed to a large extent. examination of the blood before and after treatment showed that in one case leukocytosis had entirely disappeared, and in the other had greatly diminished. Histological examination of the tissue removed 2½ months after the conclusion of the treatment showed in one case not a trace of epithelioma; in the other epitheliomatous structure was apparent. With regard to the action of this remedy, the author is inclined to believe that it is due to antiseptic properties of the drug, acting either directly on the micro-organisms or neutralizing the toxins produced in the cancerous tissue. In the discussion which followed Salomoin said that he had used the method in 3 cases. In one, an adenocarcinoma of the kidney, the result was good; he thinks, however, that there was an error of diagnosis, although the decision as to the nature of the growth was reached after an exploratory incision. In the other 2 cases, an epithelioma of the lower lip and an osteosarcoma of the lower jaw, the result was negative. Durante said that he believed that quinine might act on the area of the leukocytic infiltration which accompanies malignant tumors, especially if there is ulceration, but he does not think there is any ground for looking upon the drug as a means of radical cure. Tansini had used quinine in a case of operable cancer of the breast, with the result that the evolution of the growth proceeded more rapidly than before. (*Brit. Med. Jour.*, Feb. 14, 1903.)

Hernia of the Bladder.—Lossen (*Beiträge zur klin. Chirurgie*, Band 35, p. 140) reports 3 cases of hernia of the bladder and analyzes the literature. The condition has been estimated by different observers as occurring in from one to 6% of all herniæ. In 3000 hernia operations, in 1.6% a portion of the bladder was found. Hernia of the bladder occurs more frequently through the inguinal canal than through the femoral canal. The protruding portion of the bladder may or may not be covered by peritoneum. In the majority of cases there is an accompanying enterocele. As a rule, there are no special symptoms in this variety of hernia, the diagnosis being made only after the incision has been made. Of 29 cases in which strangulation occurred the diagnosis was made before operation in 5 only. Even during operation a hernia of the bladder is apt to be unrecognized, and in a number of cases it has been opened before the condition has been diagnosticated. A large amount of subperitoneal fat or a distinct lipoma should put one on guard for a bladder protrusion. If the bladder wall itself be seen or its lateral ligament be made out, a mistake would be less likely to happen. Treatment consists in reducing the herniated bladder and closing the canal in the usual way. In some cases, in which there is a pouch-like formation of the bladder, resection is the proper procedure.

Cancer of the Liver Treated by Hepatectomy.—Peugniez, (*Bull. et Mem. de la Soc. Anat. de Paris*, LXXVII année, T. IV. No. 5) reports a case of carcinoma of the liver occurring in a patient, aged 59 years, who complained of colic in the right hypochondrium. A small tumor could be felt in this region. The case was thought to be one of cholecystitis. After the incision had been made, the pylorus was excluded as the origin of the growth. The gall-bladder could not be found, and the tumor was discovered to be a neoplasm in the same vicinity. It was resected with the thermocautery. Several points bled and required the application of pressure clamps. The wound in the liver was packed with gauze. Recovery followed in 3 weeks. The microscope revealed a cylindrical-celled epithelioma which probably sprung from a bile-duct.

Foreign Bodies in the Air-Passages.—Monnier (*Beiträge zur klin. Chirurgie*, Band XXXV, Heft 3) reports 9 cases of foreign bodies in the air-passages. In 4 of the cases extraction was accomplished through a tracheotomy wound. In another case the foreign body was expelled immediately after incision into the trachea. In 2 cases, although a tracheotomy was performed, no trace of the foreign body could be found. In one instance extraction was accomplished by means of the bronchoscope, and in one it was necessary to perform thoracotomy which proved successful. There were 3 deaths, 2 the result of pneumonia and one the result of purulent mediastinitis. Of all the methods which have been proposed for the facilitation of extraction of a foreign body from the air-passages, bronchoscopy is the most recent. The bronchoscope may be applied without difficulty through a tracheotomy wound and inspection of the lower trachea and upper bronchi carried out. The introduction of the tube through the mouth (superior bronchoscopy) requires more skill and more practice.

Primary Sarcoma of the Ribs.—Trofinow (*Russische Chirurgie*, Aug., 1902) reports a case of primary sarcoma of the ribs which invaded the lung and skin and which was successfully removed. The excised mass contained the seventh, eighth and ninth ribs, together with a portion of the lung and diaphragm.

The Treatment of Dupuytren's Contraction.—The treatment of few, if any, of what may be termed minor surgical affections (*Jour. Amer. Med. Ass.*, February 28, 1903) has been attended with such difficulties as that of **Dupuytren's contraction.** The clinical picture of this obstinate condition is sufficiently well known to all engaged in surgical dispensary practice. Gradually and without pain the fingers of one of the hands are drawn toward the palm, the contracture progressing gradually until several fingers, possibly the entire hand, are almost entirely useless. The ring finger of the right hand is generally first affected, and as the disease advances the little finger and the middle finger are also affected. The thumb and index finger are seldom involved. All the structures of the flexor surface of the hand, muscles, tendon and skin have been considered possible factors in the production of this condition, but Dupuytren, after long observation and careful study of the tissues, was the first to show definitely that the seat of the disease is in the palmar aponeurosis, and this has been thoroughly established by repeated subsequent observers. Examination of tissues removed shows that the process is one of chronic hyperplastic inflammation with scar tissue contraction. As the process progresses, not only the aponeurosis, but frequently also the skin, the ligaments and joints themselves are involved. The course of the disease is extremely chronic, from 3 to 10 years being required before the contraction is complete. The difficulties of treatment have been all the greater because so little is known as to its etiology. Injuries of the palmar fascia, particularly in those who use the tools of some trade continuously, rheumatic affections, general sclerosis and nervous lesions have all been suggested as possible causes; however, constitutional treatment has proved of little avail in these cases. Malgaigne and some of the earlier surgeons, believing that the contraction was primary in the muscles, resorted to division of the tendons, thus producing a state of affairs worse than before. Sir Astley Cooper advised the more rational procedure of dissecting out the contracted tissues with temporary or permanent cure in some cases. Others have simply divided the contracted aponeurosis and skin and straightened the fingers forcibly, but this has been usually followed by recurrence. Electrolysis and various forms of apparatus for extension have also been tried. The latest suggestion as to treatment comes from the clinic of von Bergmann of Berlin. Lexer, one of von Bergmann's assistants, has treated 8 cases by removal of the entire aponeurosis and overlying skin and covering in the defect with a flap with a pedicle from the chest wall or by a flap from the thigh. The results in his cases, after 2½ years' observation, were very satisfactory except in 2 cases, in which there was keloid formation requiring a second operation. Many of the earlier methods of treatment have given fairly satisfactory results and might perhaps be advised before resorting to such radical measures, but for recurrent and obstinate cases this procedure seems to be a resonable and justifiable one.

Portal Anastomosis.—Daniel H. Craig (*Annals of Gynecology and Pediatry*) reports the case of a woman suffering from cirrhosis of the liver. Operation was decided on and performed. At the lower extremity of the wound the parietal peritoneum was separated for about two inches in all directions, and the lower extremity of the omentum, after having been for some time exposed to the air and rubbed with a dry sponge, was tucked down into the sulcus formed by thus separating the peritoneum. Six sutures of catgut were used to secure the end of the omentum within this pocket, to the abdominal parietes. Peritoneum closed above and about the omentum with interrupted catgut sutures, and the abdomen closed in three layers, fascia, fat and skin. Relief of symptoms was absolute, and two months after operation the patient declared herself to be so well that she protested against further dieting, medicine or observation. By the above described technique the author avoided multiple adhesions between various organs and the parietes. As the operation does not cure the cirrhosis, though it does dispose of its distressing symptoms, the contraction of the liver may continue, and if it does so, any adhesions formed may be put on such tension as to be extremely annoying. Moreover, the author made the incision in the lower half of the abdomen instead of the upper half, and thus preserved the physiological function of the omentum; namely, to protect the intestines from violence and chill.

PEDIATRICS.

The Treatment of Scarlet Fever.—Adolf Baginsky (*Berl. klin. Woch.*, December 8, 1902) believes that scarlet fever is caused by streptococci. He used first the old Aronson antistreptococcus serum, with a mortality of 11%. At the same time the mortality in cases treated without this serum was 14%. The new Aronson serum, on the other hand, resulted in marked diminution of all symptoms almost at once. This serum together with the new Moser serum seems to Baginsky to give a brighter outlook for the treatment of scarlet fever.

The Intravenous Administration of Antidiphtheritic Serum.—D. Louis Cairns (*Lancet*, December 20, 1902) believes the greatest influence from antidiphtheritic serum both on the tissues and on the organisms can be obtained when the serum is injected into the veins. He has used doses of from 20,000 to 82,000 units, the latter dose being given in 3 separate portions. No untoward results except the usual serum rash, pyrexia, etc., were observed. The indications for the intravenous injection of diphtheria antitoxin are found in malignant cases; in cases in which there is marked involvement of the lungs; in moribund cases; and in cases that are profoundly toxemic.

Arsenic in the Treatment of Chorea.—Timascheff (*Medicinskoie Obosrenie* V. 57, No. 12) treated 26 cases of chorea with different preparations of arsenic. The best preparation, in his opinion, is a watery solution of arsenous acid, which should be administered in small doses. The duration of the disease seems to bear no relation to the length of the treatment nor will any form of treatment prevent relapses. Chorea can only be successfully treated when the underlying causes are removed.

The Treatment of Rheumatism in Children.—Crandall (*Arch. Pediat.*, August, 1902) says that the rheumatic child should wear flannel at all seasons; that exercise and out-of-door life should receive particular attention; and that a plain but generous and nourishing diet which contains some nitrogeneous matter is the best. As a prophylactic measure the care of the throat and the removal of adenoids and enlarged tonsils is strongly recommended. Sodium salicylate may be given for a week or two at a time for long periods. After the disappearance of the acute symptoms the treatment should be continued for a long time. The indications in a case of acute rheumatism are: (1) To control the fever, (2) to relieve the pain and render the patient comfortable (3) to check the arthritis and other local symptoms, and (4) to prevent involvement of the serous structures. The author is in favor of the use of the salicylates rather than the alkalis in the treatment of the disease. He has found sodium salicylate to be the most satisfactory preparation, and he gives this in doses of 5 grains every 3 hours to a child 6 years of age.

Buttermilk as an Infant Food.—W. Caro (*Arch. f. Kinderheilkunde*, V. 34 Nos. 5 and 6) says that buttermilk, which contains a low percentage of fat and high percentages of sugar and proteid with high acidity, is an excellent artificial food for infants. In 4 children who were suffering from acute gastro-enteritis, 2 who were suffering from chronic gastro-enteritis and in one normal child the use of buttermilk produced satisfactory results as to nourishment and growth. It is given after cooking for 2 minutes with flour and sugar. Out of 198 infants 157 were fed successfully upon buttermilk.

The Treatment of Tuberculous Peritonitis.—Thomas Morgan Rotch (*Arch. Pediat.*, September, 1902) divides the cases of tuberculous peritonitis into primary and secondary. The secondary cases are those in which the infection comes to the peritoneum from the lungs, the intestines or the mesenteric lymphnodes. When the lung or any other important organ is the primary cause of the disease, celiotomy is seldom of any avail. Tuberculosis of the mesenteric lymphnodes, however, associated with tuberculous peritonitis, can be relieved by celiotomy in some instances. If the tuberculous disease of the peritoneum is primary, celiotomy is essentially indicated and is often followed by complete cure.

The Use of Calomel.—Simon Schoen-Ladniewski (*Jahrb. f. Kinderheilkunde*, July, 1902) says that calomel is a diuretic, a laxative and a useful disinfecting agent for the digestive tract. It is indicated in syphilis, ophthalmia, flatulence, colic, dyspepsia, acute and chronic gastro-intestinal catarrh, convulsions, jaundice and dropsy. Its effect is rapid and sure.

Ferruginous Milk.—Luigi Giordani (*Rev. Mens. des Mal. de l'Enfance*, July, 1902) has found that iron is excreted in the milk, and that its amount is increased to 5 times the ordinary quantity contained in the milk after injections of iron in ascending doses. The iron, which is found in milk after injections of iron into the tissues, is in organic combination and, on that account, may be absorbed and assimilated. The modifications in the composition of milk produced by the injections of iron citrate are of no importance. Injections of iron citrate result in a slight reduction in the quantity of milk. Animals support large doses of this ron salt very well, when the large doses are reached by degrees and within intervals of rest from the injections. Locally the iron citrate produces no lesions. In this way it is possible to produce a ferruginous milk particularly useful in infantile therapeutics.

The Treatment of Epilepsy With Bromides and Without Salt.—J. Halle and L. Babonneix (*Rev. Mens. des Mal. de l'Enfanee*, July, 1902) report 3 cases of epilepsy which were treated with bromides and with the withdrawal of salt from the diet of the patient. The results were good in all 3 cases. According to Richet and Toulouse the withdrawal of chlorides from the diet renders the patient more susceptible to the action of the bromides. The method of treatment is to put the patient on a milk diet, a liter of which contains about 1½ gm. sodium chloride, and adding a small amount of bread, so that the 2½ to 3 gm. of sodium chloride, which is daily absolutely necessary for the organism, is furnished. The amount of bromide administered during such a diet should not exceed 2 gm. daily for children, or 4 gm. for adults.

The Medical Treatment of Tuberculous Peritonitis.—Jules Comby (*Arch. de Méd. des Enfants*, September, 1902) reports 3 cases of tuberculous peritonitis in children, aged 2, 7 and 10 years. Ascites was present in one of the cases, while the other 2 were of the fibrocaseous form. All 3 patients recovered on purely medical treatment, which consisted in rest in bed for several weeks with fresh air, sunlight and good food. As soon as possible the child should be taken to the seashore, where he should live in the open air. Cod-liver oil, creosote and the hypophosphites should be administered.

The Treatment of Epilepsy by Hypochlorization of the Diet.—L. Pierce Clark (*N. Y. M. J.*, January 10, 1903) believes that in the treatment of epilepsy the withdrawal of sodium chloride is of benefit if it is accompanied by the administration of the bromides. General hygienic treatment, massage and hydrotherapy should be accessories to the drug treatment. When the amount of chlorides in the body is reduced, the patients remain free from bromism, from gastric irritation, constipation and mental hebetude.

Subcutaneous Injection of Gelatine in Childhood.—Zuppinger (*Wiener klin. Woch.*, December 25, 1902) uses solution of gelatine, varying in strength from 2% to 10%, in the treatment of hemorrhage in children. He uses sterilized purified gelatine.

The Treatment of Pneumococcic Peritonitis.—M. Stoos (*Jahrbuch f. Kinderheilkunde*, October, 1902) reports 4 cases of pneumococcic peritonitis in children. In 3 of the cases there was a circumscribed purulent inflammation of the peritoneum, and in one the peritonitis was diffuse. The prognosis in encysted peritonitis is good; when the inflammation is diffused, it is poor. The treatment should always be by celiotomy.

Antitoxin in Diphtheria.—Charles Gilmore Kerley (*Arch. Pediat.*, October, 1902) attributes the good results obtained in cases of diphtheria with antitoxin to the early use of the remedy. In addition, it is necessary always to know when more antitoxin is required. The early use of not less than 3,000 units of antitoxin has reduced the death-rate in diphtheria to a very small percentage. This amount should be repeated if improvement is not promptly observed. When there is visible membrane, the physician should inject at once and take a culture afterward. In croup he should inject if there is inspiratory and expiratory obstruction. The patient should be seen at 12-hour intervals, and reinjection should be made if the membrane is not disappearing. A child under one year of age should receive 2,000 units at a dose, while a child over a year should receive 3,000 units at a dose.

Intubation in Diphtheria.—John H. McCollom, (*Arch. Pediat.*, October, 1902) details the results of intubation in diphtheria as observed in the South Department of the Boston City Hospital. Since the opening of this department there have been 12,000 intubations; eliminating those patients who died within 12 hours after admission, the death-rate was 25%, which the author attributes to early operation and large doses of antitoxin. When the patient can have constant watching, intubation is better than tracheotomy, because there is very little shock, because the parents will consent to intubation more readily than to tracheotomy, and because the chances for bronchopneumonia are much less. The author is convinced that stenosis of the larynx in an adult can be relieved better by intubation than by tracheotomy. The feeding of the patient after intubation is of great importance; the author prefers the esophageal method. He has given up all forms of treatment of laryngeal stenosis other than intubation. He usually allows the tube to remain in for 3 or 4 days.

The Treatment of Chronic Parenchymatous Nephritis by Renal Decapsulation.—Augustus Caillé (*Arch. Pediat.*, October, 1902) reports the case of a child who had chronic parenchymatous nephritis. The child had severe acute exacerbations and was finally operated on, the capsules of both kidneys being split and removed. The improvement following the operation was quite noticeable. The author would advise the inspection of the kidneys through a lumbar incision in cases in which acute nephritis, not secondary to heart lesions, does not clear up within a reasonable time, say 6 months; and would furthermore advise decapsulation of one or both kidneys should they appear swollen and enlarged, with the hope of preventing an acute nephritis from becoming chronic.

The Basis of Artificial Feeding in Infants.—Arthur V. Meigs (*Arch. Pediat.*, October, 1902), as a result of the analysis of human milk, says that that fluid never contains more than 1% of casein. It ought to be decided whether it is best that artificially fed infants should have the strength of their food increased at frequent intervals, as is genrally advised. More analyses of human milk should be made, and, if it is found that the percentage of casein contained in it is uniformly low, the question as to the advisabilty of increasing the strength of the food of a bottle-fed baby can be decided.

Fat Percentage in Infant Feeding.—Thompson S. Westcott (*Arch. Pediat.*, November, 1902) says that in cases of chronic gastric catarrh or chronic high intestinal catarrh, in which underfeeding becomes necessary for a considerable time, he obtains the most satisfactory results by the use of whey mixtures, in which the deficiency of proteids in ordinary modifications is supplemented by a high percentage of lactalbumin. In many of these cases unusually low percentages of fat must be given, and for this purpose dilutions of milk without cream in conjunction with a fat-containing whey offers the most expeditious means of increasing caseinogen and of keeping the fat percentage within the bounds of digestive tolerance.

The Proteids of Milk.—Henry Dwight Chapin (*Arch. Pediat.*, November, 1902) points out that, until the composition of the different proteid bodies found in milk is discovered and some uniform methods of separating them are agreed upon, comparing milks by analyses made by different methods may lead to erroneous conclusions. Whey and cream mixtures may not be such close imitations of mother's milk as has been supposed. At present the comparison of milk anlayses for proteid is of little use, except by showing total proteid and thus the potential food value. The primary object in infant feeding is to increase the number of cells in the body. These all contain phosphorized proteids. Albumin does not contain phosphorus, so, theoretically, it is not fitted for the sole proteid of a diet for any animal. With the present limited knowledge, it is a question whether it is wise to attempt to introduce into practical infant feeding methods that call for mixture of different forms of proteid supposed to exist in milk.

Enuresis in Children.—Dr. H. B. Sheffield (*The Post-Graduate*, December, 1902) points out that of the two varieties of enuresis—that by day and that by night—the former scarcely ever occurs in children. The latter form is, on the other hand, exceedingly common. It may be either functional or organic. Functional causes may either consist in a spasmodic condition of the detrusor muscle or in atony of the sphincter, one state being found in nervous, irritable children, the other in those who are in feeble general health. A long list of organic conditions may give rise to the malady, among them, organic disease of the spinal cord, cystitis, phimosis in the male, and hypertrophy of the clitoris in the female, masturbation, undescended testicle, hernia, worms, vesical and renal calculi, tumors in the bladder, excessive quantity of lithates or phosphates, constipation and accumulation of feces, epi- or hypospadias, fissure in ano, vulvovaginitis, gonorrhea, diabetes mellitus and simple or gonorrheal proctitis. Needless to say, in such cases the treatment consists in removal of the organic condition. On the absence of such organic causes, much may be done by good advice. The patient must be instructed, if old enough, not to refrain from micturition when the desire occurs; and small children should be taught to pass water every 3 hours, in order to avoid any undue distension of the bladder. The patient must not be allowed to sleep on his back. In atonic cases attention must be paid to the general health by means of tonics, change of air, etc. Sheffield recommends the following mixture:

Ext. ergotæ	3 oz.
Ext. rhus. tox.	1 oz.

S.: Five to ten drops every 4 to 6 hours to a child 6 years old.

In cases in which there is hyperesthesia of the neck of the bladder, the following mixture may be used:

Ext. hyoscyami		½ oz.
Natrii bromidi		1 oz.
Aquæ anisi		1 oz.
Syrup. simplicis	q. s. ad.	2 oz.

S.: One teaspoonful every 4 to 6 hours for a child 6 years old.

Sinapisms over the lumbosacral region are often useful, and, as a last resource, gradual dilatation of the posterior urethral canal is sometimes successful.

The Treatment of Recurrent Vomiting in Children.—Henry Larned Keith Shaw (*Arch. Pediat.*, November, 1902) says that, in the condition known as recurrent vomiting in children, the vomiting is the most striking and characteristic symptom. This may be mild or very severe and is usually accompanied with nausea and unproductive retching. Thirst, abdominal pain and constipation are also common attendants on the condition. The temperature is slightly, if at all, elevated. The urine, as a rule, contains an excess of uric acid either preceding or during the attack; and indican is often present. Albumin and casts are inconstant. This disease may last from a few hours to 7 or 8 days. Recovery is almost instantaneous. In the treatment of the disease the indications are to give the stomach absolute rest and to get the bowels to act. For the former purpose morphine hypodermically or chloral by the rectum are of value. Marfan obtained good results in the latter indication by the use of large rectal injections of normal salt solution.

DERMATOLOGY.

Acids Internally in Pruritus.—Prof. H. Leo, of Bonn, (*Semaine Médicale*, XXII., No. 51) recommends a trial of hydrochloric or sulphuric acid in all cases of generalized pruritus of obscure origin, whether there be alkalinuria or not. Some time ago he was called to a man suffering for more than a year from very intense generalized pruritus. Nothing abnormal could be discovered save an alkalinity of the urine due to an increased elimination of phosphates; so the doctor ascribed the pruritus to hyperalkalinity of the blood. Accordingly he prescribed a 50% solution of hydrochloric acid in doses of 10 drops every 2 hours. As a result the pruritus diminished in intensity, and the urine became clearer. After several days a 1½% solution of sulphuric acid was given, a tablespoonful every 2 hours, and still later the strength was increased to 2½%. The pruritus soon disappeared completely. Dr. Leo has applied the same treatment with success in another case of generalized pruritus and in a case of vulvar pruritus. In these 3 cases the urine was alakline; but in 3 other cases it was of normal reaction before instituting the treatment, and yet the results were very satisfactory. Of course, there were some instances in which no success was had.

A Case of Severe Pyrogallol Poisoning.—Rusch (*Wien. klin. Woch.*, 1901, No. 52, from *Monatssch. f. Prakt. Derm.*, Band 35, No. 7) reports a severe case of poisoning from pyrogallic acid which was employed in ointment form for psoriasis. The patient was a pregnant woman, and, although recovery took place, abortion occurred. Hematuria and hemoglobinuria were absent, although the urine was, as usual, of a dark brown color. The pregnant state seems to increase the susceptibility to pyrogallol poisoning.

Derivatives of Formaldehyde in the Treatment of Intertrigo, Hyperidrosis and Eczema.—Weijamowitch (*Med. Obozrenie*, 1902: abstracted in *Monatssch. f. Prakt. Derm.*, Band 35, No. 7) advises the use of tannoform in combination with starch or talcum (1 to 4 or 5 parts) in intertrigo, weeping eczema and sweating feet. He also obtained excellent results in the last named condition by painting the soles with formalin either pure or diluted with three parts of water.

Treatment of Oily Seborrhea.—The *Revue Pratique des Maladies Cutanées, Syphilitiques et Vénériennes*, January, 1903, sets forth the following methods of treating oily seborrhea: Oily seborrhea may be treated with reducing agents such as sulphur, mercury and ichthyol, or one may employ keratolytic substances or a combination of these. Before applying preparations containing sulphur the skin should be freed of its oil by such applications as alcohol, ether, Hoffmann's anodyne, acetone, benzine, strong alkali—for example, the following solution:

Caustic soda	1 gm.
Water	300 to 500 gm.

All of these remedies permit greater penetration of the sulphur but also make the skin more irritable. Sulphur pastes are frequently employed. The author has often used the following:

Benzoated lard	28 gm.
Zinc oxide	4 gm.
Ceyssatite	1 gm.
Precipitated sulphur	6 gm.

Or.

Precipitated sulphur	1-3 gm.
Zinc oxide	5 gm.
Lanoline	10 gm.
Water	15 gm.

The author states that sulphur ointments with such bases as vaseline are more dangerously irritating than pastes, and that the addition of zinc oxide mitigates the irritating influence of the ointment. The utility of ichthyol in the treatment of oily seborrhea is very variable, depending on the individual cases. It is used in the form of a lotion with light friction after previous soaping of the part. The following formula is advised:

Ichthyol	10 gm.
Alcohol	50 gm.
Ether	50 gm.

One may employ keratolytic in combination with antiseborrheic remedies.

The following is an excellent paste of this character:

Resorcin	1 gm.
Acidi salicylici	2 gm.
Sulph. præcip.	5 gm.
Zinc oxide	10 gm.
Starch	10 gm.
Vaseline	25 gm.

Allow to remain over night, clean off in the morning with vaseline and powder with talcum.

Resorbin.—Ledermann (*Jour. Cut. Dis.*, August, 1902) writes of resorbin, the ointment base which he introduced to the profession in 1893. Resorbin is a fat emulsion, consisting of almond oil, wax and water, combined with a minute quantity of gelatine, and a small quantity of lanolin to improve its consistency and stability. Resorbin is claimed to have unusual power of penetration into the skin. It finds a special usefulness combined with mercury for inunctions in syphilis. Mercurial resorbin has a dull gray color, somewhat lighter than that of the official mercurial ointment, and a faintly aromatic, pleasant odor. The microscopical examination of the ointment, according to Silberstein, shows that the globules of mercury, contrary to what obtains in the official ointment, are uniformly distributed, their diameter ranging between 2 and 4 microns. As the ointment is very soft, it can be most rapidly rubbed into the skin, and even after an inunction lasting 8 or 10 minutes, it can be seen that it has disappeared, leaving only a dull gray reflex but no other fat residue on the skin. A material advantage in the use of mercurial resorbin is the reduction of the duration of the rubbing to one third the time ordinarily required. Another advantage consists in the lessened soiling of the linen, a matter that renders a course of inunctions with the official ointment objectionable to many patients. It is claimed that the efficacy of mercurial resorbin is absolutely equal to that of the official ointment despite the shorter time consumed in the ointment. The author claims that resorbin is indicated in all affections in which it is desirable to remove crusts and scales. The marked softening of the superficial layers of the skin by this agent, with or without addition of other drugs, shows that the corneous layer is permeated by the fat. Its use, therefore, is indicated in pityriasis capitis et faciei, in ichthyosis, and in all forms of dermatitis associated with fissures. The following formula is recommended for the removal of scales and crusts:

Acidi salicylic	2-5-10 gm.
Resorbin	ad. 100 gm.

DIETETICS.

Colorimetric Determination of Sugar.—Ventre Pacha (*Bull. Assoc. Chim. Sucrerie*) gives the following process for determining small quantities of sugar: to 10 cc. of a filtered and clarified solution containing sugar add 12 drops of chemically pure sulphuric acid, 5 drops of a 50% alcoholic solution of nitrobenzol, and 20 drops of a saturated solution of ammonium molybdate; warm for 3 minutes and then bring to boiling temperature. According to the amount of sugar present, a more or less strong blue coloration will appear, and, by comparison with tubes containing a definite and known percentage of sugar, the amount of sugar present in the solution under examination may be approximately determined with considerable accuracy. A solution containing sugar to the amount of 1 part in 1,000 gives a very strong blue; one containing 1 in 10,000 is also strong in proportion, while in one containing 1 part in 1,000,000, color can still be easily detected.

Coffee Drinking.—Notwithstanding the scare advertisements of health-substitutes for coffee (*American Journal of Pharmacy*), there is no cause for apprehending danger to the race at large from coffee drinking. After generations of almost universal coffee-drinkers, our own times see men of gigantic intellect in all realms of activity; our athletes are able to make sudden bursts of effort equal to any in history, and our soldiers acquit themselves manfully in fatiguing campaigns in torrid climes. The life insurance companies, constantly warring against all that lessens longevity or conduces to abnormal organs, nerves and actions, seem content to accept the use of coffee as one of the ordinary elements of every-day life.

Paraffin in Food.—It is said that among the sweetmeats now offered in the markets of New York (*Druggist's Circular and Chemical Gazette*, February, 1903) is an alleged "butterscotch" which consists mainly of glucose and hard paraffin. This dangerous fraud is not new here, as several years ago we happened on a recipe for a similar stuff in a journal devoted to confectionery. It was printed in answer to a correspondent who wanted to overcome the "stickiness" of a certain mixture, and it seems not unlikely that it was a type of others known to the trade. However that may be, our English cousins have practised the fraud for years, and it is reported that one of their manufacturing houses is now defending in court a charge against it of selling paraffined confectionery. Confections are not the only eatable things with which paraffin has been mixed. That great staple, rice, has been and perhaps still is "doctored" in that way, so as to make unsightly specimens appear agreeable to the public eye. The value of rice in dollars and cents depends somewhat on its appearance. When it is "bright" it brings the best price; when dull it is looked on as old and can be sold only at a lesser figure. Rice fresh from the fields may take a good polish when "milled," but when too old it is often dull and cannot be finished up to the market requirement by a mechanical process alone. To aid this, the grain is soaked in some kind of oil or in paraffin, mainly the latter, it is said, and it can then be given a good luster. The danger in the ingestion of paraffin is a mechanical one; it is held by physiologists to be a wholly indigestible substance; if taken in even small amounts it may accumulate and cause obstruction of the digestive apparatus. Of course, no one with the slightest knowledge of the subject would allow himself to be exposed to such a risk; that it is thrust upon him is an outrage.

Aniline Dyes in Food.—In a report to the Massachusetts Board of Health, (*Druggist's Circular and Chemical Gazette*, February, 1903), Analyst Leach says: "In the food and drug laboratory of the board there is a varied collection of strips of woolen nun's veiling or albatros cloth originally white, dyed in a variety of fast colors by boiling up the pieces of woolen cloth in solutions of various food products sold commonly on the market, illustrating in a striking manner the extent to which jellies, jam, ketchups, fruit syrups and cordials, especially of the cheaper variety, are so frequently colored. Reds, pinks and orange colors were dyed from preserved fruits and ketchups, a deep yellow from lime juice and a brilliant green from crême de menthe. The latter cordial consisted of sugar syrup slightly flavored with peppermint and deeply colored with the aniline dye. It was completely decolorized by boiling with the wool for a few minutes. Various fruit syrups are also commonly found with artificial color, the coloring matter being aniline dyes in nearly all cases. The exact group to which the dye belongs may in most instances be identified by experiments with various reagents on the dyed fiber. Azoeosin has been found in raspberry and strawberry preserve; primulin orange in preserved quince; Bismarck brown in apricot, pineapple, etc.; chrysamin in orange fruit syrup; malachite green in crême de menthe; dinitrocresol and tropeolin in lemon extract, etc.

INFECTIOUS DISEASES.

The Cause of Sleeping Sickness.—The announcement recently made by Dr. Manson (*Practitioner*, February, 1903) that the causal agent in the disease known as "sleeping sickness" or "African Lethargy" has at last been discovered is a fact of the first importance. This terrible disease, which affects the negro population in certain parts of Africa, has lately seemed to be enlarging its borders and spreading to regions which had been previously immune from it. The mortality caused by it among the natives has been enormous, whole villages being depopulated by the scourge. It is true that it is not the same thing to find the causal agent and to discover a cure for the malady, but the first step is to ascertain the pathology of the condition. The remedy will come later either in the form of a drug or, more likely, of a protective or curative serum. The morbid anatomy of this strange disease had been already ascertained by D. F. W. Mott, F. R. S., who found, in two patients who died at Charing Cross Hospital, that an intense inflammation existed in the substance of the brain, the vessels being everywhere surrounded by masses of migratory leukocytes. This appearance suggested very strongly the existence of an infective cause. The enlargement of the lymphatic glands, which also occurs, pointed in the same direction. The clinical symptoms consist of a gradually increasing lethargy, the patients not seeming to suffer any pain, but appearing miserable and resenting any attempt to arouse them. Great wasting latterly occurs, and death takes place by progressive asthenia.

Treatment of Typhoid Fever.—In an address on this subject, delivered before the North London Medico-Chirurgical Society, Dr. H. D. Rolleston (*Practitioner*, February, 1903) alludes to the question of the advisability of starving the patient, and thus reverting to the ancient method of treatment. He quotes the cases of some soldiers who suffered from typhoid fever during one of the sieges in the South African war. Provisions were scarce, and the patients lived for some days on little but water. They did exceptionally well on this diet during the fever, but during convalescence they suffered from lack of sufficient nourishment. Typhoid patients appear to do well on little but water, with or without a small quantity of alcohol. With regard to the use of this drug for heart-failure, Dr. Rolleston speaks dubiously. He tends to prefer hypodermic doses of strychnine. For intestinal antisepsis he gives the palm to liquor hydrargyri perchloridi in half-drachm doses. With respect to the antityphoid inoculation as practised by Wright, the data do not admit of a certain conclusion being reached, but Dr. Rolleston's own observations tended to show that infection did not take place within 6 months of the inoculation, which, therefore seemed to confer temporary immunity.

A Century of Arm-to-Arm Vaccination.—Eduardo Liceaga (*Indiana Medical Journal*) describes the method of **arm-to-arm vaccination** which has been practised for 100 years in Mexico, the greatest care having been exercised as to the choice of candidates for propagating the virus. As to the results, it has been observed, in the first place, that persons vaccinated in this way remain immune during their whole lives. When there is a widespread epidemic it is stopped in no time by at once vaccinating all persons who have not been previously so treated. The immunity which vaccination confers on infants is preserved during the whole of their lives. No Mexican physician has ever died of smallpox, even if he has been in practice for 40 years. The same immunity has been observed in male and female nurses who attended smallpox patients. Experiments undertaken by order of the Supreme Board of Health of the City of Mexico show that vaccinations succeeded exceptionally well. Of 1,307 revaccinations only 23 were successful.

Treatment of Tropical Dysentery.—Frederick Goldsmith (*The Australasian Medical Gazette*) insists upon absolute rest to the body and to the intestinal canal. The diet should be left off altogether for a time, or be wholly fluid and as little as possible. Although the patient may be almost continuously on the stool, that which is passed is not fecal matter at all, but merely the product of the highly inflamed bowel. The feces tend to be locked up behind the diseased part, and to be retained there by the muscular spasm of the affected portion of the bowel, the lumen of which is still further diminished by the edema present in the mucous and submucous coats. To ensure the passage of the feces it is necessary to render them as liquid as possible, and for this the sulphates of magnesium or sodium are very suitable. The author usually gives one-dram doses every two hours, combined with a little tincture of opium, tincture of orange and chloroform water, till the motions become feculent, and then every four hours afterward for a few days. To render the diseased bowel aseptic as far as possible, and to destroy the disease-producing germ, injections per rectum are valuable when the disease does not extend backward beyond the descending colon. Methylene blue nine grains, and boric acid solution two pints, gives the most satisfactory results. The enema should be injected slowly, and if there be still any expulsive effort, the buttocks (which are raised on a pillow) should be pressed together till the spasm passes.

The Cure of Boils.—A. K. Bond (*Louisville Monthly Journal of Medicine and Surgery*) says that the first thing to do is to quarantine the existing boils, so that no more pus may be carried from them by the fingers, or in any other way, to other parts of the feeble skin. To this end antiseptic dressing is necessary. If the core of the boil is loose, it should be removed by dressing forceps. Cleansing the wound-hole with hydrogen peroxide, and dressing with calomel and bismuth, will probably secure as quick healing as in any other wound. If the core of the boil is not loose, cut it out with knife and scissors. The core itself is insensitive. When, however, bacteria foci are bound by dense fibrous tissue or wherever pus is shut in, the adjacent healthy tissues will be extremely sensitive. The application of pure carbolic acid on an applicator in advance of the knife or scissors will usually anesthetize the wound sufficiently to permit of thorough work. Hydrogen peroxide is a great aid to the cleansing, but takes much time. Suppuration will not cease till all infected tissues have been removed. As pure carbolic acid favors suppuration, the last traces of necrotic fibrous tissues in the depths of a deep excavation may better be removed by dressings of pure alcohol. It gives severe pain on the first touches to the wound, but then anesthetizes the parts it has touched. Fibrous sloughs seem to clear away under it more quickly than under carbolic acid. A plug of gauze soaked in alcohol may be left in the wound. The top dressing should be of cotton, to keep the sick tissues at even warmth, and slight pressure to support the tissues is helpful.

RADIOTHERAPY.

Röntgen Ray Treatment.—Allen (*Jour. Cut. Dis.*, February, 1903) presents the following conclusions concerning the use of the Röntgen Rays: (1) The X-rays possess decided therapeutic power and may produce marked injurious effects. (2) From the study of the present series of cases the writer is warranted in stating that the X-rays as a therapeutic measure are not a passing fad to be dropped after a brief existence. (3) The effect of the method is at times to produce severe symptoms, referable to the heart, lungs and other internal organs, and systematic effects pointing to absorption of disintegration products thrown into the circulation more rapidly than they can be eliminated. (4) Metastases occur at times in grave forms of cancer more rapidly than we are accustomed to see in patients not so treated. (5) Cancer itself may be produced by the injurious effects of the rays in a person not known to be predisposed, as instanced in the case reported of the tube-maker, whose arm had to be amputated for carcinoma developing in the X-ray cicatrix. (6) The X-ray dermatitis, and many of the good effects as well, depend upon the proximity of the tube, the degree of vacuum and the degree of heating of the anode. (7) Tubes may at times get into a "burning state." This condition of tube must at present be learned by experience and observation with the tube in question, as there is nothing to indicate just when this condition is present aside from the effects produced. (8) The method is not one to be solely relied upon in all cases of cancer. (9) In the nodular, wart-like and dry growths upon the skin, other means of removal, preferably by arsenical paste, should first be employed, and the rays may then be applied. (10) The indiscriminate application of the rays to all forms of disease as claimed to be practised by advertising institutions and by charlatans, and the deceit practised by calling other rays by this name, are apt to bring much unmerited reproach upon a method really useful, the effect of which is at times almost magical, but most often disappointing.

PHARMACOLOGY.

Vaccinium Vitis-Ideæ.—The leaves of the cowberry, **vaccinium vitis-ideæ**, having been re-investigated by A. M. Karger (*Druggist's Circular and Chemical Gazette*, February, 1903) for an inaugural dissertation. The chief constituents found were arbutin, hydroquinone, tannin, quinic acid, ericolin, ericinol, gallic and probably ellagic acid, the two last named being probably products of the decomposition of tannin. Arbutin, hydroquinone and tannin increase in quantity during the summer and reach their maximum in the autumn. As these may be regarded as the most important of the constituents, the leaves should be gathered in September, and they should be dried at the ordinary temperature, as they suffer if heated. The flowers contain hydroquinone but not benzoic or salicylic acid. Benzoic acid is, however, present in the fruit. Bearberry leaves being closely allied to cowberry leaves, both botanically and chemically, it seems quite probable that these also should be gathered in the autumn.

New Test for Quinine and Quinidine.—E. Hirschsohn (*Bull. Com.*) observes that, if 10 cc. of a neutral solution of a salt of quinine be treated with a drop of solution of hydrogen peroxide (2%) and a drop of a 1 in 10 solution of copper sulphate, on boiling a red coloration is produced, quickly changing to violet and afterward to green. Other alkaloids and glucosides do not give this reaction.

Olive Oil in the Treatment of Hematomata.—Dr. Camescasse (*Revue de Thérapeutique*, December 1, 1903) advises the application of **olive oil** in all cases of contusion and hematomata. No rubbing in is necessary—it is indeed painful and therefore to be avoided—but the oil is simply sprinkled on or applied on lint. If the skin is broken, a previous cleansing with some antiseptic is advisable. The mode of action of the remedy is not clear, but the rapidity and effectiveness of its action are said to be remarkable. A black eye thus treated disappeared so quickly and completely that the victim was inclined to complain on the ground that he had no visible injury to show to the police.

Adulteration of Peppermint Oil.—E. J. Parry (*London Chemist and Druggist*) says that, since the great increase in the price of **peppermint oil**, adulteration of this article has increased to an enormous extent. Ten samples recently examined by him varied in specific gravity from 0.880 to 9.04 and in rotation from —9° to —14°. None dissolved in 3 volumes of 90% alcohol, and from none could any menthol be separated by cooling to —10° C. with the addition of a few crystals of that substance.

Atropine Conversion.—Amenomiya (*Arch. de Pharm.*) has confirmed experimentally **Gadamer's deductions** as to the **optical inactivity of atropine** and the **activity of hyoscyamine** being a function of their tropic acid residues, and that the optically active atropines hitherto recorded are probably mixtures of atropine and hyoscyamine. Inactive atropine was hydrolyzed by prolonged boiling in weak alcohol, and the tropine and racemic tropic acid isolated. By means of the quinine salt racemic tropic acid was split up into its active components. Each of the two active tropic acids was then recombined with tropine, the gold chloride salts of the two bases purified, and the optical activity of the hydrochlorides identified with d- and l- hyoscyamine.

Incompatibility Between Aspirin and Sodium Bicarbonate.—Rousseau (*Pharm. Zeit.*) has observed that when **aspirin and sodium bicarbonate** are brought together, either in solution or in dry form, the aspirin suffers a partial decomposition with the liberation of acetic acid. The solution soon acquires an acid taste and develops the peculiar acetic acid odor; while the pulverulent mixture becomes first moist, and then cakes, and in a few days forms a semifluid mass.

On the Therapeutic Application of Dormiol.—Dibailoff (*Prakititchesky Vratch*, Vol. I, No. 42, 1902) employed **dormiol** as an hypnotic in cases of angina pectoris, mitral disease, insomnia, emphysema, pneumonia, neurasthenia and appendicitis. From the results obtained he draws the following conclusions: (1) Dormiol administered in doses of 0.5-1 gm. half an hour before expected sleep is a very satisfactory hypnotic, producing in the majority of patients a refreshing sleep which resembles normal sleep. (2) No untoward effects are observed. (3) The most convenient form of using dormiol is in capsule, 0.5 gm. each. (4) Dormiol is similar in its action to trional, only it is cheaper. (5) It is possible to become habituated to the drug after prolonged use. (6) Further observations on dormiol are desirable.

TUBERCULOSIS.

Dyspepsia in Consumptives.—The apparently pretubercular dyspepsia is described by Paquin (*Memphis Medical Monthly*, February, 1903). He does not think that it absolutely precedes tuberculosis, and insists on the importance of strength rather than gain in weight as a favorable symptom in the prognosis. He thinks we should look on persistent indigestion with the greatest solicitude and watch the victims closely, so as to place them, if possible, in the condition to defeat the greatest plague of man—consumption.

DISEASES OF THE GENITO-URINARY TRACT.

Treatment of Syphilis With Intravenous Injections of Mercury Cyanide.—Renault (*Gaz. Hebdom.*, 1902, No. 55; abstracted from *Derm. Centralblatt*, September, 1902) has obtained good results with injections of mercury cyanide into the veins of the arm. He uses a 1% solution and gives 1 cc every day or every other day. The injections are painless, and the action is rapid and sure, particularly in affections of the nervous system. The author treated 14 cases of syphilis; three of these patients had secondary syphilis with severe headaches, three had gummata of the tongue and gums, two had medullary disease, four had severe tertiary headaches, and one had Jacksonian epilepsy. In all of these the improvement was rapid, the headaches disappeared, as a rule, after the first injection, as likewise did the epileptiform seizures. In the discussion the following objections to the treatment were made: The injections are difficult to carry out in fat persons; it has been shown that even weak solutions of mercury bichloride are capable of producing phlebitis and thrombosis; it has not been proved that this method is superior to the treatment with the inunctions and potassium iodide.

GASTRO-INTESTINAL DISEASES.

Dysentery.—Goltman (*Memphis Medical Monthly*, February, 1903) has treated dysentery, as he claims, of the **amebic variety**, by local treatment and divulsion of the rectum. His conclusions are: (1) The treatment of dysentery, acute or chronic, by topical application is most rational. (2) Topical applications are useless unless large volumes of fluid are used to distend the bowel. (3) Topical applications, as usually made, are very painful in all cases, particularly in those that are acute. (4) Topical applications, to be thorough and far reaching, are unbearable to the patient, on account of the extreme pain they cause. (5) Anal division is a prime factor in facilitating the work of flushing the colon. Resistance to the escape of fluid is removed, and it markedly relieves the tenesmus. (6) Anal divulsion, cauterization of ulcers through the proctoscope, passing a tube high up into the sigmoid through this instrument, and thorough distension and flushing of the gut, are absolutely impossible without the aid of anesthesia. (7) Anesthesia rather relieved than produced shock in Goltman's cases. These patients seem to take as kindly to chloroform as women in childbirth. (8) In his judgment, one is more likely to overdistend and perforate the gut without anesthesia than with it.

DISEASES OF THE EYE, EAR, NOSE AND THROAT.

Claim of Restoration of Sight in a Nearly Blind, Cancerous Eye by Cancroin.—Albert Adamkiewicz (*Medicine*) reports the case of a woman of 42 years who had previously been operated on twice for cancer of the breast. When seen by the author, there was a cancerous infiltration of the choroid of the left eye, with a partial loosening of the retina. Vision was reduced to the perception of light. Cancroin injections were begun at once. Infiltration of the scar of a former operation, and enlarged clavicular glands were favorably affected within a few days. Vision in the affected eye began at once; 7 days after the first injection the patient could recognize the countenance of her husband and moving objects near a window. Recovery of vision became practically complete, and pains which were present in the patient's hands and feet gradually disappeared.

Formalin in the Treatment of Purulent Otitis Media.—Geronzi (*Archivio Italiano di Otologia*, XIV., 1) reports the result of formalin treatment of 55 cases of **chronic purulent otitis media.** He commenced with a 2% glycerine solution and gradually increased the strength to 5%. The middle ear was tamponed with a small strip of gauze impregnated with the fluid, or 2 or 3 drops of the 5% solution were instilled. This treatment was applied in those cases that had proved rebellious to ordinary measures. Improvement was manifest by the second or third application; and a complete cure between the tenth and fifteenth application was obtained in 34 out of the 55 cases. The duration of the affection in some of the cured cases was from 10 to 21 years. The formalin reduced the size of the granulations in the tympanum and, supplemented by silver nitrate, was able to accomplish their complete disappearance in a number of cases. He found that the addition of 5% of sodium carbonate to the 5% solution of formalin increased the tolerance, while others have proved that it also enhanced its bactericidal power.

A Case of Otitis Media with Sinus Thrombosis and Double Cerebellar Abscess. Hennicke, in the *Monatsschrift für Ohrenheilkunde*, Berlin, September, 1902, gives the full details of this case. A boy, 8 years old, had complained for 8 days of headache and tenderness behind the ears; he was feverish and apathetic. Both ears had discharged since an attack of scarlet fever and diphtheria, 1½ years before. Both mastoids were reddened, swollen and tender. Hearing tests were not possible because of his somnolent condition. Temperature 102.4°. Pulse 128. Urine negative. Eyegrounds, repeatedly examined, continued normal up to last examination on the forty-sixth day. Pupils reacted to light. Hennicke operated on the left ear. The antrum was found filled with pus and granulations; all its walls were carious, as was also the tegmen-tympani. Malleus and incus missing. Following the operation the fever fell to 98.2°, pulse 108, but, on the second day after the operation, the evening temperature was 105.1°, pulse 150; both sank after changing the dressing. Fourth day: In the morning a chill, followed by an evening temperature of 103.6°. A new dressing reduced temperature to 100°. Sixth day: At noon, temperature 104.2°; pulse 160. Wound was curetted. Evening temperature 99.5°; pulse 92. Urine negative. Eighth day: Noon temperature 104.9°, pulse 162, and chill. Despite change of dressing, there was another chill at 11.30 P. M., lasting 40 minutes; temperature 105.3°, pulse 166. Ninth day: The right antrum was opened; not enough was found to account for the patient's serious condition. Left antrum was again curetted, the wound was enlarged and the lateral sinus opened. Two thrombi were removed from it. Chills occurred on the tenth and eleventh days. But temperature sank gradually until the sixteenth day, being about 99°. Pulse under 100. Seventeenth day: Temperature arose to 104°, pulse 116. The abdomen was retracted, and opisthotonos was present. Eighteenth and nineteenth days: On each a chill; evening temperature 104°, pulse 138 to 148. Patient very restless at night. Twenty-second day: At noon facial paralysis suddenly appeared; the patient was no longer so apathetic, and his appetite was fair. Temperature and pulse gradually went down. Thirty-fourth day: Facial paralysis disappeared. General condition good; all danger seemed to be over. Forty-first day: Patient complained of severe headache, and vomited. Was restless at night. Temperature about 97°, pulse 70. Forty-second day: Some headache. Forty-third day: Vomiting and mild stupor; several times he cried out. Pupils widely dilated. Temperature 97°, pulse 60 to 70. Forty-eighth day: Pulse irregular. Free flow of pus from the wound. The lateral sinus was opened 1.5 cm. further and the dura laid bare. The sinus contained several broken-down thrombi; the dura was discolored, being grayish-green. On puncturing the dura, there resulted a free flow of cerebrospinal fluid. Fiftieth day: Patient's mind clear, and he began to eat. Pulse 152 and weak. Fifty-third day: Vomited; while changing the dressing the wound in the dura was enlarged, resulting in an out-flow of greenish-yellow fetid fluid. Vomiting recurred daily until the fifty-ninth day. The temperature remained about 98°, pulse occasionally reached 136. Fifty-ninth day: Under anesthesia an extensive opening of the sinus and brain-abscess was undertaken, and much pus evacuated. There was a constant flow of cerebrospinal fluid. Sixty-first day: Epileptiform convulsions suddenly appeared, singultus, conjugate deviation of both eyes inward and opisthotonos, the patient cried out and tossed hands and feet. These symptoms were repeated one or more times daily: besides, there was almost daily vomiting. Temperature between 97.2° and 99.1°; pulse 88 to 124. Seventy-seventh day: Convulsions became continuous; the pulse sank to 80, then to 72; and at 11 P. M. death occurred. The post mortem (cranium only was opened) showed firm adhesion of the left cerebellar hemisphere to the lateral sinus throughout its extent. The entire sinus was empty of blood. The whole cerebellar hemisphere was converted into a bladder-like abscess-cavity, lined with a thick membrane and filled with fetid greenish pus. The operation wound communicated with a second abscess-cavity in the cerebellum, but external to the other. This was similar to the first, but no longer contained pus. The edges of the membrane lining this cavity were firmly united to the edges of the wound. The dura of the entire left half of the brain was thickened and partially adherent. There had, therefore, existed, besides the opened cerebellar abscess, a second abscess which was not diagnosed.

Anomalous Positions of the Middle Meningeal Artery and of the Carotid Artery. W. Bartlett (*Annals of Surgery*, Nov., 1902), in an attempt to acquire a more exact knowledge of the normal floor of the middle cranial fossæ, and of the course of the middle meningeal artery, examined over 100 skulls. He found that, not only every floor of the skulls he examined was different from every other one, but, also, that a marked asymmetry between the two sides in the same skull existed. The grooves for the middle meningeal arteries were equally variable, both in depth and in direction. Not alone is the point of the primary division of the middle meningeal irregular, but the further course of the vessel, as well, is exceedingly varied in different skulls. The vessel may lie in an actual bony canal; division of the continuity of the bone in such a case would necessarily involve the operator in a most undesirable predicament. Some grooves were deep enough to reach almost the outer surface of the skull. The author speaks of a case described by Bardeleben, in which part of the middle meningeal groove is represented by an actual defect in the bones of the cranial floor. Another case, observed by Carson, of St. Louis, is quoted, in which the artery actually left the cranial cavity through a foramen, and, appearing on the outer surface of the skull in the temporal region, was, naturally enough, torn or cut during the operation. Incidentally, the author finds that writers have ascribed diverse functions to the middle meningeal; quite a number refer to it in such a way that one might be led to think of it as supplying the dura mater alone. He believes, with Hyrtl and Heitzmann, that it feeds certain bones, as well as part of the dura. Because of the lack of uniformity in the position and direction of the middle meningeal artery, he has found it impossible to formulate any rule for avoiding it in opening the temporal bone.

George B. Wood (*Amer. Jour. of the Medical Sciences*, Sept., 1902), reports a case in which an artery could be seen visibly pulsating on the right side of the pharyngeal wall. It was about the size of a lead pencil, much larger, therefore, than the small artery (ascending pharyngeal) sometimes seen pulsating in atrophic throats. By forcibly depressing the tongue it appearead to run from below upward and slightly inward until it reached a point about opposite the uvula, whence it took a course slightly outward and upward. The author believes that the vessel was an upward continuation of the common carotid trunk. The patient, a girl, 5 years old, suffered from incipient atrophic rhinitis. Recently the author has seen another condition of exactly the same kind in a boy of seven.

Resection of the Outer Wall of the Inferior Meatus for Empyema of the Antrum. R. Claone, (*La Semaine Médicale*, Oct. 15, 1902), advises the following method of draining the antrum: The anterior part of the lower turbinate is removed with scissors and snare, the wall is then opened with a trephine or trocar. The opening is enlarged so that free exploration is permitted and thorough drainage obtained. The author prefers this method to the one which enters the antrum through the alveolus. An abstract, with illustrations, appears in *Medicine*, Jan., 1903. [This method can hardly be recommended.]

Formulae.

GYNECOLOGY AND OBSTETRICS.

Menstrual Pains in Virgins.—Dr. Touvenaint (*Klin. Ther. Woch.*) recommends that hot applications be applied to the abdomen to relieve the pains and produce rest. If the pains are very violent an enema containing 15 minims of tincture of opium or 15 to 45 grains of chloral hydrate should be administered. The following combination may be used as a substitute for one of the foregoing:

Tinct. opium	10 drops
Pulv. camphor	3 gr.
Yolk of one egg	
Distilled water	4 oz.

M. S.: As an enema; or:

Ext. cannabis indica	
Ext. belladonna	āā 1 gr.
Ol. theobrom.	q.s.

M. fiat suppos. No. 1.
S.: Two or three daily.

The Treatment of Metritis.—The *Union médicale du Canada* for January (according to *New York Medical Journal*) quotes Doléris as saying that the treatment of metritis should have as its objective the three terms of the pathology of the uterine cervix, viz., inflammation, traumatism, and deformity. (1) **Treatment of inflammation** at the outset is simple; it is divided into extracervical and intracervical. Extracervical treatment consists in securing vaginal antisepsis by injections of hot sublimate (from 1 to 1,000 to 1 to 4,000) and in the application of iodoformized tampons, which stimulate the cervix and facilitate the return circulation. In case of thick secretions or of extreme swelling of the mucosa, one must have recourse to the useful dialytic properties of glycerine with the subsequent use of iodoformized vaseline.

Petrolatum	30 parts
Iodoform	10 parts
Camphor	2 parts

M. ft. unguentum.

Or, if there are painful symptoms, the following preparation may be used:

Petrolatum	30 parts
Salol	5 parts
Chloral	5 parts

M. ft. unguentum.

Intracervical treatment consists especially in antiseptic dilatation of the cavity and in mild applications. In cases of lesser intensity repeated dilatation, followed by antiseptic tamponing, may be employed. It is, however, often insufficient, and recourse must then be had to scarification with a kind of scarificator with multiple parallel blades, cutting to a depth of from two to four millimeters (about 1/12 to 1/6 of an inch); to the use of the sharp spoon (*curage tranchant*), or to the use of topical applications, such as creosote, camphorated naphthol or iodized glycerine:

Iodine	1 part
Glycerine	2 parts

M.

In deeper lesions, ablation of the mucosa with the bistoury must be practised, followed by light thermocauterization of the bleeding surface, or by tracheloplasty, which is only a sort of flap amputation. The interstitial sclerocystic form is especially amenable to amputation. Puncture and cauterization of the cysts, which affect a transient cessation of the symptoms, are only palliatives of short duration. (2) **The Treatment of Traumatic Lesions.**—Emmet's method is applicable in cases in which the cervicitis, being in the early stage, is capable of yielding to slight measures. But when the endometritis is deep and accompanied with cysts, recourse must be had to Schröder's amputation, in combination with the operation of wide freshening and the lateral sutures of Emmet. (3) **Treatment of deformities.**—(a) In flexion, a series of repeated dilatations must be practised. (b) In conical cervix, recourse must be had to stomatoplasty or to bilateral section. (c) In hypertrophic lengthening, amputation must be practised. One cause of failure of curetting is the existence of a deviation of the womb; in this case the metritis becomes the secondary consideration. The use of dilatation of the curette in a case of deviation is not to be neglected, but it is not curative. Failures in cases of this kind should not be laid to the charge of the curette. This also applies to lesions of the adnexa—salpingitis, ovaritis, pelvic peritonitis, characterized by processes clearly hyperplastic. Curetting has an immediate and certain effect only on the mucosa. The future of gynecology is in the physiological direction. The actual cautery and strong internal caustics are destructive of the physiological functions of the uterus, and must therefore be rejected. In metritis of the body of the uterus, dilatation is sometimes of no account. Puerperal metritis calls for curetting and application of absorbent cotton soaked in

Creosote	
Glycerine	of each equal parts

M.

The Treatment of Eclampsia.—The *Revue médicale* for November 12th., citing the *Journal des Pratteiens*, ascribes the following to Maygrier: Albuminuria being often the first threatening of eclampsia, every pregnant woman with albuminuria should be kept in repose and put on an exclusive milk regimen. This should be continued for at least eight days; at the end of which time the woman will be protected against eclampsia. (Tarnier). When once eclampsia is declared, the organism must be disembarrassed of the toxic principles encumbering it, and the excitability of the nervous system calmed. The author recommends bleeding to the extent of from 300 to 500 grams (approximately about 10 to 17 ounces). He then follows the bleeding by a subcutaneous injection of the following, of an amount equivalent to the blood withdrawn:

Sodium chloride	2 dr.
Distilled water	33 oz.

M.

A full enema, followed by a purgative enema is then given, and from 150 to 200 grams (5 to 7 ounces) of milk are administered. If the patient is unable to swallow, gavage must be practised, and if the teeth are set the tube must be introduced through the nasal passages. The excitability of the nerve centers must be calmed by chloroform and chloral. But chloroform must not be administered in large doses, for fear of adding a drug intoxication to that of eclampsia ; a few drops on a handkerchief during the access will suffice. Likewise, as regards chloral, the large doses now recommended are too great. The following may be used as an enema:

Chloral hydrate	60 gr.
Yolk of egg	No. 1
Milk	7 oz.

M.

The Germans recommend morphine, but recourse must be had to it with great caution. As regards the hot baths recommended by Bar, the author says that, while they advantageously stimulate the renal function, they are often difficult of administration. During the attacks the patient must be kept in bed, and care must be taken to prevent her biting her tongue. Should the uterus be emptied? In the author's opinion there is no ground for inducing labor prematurely, for the eclampsia may persist after parturition, while pregnancy may continue after the eclampsia is over. Some authors, especially Halberstma, who consider that eclampsia is often connected with compression of the ureters, are in favor of Cesarean section, but in Maygrier's opinion this view is hardly sustainable. To justify intervention grave accidents must have supervened, anuria or high fever, for example; without such conditions, we must not interrupt pregnancy, but await its completion. But with the advent of labor, expectant treatment has no further place. As soon as it is possible to penetrate into the uterus, delivery must be effected by forceps, version or extraction, according to the nature of the case. Here, there must be no holding back; decision and promptitude in terminating labor now must be as great as was the repugnance to interfere during pregnancy.

Acute Pelvic Inflammation.—E. C. Hill (*Medical Standard*) recommends in the treatment of **acute pelvic inflammations,** from whatever cause, that the patient be placed in a comfortable posture: sometimes elevating the foot of the bed gives great relief. The administration of morphine or opium in sufficient doses, which may be given per rectum; absorbent cotton saturated with equal parts of tincture of belladonna and glycerine applied hot and covered with a rubber cloth. Ten or fifteen grains of quinine should be given on the first days of the disease. A small amount of cold water may be given frequently to relieve the thirst. If the lower bowel is loaded, employ a rectal injection composed of the following:

Magnes. sulph.	3 oz.
Glycerine	
Aquæ	āā 2 oz.

M. S.: As an enema, to be repeated as necessary.

Sodium phosphate, one-half dram then should be given and repeated every 3 or 4 hours.

When the acute symptoms have subsided and there is no evidence of pus or serum, small blisters should be applied repeatedly to the iliac regions (one on each side), or paint the roof of the pelvis with tincture of iodine, or keep up counterirritation with the following solution:

Olei tiglii	1 dr.
Etheris	2 dr.
Tinct. iodi	3 dr.

M. S.: Paint over the lower abdomen and repeat when the eruption disappears. Nourishing food, quinine, ferri iodide, potassium iodide, ferric chloride and other tonics may be prescribed. Avoid exercise which excites pain. Promote absorption and lessen adhesions by pelvic massage.

INFECTIOUS DISEASES.

Scarlet Fever.—W. T. Corlet (*Medical News*) recommends that a tepid sponge bath be given twice a day, followed, when there is itching or desquamation, by inunction from head to foot with cold cream, carbolized vaseline, lanoline, cocoa butter or eucalyptus oil. The following is recommended for the throat:

Menthol	2 gr.
Thymol	1/10 gr.
Ol. gaultheriæ	2 *m.*
Glycerini	4 dr.
Aquæ	q. s. ad. 8 oz.

M. S.: Use as a spray or gargle.

Cracked ice or irrigation with hot water to which glycerine has been added promotes **the comfort of the pharynx.** The best antipyretic is cold water, or occasionally quinine or phenacetine, or the cold pack. The following combination containing iron should be given:

Tinct. ferri chloridi	2 dr.
Acidi hydrochlor dil.	1 dr.
Syr. limonis	1 oz.
Aquæ	q. s. ad. 3 oz.

M. S.: One teaspoonful every 2 or 3 hours, or:

Liq. ammon. acet.	1½ oz.
Potassii chloratis	1 dr.
Syr. limonis	½ oz.
Aquæ	6 oz.

M. S.: One to three teaspoonfuls every 3 or 4 hours.

DISEASES OF THE NOSE AND THROAT.

Quinsy.—The following combination is recommended in **the treatment of quinsy:**

Ichthyol	3 dr.
Ungt. belladonnæ	2 dr.
Ol. citronellæ	3 *m.*
Adipis. lanæ hydrosi	3 dr.

M. S.: Apply freely externally.

Tonsillitis.—For use in chronic enlargement of this condition the following is prescribed:

Sodii salicylatis	
Potassii iodidi	āā 4 dr.
Syr. sarsaparillæ comp.	1 oz.
Aquæ	q. s. ad. 3 oz.

M. S.: Teaspoonful in water three times a day.

To Prevent Nasal and Throat Complications in Scarlatina.—J. A. Le Sage (*Union médicale du Canada*, January) recommends intermittent use of boric or mentholated ointments:

Menthol	3 gr.
Boric acid	60 gr.
Petrolatum	1 oz.

M. ft. ungt.

Or this:

Resorcin	4½ gr.
Petrolatum	1 oz.

M. ft. ungt.

Injections of the following oil are also recommended:

Essential oil of mint	11 drops
Resorcin	15 gr.
Sterilized olive oil	5 dr.

M. Ten drops to be melted into each nostril, night and morning.

These measures will obviate the purulent rhinitis, the result of which is uncertain and rarely remains localized to the nasal mucous membrane.

The throat demands equal care. Antisepsis may be obtained by gargles of borated, naphtholated or saline water. If the tonsils are affected, they may be touched with resorcin or with a weak (2 per cent.) solution of silver nitrate.

DISEASES OF THE RESPIRATORY TRACT.

Bronchitis Complicating Diseases of the Heart, Lungs and Kidneys.—The treatment of this form of bronchitis, according to I. N. Danforth (*Text-book of Applied Therapeutics*) should begin with the treatment of the condition that precedes and causes it. Elderly individuals, however, are improved by the administration of potassium iodide. The following formula is recommended by the author:

Pot. iodidi	2½ dr.
Syr. picis liq.	4 dr.
Syr. pulveris doveri	1 oz.
Syr. tolutani	q. s. ad. 4 oz.

M. S.: One teaspoonful 4 times a day.

Stimulating expectorants are rarely needed in this form of bronchitis, but the author recommends small doses of aromatic balsams combined with a mild anodyne if the cough is troublesome, as follows:

Terebinthinæ canad	
Pulv. ipecac. et opii	āā 1 dr.
Pulv. acaciæ	q. s.

M. ft. capsulæ No. 20.

S.: One every 3 or 4 hours; or:

Copaibæ	
Camph. monobrom.	āā 1 dr.
Pulv. acaciæ	q. s.

M. fiant cap. No. 20.

S.: One 3 or 4 times a day; or:

Olei santali	2 dr.
Tinct. opii camph.	1 oz.
Sacchari albi	
Acaciæ	āā q. s.
Aquæ anisi	q. s. ad. 4 oz.

M. fiat emulsio.

S.: One teaspoonful 3 or 4 times a day.

Mixture for Catarrhal Pneumonia.—Pepper advised the following combination:

Ammonii carbonatis	46 gr.
Mucilaginis acaciæ	
Syrupi	āā ½ oz.
Tincturæ lavandulæ compositæ	2 dr.
Aquæ	ad. 4 oz.

M. f. mist. One teaspoonful in water every 2 or 3 hours for a child 5 years of age.

Acute Bronchitis.—As an expectorant in acute bronchitis (*Jour. Amer. Med. Ass.*, January 31, 1903) the following combination is useful:

Syr. scillæ	1 oz.
Ext. lobeliæ fld.	1 dr.
Tinct. opii	2½ dr.
Ext. ipecac fld.	15 drops.
Syr. pruni virg.	1½ oz.
Syr. picis liq.	q. s. ad. 4 oz.

M. S.: One teaspoonful in water 4 times a day.

Catarrhal Pneumonia, If Respiratory Failure Threatens.—Pepper also uses the following in the treatment of this condition:

Quininæ sulphatis	24 gr.
Strychninæ	¼ gr.
Acidi hydrochlorici diluti	15 *m.*
Glycerini	3 dr.
Liquoris pepsinæ	ad. 4 oz.

M. f. mist. A teaspoonful in water every 3 or 4 hours for a child of 5 years of age.

Powders in Catarrhal Pneumonia.—Until the bowels are moved once or twice (Yeo, in *Manual of Medical Treatment*) give one or two of the following powders every 3 hours:

Hydragyri subchloridi	1 gr.
Sodii bicarbonatis	24 gr.

M.

Digitalis Mixture for Pneumonia.—R. J. Bond recommends the following combination:

Spiritus ammoniæ aromatici	½ oz.
Extracti digitalis fluidi	2½ dr.
Glycerini	q. s. ad. 4 oz.

M. f. mist. A teaspoonful every 3 or 4 hours, to be increased as the case may require.

Ergot in Chronic Bronchitis.—A. Martinet (*New York Medical Journal*) recommends ergot in certain forms of chornic bronchitis in which the pulmonary catarrh is of long standing, etc. The combination used is as follows:

Ext. hyoscyami	1/6 gr.
Quininæ sulph.	¾ gr.
Ergotin	1½ gr.

M. fiat. pil. No. 1.

S.: One to be taken every 3 hours through the day, or 6 in the 24 hours.

M. Renaut recommends the use of the balsams, such as terpin, syrup of Canada balsam or syrup of tolu alternating with ergot, which may be combined with opium and hyoscyamus as follows:

Ext. hyoscyami	1/6 gr.
Pulv. opii	1½ gr.
Ergotin	4½ gr.
Cacao butter	q. s.

M. ft. suppos.. No. 1.

S.: To be used as a suppository.

Or for 5 days in the week he recommends the following:

Ext. hyoscyami	1/6 gr.
Terpin	1½ gr.
Ergotin	¾ gr.

M. ft. pil. No. 1.

S.: Two such pills at a dose, 3 times a day with hot water containing syrup of Tolu.

The following is advised in chronic bronchitis, accompanying la grippe:

Strych. sulph.	1/60 gr.
Ergotin	¾ gr.
Quininæ sulph.	1½ gr.

M. ft. pil. No. 1.

S.: One every two hours, except at night, or from 6 to 8 in the 24 hours, to be taken in an infusion of hot sugar, water and syrup of Tolu and a teaspoonful of cognac.

DERMATOLOGY.

Dandruff.—The following outline of treatment is recommended (*New York Medical Journal*) in the treatment of dandruff:

Olei bergamot	2 drops
Ung. hydrarg. oxidi rubri	4 dr.
Adipis benzoinati	1½ oz.

M. fiat. unguentum.

S.: Apply locally; or:

Sodii boratis	2 dr.
Glycerini	3 dr.
Aquæ	q. s. ad. 5 oz.

M. fiat lotio.

S.: Apply locally.

When there is some constitutional disturbance the following mixture may be employed:

Vini ferri	1½ oz.
Liq. potassii arsenitis	1 dr.
Syr. simplicis	3 dr.
Aquæ	q. s. ad. 4 oz.

M. fiat. mistura.

S.: One teaspoonful to be taken after each meal.

Indolent Ulcers of the Leg.—In the indolent ulcers Cheney (*Medical Standard*, XXV, No. 10) recommends wet bichloride compresses, applied after cleansing well, followed by application of woven, elastic bandage. The wet dressing should be changed twice daily for 3 or 4 days, and then an ointment applied daily after cleaning with hydrogen peroxide. One composed as follows is recommended:

Ichthyol	24 gr.
Balsam Peru	24 gr.
Vaseline	1 oz.

This ointment is applied once daily.

Superficial Burns.—Reclus (*Charlotte Medical Journal*) recommends the following ointment:

Iodoformi	7½ to 15 gr.
Antipyrini	
Acidi borici	āā 75 gr.
Vaselini	600 gr.

Wertheimer applied to burns, especially in children, the following liniment:

Thymol	1½ to 2 gr.
Aquæ calcis	
Olei lini	āā 1,500 gr.

Psoriasis.—Sherwell (*Journal of Cutaneous and Genito-Urinary Diseases*) recommends the following outline of treatment of psoriasis:

Quininæ sulph.	30 gr.
Mag. sulph.	1 oz.
Acidi sulph. dil.	3 dr.
Tinct. nucis vom.	½ dr.
Vini colchici	3½ dr.
Glycerini	1½ oz.
Aquæ	2 oz.

M. S.: One dessertspoonful night and morning in a wineglassful of water, half a glass of water to be drunk directly after.

The following to be applied locally:

Liq. carbonis detergentis	3 dr.
Acidi salicylici	15 to 30 gr.
Ung. aquæ rosæ	11 dr.

M. S.: Apply locally night and morning.

Fissure of the Hands.—The following is recommended by Steffen (*Bul. Gen. de Ther.*) as an ointment in the treatment of fissures of the hands:

Menthol	20 gr.
Salol	
Olei olivæ	āā ½ dr.
Lanolini	2 oz.

M. To be applied twice a day.

For Cracked and Chapped Hands.—J. Nevins Hyde employs the following for these conditions:

Tinct. benzoini	1½ oz.
Tinct. tolutani	75 *m.*
Glycerini	½ oz.
Spts. vini rect.	3 oz.
Aquæ rosæ	q. s. ad. 6 oz.

M. S.: Wash the hands thoroughly in warm water and apply locally night and morning.

Sulphur for Dandruff.—The following combination is recommended by G. T. Jackson (*Trans. Amer. Dermat. Ass.*:

Sodii boratis	15 gr.
Sulphuris precip.	3½ dr.
Ung. aquæ rosæ	1 oz.
Ceræ albæ	3½ dr.
Petrolati	2½ oz.

M. fiat. unguentum.

S.: Apply locally once or twice a week. This does not have the odor of sulphur and does not make the hair too greasy, and at the same time checks the dandruff.

CONSTITUTIONAL DISEASES.

Eucalyptus in Diabetes.—Faulds (*Glasgow Medical Journal*) has employed with success an **infusion of eucalyptus** in the treatment of diabetes as follows:

Eucalyptus flores (dried)	4 dr.
Aquæ	6 oz.

M. fiat. infusum.

S.: One such draught to be taken twice daily. He states that he has obtained good results in 15 out of 16 cases. In one case, a girl of 18, in which there were 60 grains of sugar to the ounce of urine passed, after 4 days' treatment only one grain to the ounce was passed, and on the sixth day none. He, however, thinks it of service only in those cases due to gout, overindulgence in food, or cold. It does not seem to be of service in those cases dependent on vasomotor disturbance affecting the bloodsupply to the hepatic cells as no improvement was shown in those cases. Eucalyptus oil or eucalyptol will not produce the same results as the infusion.

GENITO-URINARY DISEASES.

Urethritis.—The following combinations are recommended by Brunton (*Jour. Amer. Med. Ass.*, February 21, 1903) in the treatment of gonorrheal urethritis:

Calaminæ prep.		2 dr.
Zinci oxidi		2 dr.
Liq. plumbi subacetatis		1 dr.
Glycerini		1 dr.
Aquæ calcis	q. s. ad.	1 oz.

M. fiat mistura.

S.: To be used locally as an injection.

(It will be noted that the amount of zinc and lead preparation is large). Or:

Zinci sulph.		1 gr.
Zinci acetatis		1 gr.
Tinct. catechu		10 *m.*
Ext. opii fluidi		½ dr.
Aquæ destil.	q. s. ad.	1 oz.

M. S.: As an injection; or:

Zinci sulphocarbol		4 gr.
Aquæ destil.	q. s. ad.	1 oz.

M. S.: To be used as an injection.

Syphilis.—The following combination is recommended by Antony (*Jour. Amer. Med. Ass.*, January 31, 1903) as an injection in the treatment of syphilis:

Hydrarg. biniodini		1½ gr.
Potassii iodidi		9 gr.
Sodii phos.		15 gr.
Aquæ destil.		
Normal saline sol.	āā	2 oz.

M. fiat solutio.

S.: Sixteen drops by hypodermic injection daily.

DISEASES OF THE KIDNEYS.

Chronic Bright's Disease.—The following combination is recommended by Semmola (*Jour. Amer. Med. Ass.*, January 3, 1903) as a drink in chronic Bright's disease:

Sodii chloridi	1½ dr.
Sodii phos.	½ dr.
Sodii iodidi	15 gr.
Aquæ puræ	36 oz.

M. S.: Use pure as a drink or mixed with milk.

DISEASES OF THE EYE.

Affections of the Cornea.—The following is recommended by Fedorow (*Westnik. Ophthal.*) in conditions causing infiltrations of the cornea:

Ichthyol	1½ gr.
Cocainæ hydrochlor	2½ gr.
Vaselini	75 gr.

M. fiat. unguentum.

S.: Apply locally to the cornea.

PEDIATRICS.

Cholera Infantum.—Dr. H. W. Thompson (*Medical Brief*, 1902, page 1220) recommends the following formula, after having cleaned out the bowels with calomel and castor oil:

Tannalbin		4 dr.
Zinci sulphocarbolatis		½ dr.
Cupri arsenitis		1/10 gr.
Bismuthi subgallat		4 dr.
Aquæ cinnamomi	q. s. ad.	4 oz.

One teaspoonful every 2 to 4 hours, until bowels are checked, then increase interval to 6 to 8 doses. This dose is for a child from 1 to 3 years old.

The following is used in chronic enlargement in a child of strumous type:

Syr. ferri iodid		1 dr.
Syr. aurantii flor.		1 oz.
Aquæ	q. s. ad.	3 oz.

M. S.: Teaspoonful three times a day after meals.

The following is prescribed to allay inflammation and relieve pain in pharynx and also to relieve headache:

Potassii bromidi	2 dr.
Antipyrini	1 dr.

M. ft. tablets No. 12.

S.: Dissolve a tablet in mouth every two hours.

MISCELLANEOUS.

Liquid Antiseptic Soap.—A good formula for liquid antiseptic soap was published recently by M. I. Wilbert, apothecary at the German Hospital, of Philadelphia, (*Merck's Archives*, February, 1903); it is as follows:

Cottonseed oil	300 gm.
Alcohol	300 cc.
Water	325 cc.
Sodium hydrate	45 gm.
Potassium carbonate	10 gm.
Ether	15 cc.
Carbolic acid	25 cc.

To the oil contained in a bottle of sufficient size add 100 cc. of water and 200 cc. of alcohol; add the sodium hydrate and shake, or stir occasionally until saponification has taken place; then add the remaining portions of the alcohol, and the potassium carbonate dissolved in the water; lastly, add the carbolic acid and the ether, and mix or shake well.

This soap is a little yellow liquid, with a not unpleasant ethereal odor and a distinctly alkaline reaction. It should be kept in well-corked bottles, to prevent evaporation of the alcohol, and at a temperature not below 50° F., to avoid solidification, though the latter does no permanent harm, as the soap will liquefy again when left in a warm place for some time. A few drops poured in the palm of the hand, after previously wetting, will give with a slight rubbing a copious lather that stands up well for a considerable length of time.

Ascites.—A. H. Bigg (*Medical Record*) considers **elaterin** a very valuable drug in the treatment of ascites, providing it is used in a suitable combination like the following:

Elaterin		1/15 gr.
Strychnine sulph.		1/40 gr.
Spirit glonoin		½ *m.*
Ext. digitalis		¼ gr.
Caffeine		
Powd. cloves	āā	1 gr.

M. S.: For one capsule. Give one capsule every 3 to 6 hours. The author says that he would boldly attack any case of ascites with the above combination with the confident expectation of rapidly removing the fluid with material discomfort and with no risk whatever to the patient. Where there is a tendency to nausea, ⅛ grain of cocaine, or the temporary substitution of cocaine for the digitalis may be advisable. The treatment must be pushed vigorously, so as to cause 4 to 6 copious evacuations until relief is obtained.

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Heredity and Twins.—The question of multiple births is one of perennial interest. Physiologists and obstetricians have exhausted their ingenuity in the endeavor to find out how they occur, but hitherto without success. In 1879 Goehlert, in a long article illustrated by numerous genealogical tables, declared that there was much reason to believe that the tendency to produce twins was hereditary. The same thing has been asserted and denied with regard to the lower animals, although there can be no doubt that multiple births are the rule in certain species, and single births in others. Moreover, there can be no doubt that this tendency bears a close relation to the size of the animal, the larger animals rarely having more than one offspring at a birth, the smaller animals rarely so few. Of course, the relationship of multiple births to the manner of life, to the dangers to which the offspring is exposed, and to various other factors, is quite obvious. We know, for example, that a single pair of certain species of fish could fill the ocean with a solid mass in the course of a very few years if all their offspring developed and in their turn had the usual number. It is not *a priori* impossible, therefore, that this hereditary tendency could exist in human beings. Of course, the cases that are cited in which a single married pair will have a series of twins, or a series of triplets, or in which, as in one instance, two brothers had each a series of twins, may be accidental, even if they actually occur. The doctrine of probabilities applied to such a vast number of variable individuals as is the child-bearing part of the human race, could give rise to some very extraordinary facts without implying the existence of recondite laws. Recently Dr. Naegeli-Akerblom in a most interesting article (*Virchow's Archiv*, Band 170, H. 1 & 2, 1902) has undertaken a careful critical study of the whole subject. The amount of labor that this has involved is enormous, and the frankness and evident sincerity with which the results have been stated lead us to place considerable faith in his conclusions. He touches upon so many points that it is hardly possible to consider his article as a whole.

In all these studies it is necessary for the statistician to select the most distinguished class of persons, and the family records of the nobility of Europe go further back and are more accurate than those of any other class. As a result they were the material from which Goehlert drew his conclusions, and it has been a renewed study of this material that has furnished the basis of Naegeli-Akerblom's criticisms. There are several distinguished families in whom, it has been alleged, a tendency to have twins existed. Possibly the most distinguished is the house of Capet of France. Another is the family of Solms-Laubach, and another the house of Hanau. The chief criticism found with Goehlert's data regarding these three families is that his historical studies were inaccurate. In many instances he stated that twins were born of certain families, when, as a matter of fact, we have no historical data upon which to base such a conclusion. Another factor, however, upon which Naegeli-Akerblom lays great stress, is the confusion of the lines. The tendency to intermarry is so pronounced among European nobility that the house of Solms-Laubach, for example, is related by marriage to no less than sixty-five reigning families of Europe, practically all there are. The point which seems to have escaped Goehlert is, whether to these families, taking the genealogy as given, more twins are born than occur ordinarily, according to the statistics obtained from large maternity hospitals. Now it is known that in every eighty-four births one twin birth occurs, and from a study of these tables it appears that, as a matter of fact, only one birth in eighty-nine is multiple. Now, as a result of the continual intermarriage, it seemed reasonable to suppose that the tendency to produce twins would be greatly exalted, and this is undoubtedly not the case.

This whole question of heredity, and particularly hereditary tendencies occurring in many generations, is exceedingly involved. It is not generally appreciated how rapidly a man's ancestors increase in the not-too-distant past. Presuming that there were no intermarriages the ancestors of any individual now living must, at the time of Charlemagne, have exceeded considerably the greatest possible total number of inhabitants in the world. It requires merely a feeble imagination to picture the great diversity of hereditary influences that act upon each of us, for in such a vast number there must have been representatives of every type of character from a genius to a criminal, of every type of conformation, of feature or of physical tendency. And if one should be sufficiently curious, and have access to the data, it would be possible to ascribe the minutest peculiarities of any individual to atavistic inheritance. What profits it then, to waste time, energy and intelligence upon such fruitless and impractical inquiries?

Naegeli-Akerblom takes occasion, as a result of the very considerable statistical information, to discuss the expectation of life in twins, and he finds, contrary to the statements of Goehlert, Weinberg and others, that, granted they survive birth and the first year of life, their expectation is quite as good as that of single births. He notes some remarkable instances in which both members of a twin birth survived past eighty years of age. In 151 instances 97 of the twin births exceeded 21 years of age, and, of these, 34 exceeded 60 years of age. Not a bad showing if we compare it with the expectation of life in insurance tables.

Now what is the conclusion of all these extensive historical investigations going back to the eighth century? We may quote the final paragraph which runs as follows: "What may we conclude from this? Only that for the moment we rest under the ban of systematic investigations; that we continually strive to classify all natural phenomena as well as we can. Further, that we know nothing concerning the cause or origin of twins, triplets, etc., and that it is not likely that in any reasonable time we shall know any more." And the lame but not altogether impotent conclusion of all is that we do not know. This is at least better than fine-spun theorizing or highsounding terms and periods with which to cloak our ignorance.

What a Medical Society Can Do.—The wide and almost unlimited possibilities arising from a concerted action on the part of medical men are nowhere so well illustrated as in the doings of the Charkoff Medical Society in Charkoff, Russia. This society was organized in 1850. In 1887 the membership numbered 91, in 1900 the number increased to 333, including 18 honorary and 54 corresponding members. This society owns and controls a dispensary in which 8,017 patients received treatment during 1900; a hospital in which 103 patients were treated during the same year; a home for the accommodation of persons treated for hydrophobia, which accommodated 1,248 persons during that period; a Pasteur institute in which 1887 persons were treated; a chemical and microscopical laboratory in which 11,590 samples were analyzed; an antitoxin laboratory from which 69,105 doses of diphtheria antitoxin were sold and distributed during the year; a bacteriological institute for research, and a library containing 7,116 volumes and current journals on which 661 roubles were expended during the year. That this enterprising society does a thriving business is shown by its financial report for the year of 1900. Despite the deficit on the account of the society (1,911 roubles), the hospital (10,368 roubles) and the bacteriological institute (726 roubles), there is a total gain of about 18,681 roubles. This is made up largely of the profits derived from the sale of antitoxin, which amounted to about 19,143 roubles for the year on an expenditure of some 30,333 roubles. Yet the antitoxin is sold at a very low price. A dose of diphtheria antitoxin of 1,000 units is sold at one rouble, with a 15% discount to druggists. An immunizing dose of 500 units is sold at one-half that price, while societies and charitable institutions pay from 65 to 70 copecks (about 32 to 35 cents) per dose, and the poor receive the antitoxin free of charge. The society owns 38 horses, and of these 8 were supplying all of the serum for the year.

The gains to science from these establishments owned and controlled by medical men cannot be computed in dollars and cents. Aside from the scientific contributions to the meetings of the society and the publication of the proceedings, the several laboratories enable the society to employ trained physicians who are engaged in research. Already some of the best work bearing on methods of immunization has issued from the laboratories, and still greater results may be confidently expected in the future. From time to time one of these physicians is sent abroad on full pay to take special courses in some of the famous European laboratories. The laboratories are also open to physicians and others who may wish to engage in special research.

Here then is an institution contributing to science, humanity and medical progress without any personal gain to any of its promoters, without the slightest trace of commercialism, and yet without dependence on government support, grants, endowments or subsidies. Our Russian colleagues are to be congratulated on the rare combination of business abilities and scientific erudition.

Big Endowments.—We have not hesitated in these columns to express our concern lest some of the great new institutes (such as the one which Mr. Rockefeller has founded) should take many of the best men away from the medical schools. But there is possibly also another danger. May not these millionaire endowments also take some of the best men away from the medical profession? Research work in the past has largely been stimulated by the practical demands of practical men. Its object has been utilitarian, frankly and exclusively. The love of pure science for itself has never been a marked characteristic of the medical profession. All that medical scientists have done has been largely for a practical purpose. Behind the scientists have been the serried ranks of the profession, demanding results. In close touch with the investigators have been the practitioners, asking for help. Binding all together in a mutual fraternity have been the medical schools and the medical societies. The successful laboratory workmen (with a few exceptions) have never got far away from the body of the profession.

The tendency lately has changed. This change has been due partly to the force of German and French example, and partly to the acquisition of money. The scientist now sees a prospect of being able to retire into a cell, where he can cogitate and experiment undisturbed by the clamors of the classroom and the importunities of an exacting professional public. The situation is not without peril.

The tendency on the continent—especially in Germany—is more and more to pursue science for its own sake. This spirit leads a man sometimes to lose a sense of the proportion of things. As a recent critic has said of the Germans, they are specialists and classifiers. They deal in formulas, data and rules. They write history just as they cultivate science—the one is the work of the seminary, the other of the laboratory. The heart of the thing is not always in it. At least, this is what Maurice Barries says in a recent number of *Mercure de France.*

It will not do to say that science is science, and that we cannot have too much of it. No rational man will dispute such a truism. But medical science must be made available. It must be practical and adapted to its ends by men who are thoroughly in sympathy with those ends. It must be made intelligible by men who are in constant touch with its practitioners. It must have a clinical field as well as a laboratory; the two should never be far apart.

We are not writing in a pessimistic mood. The air is full of hope, of ambition and of promise. It is impossible not to feel it and to share in it. But at the same time we may be staking our all upon big endowments, forgetful of the fact that mere money has never yet bought knowledge, and that some of the best achievements of scientific medicine have been in the field, not in the camp. We may set up a vast and learned apparatus, but the soul of the real seer and teacher may be lacking in it. President Garfield said that a true college could be represented by a log of wood with Mark Hopkins seated on one end of it and a student on the other.

Tropical Diseases and a Society for Their Study.—In our last issue we concluded the publication of a series of lectures, eight in number, recently delivered by Assistant-Surgeon Charles F. Kieffer, U. S. A., before the students of the Jefferson Medical College. These lectures had to do with with tropical diseases, omitting malaria, yellow fever, dengue, typhoid, cholera and plague. These common disorders were not considered for the reason that in the usual lectures upon medicine in our colleges they receive full consideration. The morbid conditions discussed by Dr. Kieffer were dysentery, hill diarrhea, epidemic gangrenous rectitis, abscess of the liver, filariasis and the diseases caused by it, intestinal parasites, special tropical fevers, special tropical skin diseases, frambesia, tropical granulomata and, last, but not least, hygiene. Dr. Kieffer has written with the practical pen of one whose work has made him personally familiar with the conditions described, and, therefore, his observations come to us first hand. The events of the last few years have brought tropical diseases home to us. The Spanish-American war and the subsequent occupation of our Eastern possessions have caused our army and navy surgeons to face (to them) new diseases in both acclimated and unacclimated patients under new conditions. It is no small tribute to the skill of these officers that so much has been accomplished in so short a time. All over the civilized world the diseases of the tropics are beginning to receive the attention they have long deserved, and Dr. Kieffer's interesting lectures point out vividly how rich is this field for scientific research. The students of Jefferson College have been most fortunate in being enabled to hear this admirable course, and the fact that the invitation was extended to Dr. Kieffer by the Trustees of the College is an added evidence of their recognition of the importance of the subject. The day, surely, is not far distant when thorough familiarity with the diseases of the tropics will be demanded of all candidates for the M. D. degree; and this is as it should be. Apropos of this subject, the general interest of the medical profession in this field is reflected by the recent formation in this city of a Philadelphia Society of Tropical Medicine, the first of its kind in this country. The object of this organization is stated to be the preparation of students in medicine and physicians for service in the tropical dependencies of the United States.

Cheap Schools for Nurses.—There is an unfortunate tendency at present to cheapen education. This tendency is seen even in some of our universities. What wonder then that the evil influence is exerting itself in some of the technical schools? The specious plea is made that education should be free for all, and that we must not discriminate in this country in favor of any privileged class. Nothing could be more irrelevant and misleading. If there is no royal road to learning, neither is there any mendicant way to it. Education can only be had by effort and at some cost. The pauper is no more privileged in this matter than the prince.

We are not surprised that this evil influence is exerting itself in behalf of a cheap system for educating nurses. Schools are springing up, or have sprung up, which profess to give a nurse's training in a brief span of six weeks. No adequate attempt is made to give bedside instruction, except work in the "slums." Every physician must know what that means. A few weeks in the slums, and a little didactic instruction, can no more make a trained nurse than a few weeks' work on cobble stones in the streets could make a trained engineer. Such attempts are evidence of philanthropy misapplied.

The party most injured by such a scheme is the public. The coin offered is a spurious coin. It is not what it purports to be on its face. This is an inflation of the educational currency of the country.

For these reasons we are heartily in accord with the bill before the New Jersey Legislature for licensing nurses. We believe that a nurse's license should have a definite value, just as the license of a physician, an engineer or a miner has a definite value. The time may not yet have come for this, but we believe that it will come. Cheap nurses are no more to be desired than cheap doctors. That there are reactionary influences at work is evident, but they should not prevail.

Boycotting Doctors.—The strikers in Waterbury, Connecticut, have been having "high jinks" in their own way, but nothing that they have done deserves so much to bring down public wrath on their heads as their recent attempt to "boycott" the doctors. According to the *New York Herald* these labor agitators have just issued an "unfair" list (which means a kind of black list), in which are included the names of some prominent physicians of the town. These practitioners are "boycotted" because they used the trolley cars to answer hurry calls, and because *they dressed the wounds of injured conductors and motormen.*

We trust this report will be widely read in the United States of America. The spirit displayed by these strikers is strongly suggestive of that of the French Revolution when it was at its worst. Civilization would not be worth a farthing if such men are to dictate terms. When the day comes when a physician had to ask permission of a mob to give his aid to the sick and injured, and to suffer a boycott if he ignores its unholy mandates, it will be time for civilization to go out of business. We honor these physicians, and should like to have their names.

A Remedy for Old Age.—In this issue we present an interesting report from the pen of Dr. Alfred Gordon on the value of Trunecek's serum. The term is a misnomer, for, of course, the fluid is not a serum, but merely a solution of various inorganic salts. Names, however, are not of as much consequence as things, and if this solution shall prove effective in cases of arteriosclerosis, it will indeed be a valuable addition to our therapy.

The theory upon which this combination of salts is administered is a purely laboratory one; it is based upon the solubility of calcium phosphate in the presence of several other inorganic salts, such as sodium phosphate, magnesium phosphate and sodium chloride. As calcium phosphate is the chief mineral salt found in the sclerosed bloodvessels of elderly people, the idea is to effect a solution of it. The theory is simplicity itself, but, we imagine, few physiological chemists would vouch for the applicability of it.

However that may be, the results seem to be satisfactory, and the so-called "serum" is worth a trial. Dr. Gordon has made no immoderate claims for the solution, and we can afford to accept his report without rushing to the conclusion (as he himself is careful not to do) that we have found in this fluid a sure cure for old age.

Doctor Ireland's Tribute to Professor James.—It is decidedly interesting to read in the *Journal of Mental Science* Dr. William Ireland's review of Professor William James' new book on "The Varieties of Religious Experience." In a few deftly turned sentences, Dr. Ireland, with utmost grace and courtesy, shows that Professor James is a mind-curist, an Eddyite, and a believer in "subliminal consciousness," in telepathy and in messages from the dead. As though this were not enough, the writer of the review gives us a few hints to the effect that the Cambridge psychologist has but little religion and not much science.

Professor William James is the writer who is so fond of referring to physicians as "medical materialists." He is himself so far from being a materialist that he has written a book in which, while he manages to throw discredit upon almost all religions, he himself brings up as an admirer of Eddyism! As Dr. Ireland points out, the examples given by Professor James of the efficacy of "mind cure," are trivial and unconvincing; and the critical acumen of this latest "religiographer" may be judged from his statement, apropos of the mind cure movement in America, "that the blind have been made to see, the halt to walk, life-long invalids have had their health restored, and moral fruits have been no less remarkable." Dr. Ireland thinks that Professor James is a "spiritualist." We are glad that some one has found a name with which to characterize him, for to us he has always appeared, both as a philosopher and a scientist, to be quite nondescript.

Current Comment.

SURE DEATH.

"Medical science has made such progress," said the doctor, when speaking of his profession, "that it is almost impossible for anybody to be buried alive now." Then he wondered why everybody laughed.

—*Boston Courier.*

TO LICENSE NURSES.

No fault could be found with a law to license nurses. People who have need for the services of a trained attendant in the sick room are entitled to such protection against incompetence as would be given by an official certificate to the professional qualifications of the bearer thereof. Such certificates are required in the cases of practising physicians, lawyers, engineers, miners, pilots and other persons whose occupations are of a character demanding a greater or less degree of professional skill.

—*The Philadelphia Record.*

Correspondence.

SPINAL SYMPTOMS CAUSED BY ACUTE MORPHINE POISONING.

By ALFRED GORDON, M. D.,
Of Philadelphia.

To the Editor of the **Philadelphia Medical Journal**:

The following case, equal to a most carefully carried out experiment, came under my observation a few days ago.

A middle-aged man, engineer by occupation, in one of his usual attacks of rheumatism, from which he had been a sufferer for several yearts, went to a nearby pharmacy for relief. A mixture containing 3 grains of morphine sulphate was given him. He drank a little over half of it at once. Half an hour later he suddenly became pale and fell in a semi-comatose state. Soon clonic contractions in the upper extremities and trismus made their appearance, which, however, did not last long.

Before I reached the patient, a vomitive was administered. The patient rendered an abundant fluid and soon felt relieved. I found him pale, covered with perspiration and unable to walk. When, however, he was forced to take a few steps, he presented distinct spastic paralysis with markedly exaggerated knee jerks, ankle clonus and Babinski's sign.

The condition was undoubtedly caused by the morphine, as during that day or on any previous day no drug had been taken by the patient.

He was put to bed at once, all food was withheld, except cracked ice, and 10 grains of sodium bromide were given every 3 hours. Seventeen hours later all the symptoms of irritation of the motor tract disappeared. The case is, in my opinion, extremely interesting in view of the presence of all the symptoms of lateral sclerosis. To my knowledge cases of a similar character have not been reported. It is well known that morphine in toxic doses can produce violent convulsions followed by paralysis. All the writers speak in a general way of spinal irritation caused by morphine, but such a clear symptomatology, reminding us of a systemic disease of the spinal cord of such a short duration, is certainly remarkable.

The presence of Babinski's sign in this case is quite significant, as it shows that degeneration of the motor tract is not absolutely necessary to produce it; an irritation or any functional disturbance is sufficient to make it appear.

Reviews.

The Elements of Bacteriological Technique. A Laboratory Guide for the Medical, Dental and Technical Student. By J. W. H. Eyre, M. D., M. S., F. R. S. Edin., Bacteriologist to Guy's Hospital, London, and Lecturer on Bacteriology in the Medical and Dental Schools, etc. With 170 Illustrations. W. B. Saunders and Company, Philadelphia and London.

It would seem that we are already well supplied with books on laboratory technique, and the appearance of a new aspirant for a favorable reception is likely to suggest the query, "Why more?" No such query, however, is suggested by the book before us. It is a work of some 371 pages, masterfully illustrated, treating of absolutely everything pertaining to bacteriological technique. Nothing of any importance was omitted and no detail overlooked, and yet the arrangement of the matter is compact and extremely simple. The cleaning and arranging of glass apparatus, methods of sterilization, handling of the microscope, staining methods, methods of demonstrating bacteria, preparation of various ordinary and special media, methods of isolation and study of bacteria, methods of bacteriological analyses and a number of other subjects are treated in a most thorough and simple manner, so that any beginner can follow the directions without the least difficulty. We have tested the value of the book in actual laboratory work and never found it wanting. It often saved us hours of looking through bacteriological journals to find a certain method or medium not mentioned in other text-books. We therefore speak from experience when we say that this is by far the best laboratory guide published, and congratulate the author upon this very meritorious contribution to bacteriological literature. [A. R.]

Annual Report of the Board of Regents of the Smithsonian Institution, Showing the Operations, Expenditures and Condition of the Institution for the year ending June 30, 1901. Washington: Government Printing Office, 1902.

The annual report of the Smithsonian Institution is always an interesting volume and ought to be more widely known among physicians than it is. While the chief function of the Smithsonian Institution is the promotion of original investigation and the publication of papers by and for the scientific specialist, one of its important subsidiary functions is the diffusion of knowledge in language "understanded of the people." The appendix to the report contains fifty papers, many of which are finely illustrated, which tell in clear language of the latest progress in the principal branches of knowledge. The papers published in the appendix to the present volume that are of particular interest to physicians are as follows: On Bodies Smaller Than Atoms, by J. J. Thomson; Solid Hydrogen, by James Dewar; Utilizing the Sun's Energy, by Robert H. Thurston; The Antarctic Voyage of the Belgica during the years 1897, 1898 and 1899, by Henryk Arctowski; Forest Destruction, by Gifford Pinchot and C. Hart Merriam; Irrigation, by F. H. Newell; The Mind of Primitive Man, by Franz Boas; The Possible Improvement of the Human Breed Under the Existing Conditions of Law and Sentiment, by Francis Galton; and, Salt and Its Physiological Uses, by A. Dastré.

Another important function of the Smithsonian Institution is its Bureau of International Exchanges, through which it forwards scientific publications to its correspondents in all parts of the world. Through this bureau the Proceedings of the Philadelphia County Medical Society, for example, are regularly forwarded to fifty-five libraries in foreign countries.

The activities of the institution could be still further increased if it had greater means at its absolute disposal; while those who are thinking of giving for some special scientific object may yet find the Regents, on account of the peculiarly disinterested position they hold, the best counsellors in suggesting the channel into which gifts for public purposes might be directed, even should they not see their way clear to accepting such donations for the institution itself.

The Smithsonian Reports are distributed by the Institution to libraries throughout the world; may be had by purchase at cost from the Superintendent of Documents, Washington City, and may also generally be obtained free of charge from the applicant's Member of Congress.

[J. M. S.]

The Essentials of Histology. By E. A. Schafer, LL. D., F. R. S., Professor of Physiology in the University of Edinburgh. Sixth edition, revised and enlarged. Lea Brothers & Co., Philadelphia and New York.

The fact that five editions of this work have been exhausted is sufficient evidence of its value. The present edition has been considerably enlarged, both by additions to the text, especially the chapter on the general nervous system, and a number of illustrations, of which there are no less than 463.

The work is especially adapted to the student as a laboratory guide. The technique and essential facts of the science are described in a clear and concise manner. Unimportant details have been omitted, the discussion of which only tends to confuse the student. The book is one which will be of great value to the beginner. [H. U. N.]

How to Succeed in the Practice of Medicine. By Joseph McDowell Mathews, M. D., LL. D., President of the American Medical Association, 1898-9, etc. Louisville, John P. Morton & Co., 1902. Pages 215.

Dr. Mathews is thoroughly imbued with the code of ethics as adopted by the American Medical Association, and which is also the standard of gentlemen whether in medicine or in other lines of life. He has included in this most entertaining volume the safe rules of conduct for the medical man from the day of graduation to the day of death. Apart from the points of practical value that are embodied in the work, as a literary production the book affords most interesting reading. The author has included such apparently triffling matters as the selection of a sign and the manner of conduct in dealing with agents and other nonmedical consultants. We are in hearty accord with all that he says, and can most sincerely recommend his book to every member of the medical profession. [W. A. N. D.]

Elementary Text-Book of Zoology. By Arthur T. Masterman, M. A. (Cantab), etc. Lecturer on Zoology and on Biology in the School of Medicine of the Royal Colleges, Edinburgh, etc., etc. Second Edition (with 411 illustrations). Edinburgh. E. & S. Livingstone. 1902.

This is a copiously illustrated text-book for the use of students. It begins at the very beginning of organic matter, and conducts the reader through the whole scheme of zoology. It is chiefly anatomical, and the descriptions are terse and clear, and assisted by the use of very excellent anatomical drawings. It is surprising, indeed, that so much matter can be condensed into a book of about 600 pages. There are some admirable chapters in the fore part of the book on Living Matter, Comparative Physiology and Morphology, Histology, Growth and Reproduction, Comparative Embryology, Geographical and Geological Distribution, Bionomics, and Heredity and Descent. Altogether, as a text-book for students of Zoology and Biology, this work has everything to commend it. It is written by a man who is a recognized expert and teacher of his specialty. [J. H. L.]

News and Notes.

AMERICAN

PHILADELPHIA AND PENNSYLVANIA.

Philadelphia County Medical Society.—At the meeting held March 11, the address of the evening was delivered by Dr. J. C. Hemmeter, of Baltimore, upon the Rôle of Intracellular Catalytic Processes in the Pathogenesis of Malignant Neoplasms. Other papers read were by Drs. G. H. Makuen on Organic Disease Causing Defect in Speech, and by Orville Horwitz on the Use of the Electrothermic Angiotribe in Lieu of the Employment of Ligatures. Dr. Hemmeter's paper provoked a great deal of discussion.

Bryn Mawr Hospital.—Subscriptions are now being collected for the erection of an extension to the Bryn Mawr Hospital. Several entertainments are soon to be held for the purpose of raising funds for this.

Lectures on First Aid to the Injured.—It has now been decided that the lectures for train men, to be given by Jefferson Medical College, will soon be begun, both the Pennsylvania and Reading Railroad Companies having agreed to permit their employés to attend the lectures. The railroad men will be taught bandaging, how to treat fractures, hemorrhages and other injuries. Lectures will be given, at different hours, on selected days, so that as many men may attend as possible. It is said that railroad officers have agreed to provide medicine chests on most of the trains in the future.

Henry Phipps' Institute, for the Study, Treatment and Prevention of Tuberculosis.—The staff of this institution was greatly enlarged last week by the director, Dr. L. F. Flick. Dr. D. J. McCarthy was placed in charge of the neurological department; the medical staff now consists of Drs. Joseph Walsh, C. T. Hatfield, J. W. Irwin, Ward Brinton, W. B. Stanton and G. W. Norris.

Allegheny General Hospital, Allegheny.—A seven-story hospital is soon to be erected on Stockton avenue, east of Diamond street, Allegheny. The building will be U-shaped, containing a basement with receiving ward, padded cells, bed rooms and dining room; a first floor with reception rooms, sun parlor, offices, wards and bed rooms, and the upper floors will contain wards and rooms. There will be a separate one-story building for contagious diseases, a laboratory, an autopsy room and a power-house 2-stories high.

Medical Club of Philadelphia.—A reception will be given in honor of Dr. William Osler, of Baltimore, by the Medical Club, of Philadelphia, at the Hotel Bellevue, on Friday evening, March 27.

Typhoid Fever in Harrisburg.—There has been an epidemic of typhoid fever all winter, and it is believed that the disease has been spread through the drinking water. There are at present 11 cases in the Harrisburg Hospital, and 2 deaths occurred a few days ago. It is hoped that the new filtration plant and other improvements proposed will soon be begun, that the water-supply may be pure by this time next year.

The Health of Philadelphia.—During the week ending March 14, 272 cases of typhoid fever with 38 deaths were reported, as compared with 254 cases with 21 deaths in the preceding week. The greatest number of cases, 24, developed in the Twenty-fourth ward, the Thirty-fourth ward coming next with 22 cases, followed by the Thirty-third with 17 cases. The wards in which no new cases were reported during the week are the Sixth, Eighth, Ninth and Thirty-fifth wards only. There was also a great increase in the number of smallpox cases reported, there having been 44 cases with 5 deaths, as compared with 17 cases with 4 deaths during the previous week. This makes a total of almost 300 cases of smallpox reported in this city since January 1. There was also an increase in the number of cases of scarlet fever reported, 101 cases with 2 deaths, compared with 90 cases with 6 deaths in the week before. The number of cases of diphtheria, however, has diminished, there having been 41 cases with 10 deaths, as compared with 51 cases with 19 deaths in the week preceding.

Society Meetings Next Week.—The following societies meet next week at the College of Physicians, Philadelphia, at 8.15 P. M.; Tuesday evening, March 24, Neurological Society; Wednesday evening, March 25, Philadelphia County Medical Society, and Thursday evening, March 26, Pathological Society.

Protestant Episcopal Hospital, Philadelphia.—Dr. Charles H. Weber has been appointed visiting physician to the Episcopal Hospital in the place of Dr. D. D. Stewart, who recently resigned.

Death of Dr. McCall.—Dr. Charles A. McCall died at his residence in West Philadelphia, March 12, in his sixty-seventh year. He was graduated from the University of Pennsylvania Medical School and then became resident physician at the Pennsylvania Hospital. When the Civil War broke out, he was appointed assistant surgeon, U.S.A. In 1865 he was promoted to captain, being placed in charge of the Mount Pleasant Army Corps Hospital near Washington. Later he returned to Philadelphia, where he practised until his death.

NEW YORK AND NEW JERSEY.

New York State Hospital for Crippled and Deformed Children, Tarrytown.—Drs. H. A. Gates, of Delhi, G. C. Madill, of Odgensburg, and F. W. Sears, of Binghampton, have recently been appointed consulting surgeons to the New York State Hospital for the Care of Crippled and Deformed Children at Tarrytown.

Suspected Cholera Cases.—Upon the arrival of the Anchor Line steamship *Karamania*, from Marseilles, Palermo and Naples, it was found that 6 persons, 2 of them members of the crew and 4 of them passengers, had died in convulsions following a sudden attack of nausea and cramps. All of the bodies were buried at sea. One of those stricken, who was sent to the hospital in Palermo, died soon after admission from what was diagnosed ptomaine poisoning. As the symptoms exhibited by these patients were typical of Asiatic cholera, the health officer of the port of New York had the vessel, crew and passengers quarantined. The passengers, numbering 733, and the crew were sent to Hoffman's Island for observation, and the ship has been disinfected. This is, oddly enough, the second time that the *Karamania* has arrived after having had cholera on board. She was quarantined August 3, 1902, upon arrival from Naples. 3 deaths from Asiatic cholera having occurred during the voyage. As no cases of cholera developed among the passengers, they were released March 17.

Camden County Medical Society.—At a special meeting, held March 10, the proposed amendment to the bill now before the Legislature, making the State of New Jersey recognize only those medical licenses which have been granted by State Boards which recognize those of New Jersey, was under discussion. Under the present law a nonresident practitioner can obtain a license to practise in New Jersey upon presenting his diploma and paying a fee of $50, while both Pennsylvania and New York States require re-examination by the State Boards of those States. The majority of the members present opposed the proposed amendment and the society decided to withdraw its objections to the bill. Much dissatisfaction was expressed by those in favor of the amendment.

The Prophylaxis of Venereal Disease.—At the last meeting of the American Medical Association, held at Saratoga Springs, N. Y., last June, a joint resolution from the Sections on Cutaneous Medicine and Surgery and on Hygiene and Sanitary Science was introduced in the House of Delegates as follows: Whereas, There is a burning necessity to check the spread of venereal diseases, and, assuming that the States cannot with impunity ignore the condition, it lies in the province of the medical profession to discuss and recommend to the respective State Legislatures and Municipalities means not regulamentative, but social, economic, educative and sanitary in their character, to diminish the danger from venereal diseases: Resolved, That the Section on Cutaneous Medicine and Surgery of the American Medical Association invite the section on Hygiene and Sanitary Science to co-operate with the Section on Cutaneous Medicine and Surgery in bringing about a propaganda in the different States, looking toward a proper recognition of the dangers from venereal diseases, and to arrange for a national meeting under the auspices of the American Medical Association for the prophylaxis of venereal diseases, similar to the International Conference for the Prophylaxis of Venereal Diseases, which meets again this year at Brussels, under the authority of the Belgian Government. This was later submitted to the House of Delegates, which endorsed the action of the Section and adopted the following: Resolved, That a joint committee of six from the Sections on Hygiene and Sanitary Science and Cutaneous Medicine and Surgery be appointed by the President to stimulate study in the uniform knowledge of the subject of the prophylaxis of venereal diseases and to present to the American Medical Association a plan for a national meeting, similar to the International Conference for the Prophylaxis of Venereal Diseases, which meets again this year in Brussels, under the auspices of the Government of Belgium. The committee on the prophylaxis of venereal diseases consists of Drs. H. D. Holton, Brattleboro, Vt., chairman; Ludwig Weiss, New York, secretary; G. M. Kober, Washington, D. C.; W. H. Sanders, Montgomery, Ala.; L. D. Bulkley, New York, and F. H. Montgomery, Chicago. The peculiar social, racial and political conditions of America are so different from those of Europe that they necessitate the expression of purely American ideas on this question, both from socio-economic and sanitary points of view. The committee desires the support of the medical profession and takes the liberty of soliciting expressions and views from those supporting the movement, who will contribute papers to make it a success, in case the House of Delegates should favor the holding of such a congress. Communications should be addressed to the secretary, Dr. Ludwig Weiss, 77 East Ninety-first street, New York City.

New York Academy of Medicine.—A symposium on typhoid fever in infants and children was presented before the section in pediatrics, on March 19 last. The following papers were read: The Occurrence of Fetal and Infantile Typhoid Fever, by Dr. J. Lovett Morse, of Boston; The Occurrence of Typhoid Fever in Infants and Children, by Dr. J. Crozer Griffith, of Philadelphia, and The Symptoms and Etiology of Typhoid Fever in Children, with Special Reference to the Widal Reaction, by Dr. A. D. Blackader, of Montreal.

NEW ENGLAND.

No State Sanatorium for Consumptives in New Hampshire.—The Governor of New Hampshire, in his message vetoing the acts appropriating $50,000 to found a State sanatorium for consumptives, says that: "The statistics of mortality show that from 1884 to 1901 the deaths from tuberculosis in New Hampshire decreased from about 15% of the whole number to less than 10%, and that the average for the whole period was 11.26%. Is there any logical stopping place between a sanatorium for the victims of a disease of which 10 people die and sanatoria for those afflicted by maladies to which 90 people succumb? Is there any sound reason why the public should be required to maintain a home for the few consumptives that can be cured in such a home, while all other consumptives and all those stricken by other diseases are denied access to the home and at the same time taxed to support the favored few? I think not. Eminent physicians declare that consumption is curable in our climate. Others just as eminent maintain that it is not. Another class, more cautious, assert that the new theories and treatment which the State is asked to approve and bear the expense of, are still in the experimental stage, which I am forced to conclude is the fact. All experience teaches that such an institution once established by the State cannot be abandoned, and I know of no evidence that one can be made self-supporting. I believe that an appropriation of $50,000 for such an object this year will make necessary a larger one 2 years hence for construction and equipment, and the annual cost of operation will be very large ever afterward. Massachusetts has one which cost originally $175,000, and is maintained at large expense. It treats but one in five of the applicants and bars all but incipient cases. Other States are waiting and inquiring before taking a step that cannot be retraced. I believe we should do the same. At the lowest, the appropriations by the present Legislature will reach an aggregate unequalled in our history and appalling to those who are obliged to count the cost of public service, because to them taxes mean hard work, enforced economies and oftentimes denial to themselves of what they feel they need.

We must stop somewhere, and it appears to me that we should stop upon ground that is safer than that upon which the bill under consideration would place us. With these views I cannot accept any part of the responsibility of forcing such a burden upon the people of the State, who have never considered the subject generally or passed upon it in any way."

Greenwich Hospital, Conn.—The Greenwich Medical Society recently started a movement for the erection of a hospital and $30,000 have already been subscribed. A site has been chosen near the center of the town. A number of entertainments have been given to raise funds.

Foot-and-Mouth Disease in New Hampshire.—On March 12, news was transmitted to the Bureau of Animal Industry, Washington, from Boston, stating that 4 herds of cattle, aggregating 63 animals, had been found near Bedford, N. H., affected by foot-and-mouth disease, and had been slaughtered. Stock-yards have been disinfected. It is believed that the disease originated at Goffstown, near Bedford. Dr. Brush, in Lawrence, Mass., has found that the disease affected several children during the past winter, 5 in one family and 2 in another. On account of this new outbreak of the disease, the State of New Hampshire has been quarantined again. On March 15 four herds which had been exposed to the disease were found and the animals, 37 in number, were killed.

A Physician Mayor of Burlington, Vt.—Dr. D. C. Hawley, who was graduated from the University of Vermont Medical School in 1884, has been re-elected Mayor of the city of Burlington. He has practised medicine in Burlington since his graduation and is vice-president of the American Academy of Medicine.

The Health of Boston.—For the week ending March 17, there were 34 cases of scarlet fever with one death, 34 cases of tuberculosis with 30 deaths, 18 cases of measles with no deaths, 17 cases of diphtheria with 6 deaths, 5 cases of typhoid with 2 deaths, and one case of smallpox with no deaths, reported. The death-rate was the same as for the corresponding week of last year. The number of deaths due to influenza was only 6, showing a great decrease.

Smallpox at Hyannis, Mass.—Eleven cases of smallpox were discovered in Hyannis, March 13. There are several other suspicious cases under observation. All of the patients live in the western part of the village, on the road leading to Hyannisport.

Harvard Medical School.—Dr. Henry P. Bowditch, professor of physiology, has recently been appointed to the new George Higginson professorship of physiology in that institution.

Bequests.—By the will of the late J. H. Hecht, of Boston, $5000 were left to the Massachusetts General Hospital and the Boston Lying-in Hospital, $100 to the Carney Hospital and the Boston Emergency Hospital, $500 to the Industrial School for Crippled Children, $2000 to the Leopold Morse Home and Orphanage, and other sums to a number of charitable institutions.

SOUTHERN STATES.

To Fight Tuberculosis.—A number of the leading citizens of Washington, D. C., have organized to fight tuberculosis and have undertaken to spread intelligence that will tend to minimize the conditions which produce the disease. The work is done under the sanction and with the co-operation of the city health authorities, and promises good results. The organization embraces many prominent physicians, clergymen, charity workers and other persons of philanthropic tendencies. The society purposes to raise funds to carry on a systematic diffusion of scientific knowledge about tuberculosis, its prevention and the relief of those who are afflicted. By means of public lectures, leaflets and scientific documents the work will be carried on permanently. The society accepts the belief that the disease may be prevented, that its spread may be checked and that persons who have it may be cured. Its first duty will be to spread generally a clear scientific knowledge of just what tuberculosis is and how it may be prevented. The work will from time to time be made the subject of lectures and special study in the public schools.

Infectious Hospital, Baltimore.—The board of charities met March 6 and decided to have plans prepared for buildings to be placed on the 140 acres of land adjoining Bay View Insane Asylum, to be used as a hospital for infectious diseases, although it has not yet been definitely decided that such an institution will be erected.

Smallpox in Virginia.—Reports from Washington, dated March 11, show that there were at that time but 9 cases of smallpox in the State of Virginia. But Dr. P. A. Irving, the secretary of the Virginia State Board of Health, stated that the disease is much more prevalent than is commonly supposed, that the average number of cases in the State for the past 6 months was over 100, and he was confident that there were not less than 200 cases at present in the State, in spite of reports to the contrary. A great number of cases are known to have occurred in the border counties of Kentucky and Tennessee.

The Care of the Insane in Maryland.—The Washington county commissioners have been trying to have a number of incurable patients released from the Maryland Hospital for the Insane at Catonville. The hospital authorities state that they have no power to release inmates committed by the court except on an order from the court. At the Springfield State Hospital it was decided to move the male epileptics from Buttercup Cottage to the new industrial building recently completed. The female epileptics will then be separated from the other insane, being removed to the Buttercup, thereby giving more room to both groups, the male and the female.

Frederick City Hospital, Frederick, Md.—During the 9 months since this hospital was opened, 60 patients have been treated. The board of managers consists wholly of ladies.

To Check Tuberculosis.—A meeting was held March 10, to discuss the best means of gathering statistics and information for presentation to the next Legislature, in regard to the extent of tuberculosis in Baltimore. Dr. W. S. Thayer, president of the Maryland Tuberculosis Commission, presided. Dr. J. S. Fulton, secretary of the State Board of Health, said that it was essential to the work of the commission that the residence, occupation and place of employment of each patient should be reported, with the sanitary conditions prevailing. Mr. J. M. Glenn said that the Charity Organization Society and the Society for the Improvement of the Poor are working in accord in assisting the commission, with good results. Dr. H. W. Buckler described the methods adopted in New York hospitals, showing that incipient cases of tuberculosis could, with proper treatment, be cured in from 6 to 9 months. Dr. C. H. Jones, assistant health commissioner, had prepared plans showing the location of the deaths from tuberculosis in Baltimore during the past 10 years. Dr. C. W. Mitchell advised education, as did Dr. O'Donovan. Dr. H. M. Knox described an institution for the treatment of tuberculosis near Berlin. There were also a number of other speakers.

Death of Dr. Le Cato.—Dr. George W. Le Cato died at Richmond, Va., March 12, aged 61 years. He was a graduate of Carlyle College, Pa., and was graduated in 1864 from the University of Maryland Medical School, Baltimore. In 1869 he moved to New York City and was a member of the New York Board of Health for a number of years. He then returned to his home in Virginia, where he practised his profession until 1894. He was then elected State Senator, to which position he was re-elected several times, having been a member of the State Senate at the time of his death.

MISCELLANY.

Cholera in the Philippines.—Since the present epidemic of cholera appeared in the Philippines, 125,810 cases have been reported, up to March 10. The disease is still devastating the Moro country, and many cases are being reported in Misamis, where 3 American surgeons are in charge.

Smallpox in Trinidad.—News from St. Thomas, D. W. I., states that Dr. Bridger, who has been commissioned by the authorities of Barbados to investigate the eruptive fever prevailing in Trinidad, reports that it is a widespread and rapidly increasing epidemic of smallpox. The Trinidad Medical Board, however, declares that smallpox does not prevail there epidemically, and that the eruptive fever referred to is not smallpox.

A Healthy Spot.—One of the healthiest spots in the world is the Island of Pico, in the Azores. It has a population of about 3,000. For 395 years it has not had a physician or a drug-store, or a contagious disease. When residents become so old that they think it is time to die, they move to a less healthy place.

Bubonic Plague in Mexico.—The epidemic has decidedly diminished, as there were no new cases at Mazatlan, Villa Union or Siqueiros, nor any deaths March 13. On March 10 there were but 2 deaths reported from Mazatlan, and it was stated that there were but 2 serious cases in the hospital. The Mexican Government has declared that the spread of the plague into the interior from Southern ports is practically impossible, owing to the stringent measures adopted.

A House Without Germs.—A Dutch doctor at Yokohama, Japan, has built himself a novel house with a view to guarding against microbes and earthquakes. The walls of this edifice are made of blocks of glass. They are built hollow, the interstices being filled up with a solution of salts of soda, which is intended to regulate the temperature of the interior. The windows are hermetically closed, and air is only admitted after passing through filters.

Death of Dr. Bargono.—Dr. Manuel Barros Bargono, the well-known surgeon of Santiago, Chile, rector of the University of Santiago, died March 11.

Obituary.—Dr. John R. Faust, at Hyndman, Md., March 8, aged 68 years.—Dr. B. P. Hooke, at Loysville, Pa., March 11.—Dr. Charles Archibald McCall, at Philadelphia, Pa., March 12, aged 66 years.—Surgeon Frederick A. Hesler, at Shanghai, March 11.—Dr. T. Harper Rice, at Pottstown, Pa., March 14.—Dr. William P. Munn, at Denver, Col., March 14.—Dr. Arthur W. Church, at Jersey City, N. J., March 13, aged 32 years.—Dr. George W. LeCato, at Richmond, Va., March 12, aged 61 years.

FOREIGN.

CONTINENTAL EUROPE.

University Notes.—**Basel:** Dr. F. Egger has been appointed director of the polyclinic in the place of the late Dr. Massini.—**Berlin:** Dr. Finsen, of Copenhagen, has been appointed an honorary member of the Berlin Dermatological Society.—**Halle:** Dr. J. P. Pawlow, professor of physiology and director of the physiological department of the Institute of Experimental Medicine in St. Petersburg, has been awarded a gold medal by the University of Halle, for his splendid work upon the physiology of digestion.—**Innsbruck:** Dr. Ludwig Kerschner has been appointed professor of histology and embryology.—**Jena:** It has been announced that Dr. Kroenig, of Leipsic, has been appointed professor of gynecology, replacing the late Dr. B. S. Schultze.—**Königsberg:** Dr. Puppe, of Berlin, has been appointed professor of medical jurisprudence.—**Leipsic:** Dr. Arthur Hantzsch, professor of chemistry and director of the chemical institute in Würzburg, has accepted similar positions in the University of Leipsic, replacing the late Dr. Johannes Wislicenus. His duties will begin October 1 next.—**Lemberg:** Dr. Ladislaus Szymonowicz has been appointed professor of histology and embryology.—**Prague:** Dr. Josef V. Rochon has been appointed professor of histology and embryology in the Bohemian University.—It is announced that Dr. Karl H. Huppert, professor of medical chemistry and director of the medicochemical laboratory in the German University, is soon to be retired. Dr. Thierfelder, professor of physiology and director of the Physiological Institute in Berlin, has been appointed professor of physiological chemistry, to take his place.—**St. Petersburg:** Dr. N. J. Tschistowitsch has been appointed professor of bacteriology and infectious diseases: Dr. T. P. Pawlow, professor of dermatology and syphilography; and Dr. D. P. Kosorotoff, professor of medical jurisprudence and toxicology.—**Stockholm:** Dr. F. Westermark has been appointed professor of obstetrics and gynecology.—**Tübingen:** Dr. Wagenhäuser, professor of otology, has recently been made honorary professor.

Death of Dr. Crolas.—Dr. Ferdinand Crolas, the father of pharmacy in Lyons, died recently. For over 30 years he has taught chemistry and pharmacology in the University of Lyons. He was the author of a number of articles upon pharmacy and chemistry.

The Latest Literature.

BRITISH MEDICAL JOURNAL.

February 28, 1903.

1. A Clinical Lecture on Some Cases Simulating Acute Appendicitis. ARTHUR E. BARKER.
2. The Erasmus Wilson Lectures on the Pathology and Symptoms of Adenocarcinoma of the Rectum. Lecture II. CHARLES B. BALL.
3. A Case of Dilatation of the Pylorus for Simple Stricture. HORATIO P. SYMONDS.
4. A Simple Method of Operating on Piles. A. B. MITCHELL.
5. Note on Intestinal Anastomosis; Special Forceps. T. CARWARDINE.
6. The Presence of Diphtheria Bacilli in Atrophic Rhinitis. J. ODERY SYMES.
7. The Bilberry. JAMES SAWYER.
8. Case of Ruptured Urinary Bladder; Operation and Recovery. HUGH LAWRIE.
9. The Open Air Treatment of Syphilis. E. H. DOUTY.

1.—Barker recites cases of the following conditions which he has found from experience may closely simulate **appendicitis.** Ruptured pyosalpinx, ovarian cyst strangulated by twisted pedicle, torsion of the omentum, perforated gastric ulcer, retrocecal hernia, broken down mesenteric glands, ileocecal cancer with abscess, hematoma of the broad ligament, reduction of a hernia *en masse* and intussusception. [F. T. S.]

2.—Ball describes 2 varieties of **adenocarcinoma of the rectum:** (1) An ulcerative form which spreads rapidly and is prone to attack younger subjects and (2) a form which is characterized by a greater amount of connective tissue and a narrowing of the lumen of the bowel producing obstruction. The symptoms are diarrhea alternating with constipation, a discharge of mucus, mixed with blood, and pain, slight at first but becoming more severe when the disease spreads to other pelvic structures. The importance of an early digital examination is insisted upon. If the tumor be situated high up, it may sometimes be felt bimanually or by having the patient stand up and strain down during palpation. A freely movable growth without enlarged glands or metatases is suitable for excision. [F.T.S.]

3.—Symonds reports a case of benign **stricture of the pylorus** which he treated by dilation after having introduced 2 fingers into the pyloric orifice through the invaginated anterior wall of the stomach. The anterior wall of the stomach was then drawn out through the abdominal wound, and a longitudinal tuck was run in it by a continuous suture of the peritoneal coat. [F. T. S.]

4.—Mitchell describes his method of excising **hemorrhoids.** A pile is clamped in a long, narrow-bladed forceps, and the redundant mucous membrane and pile is cut away by scissors. A curved needle armed with catgut is inserted immediately above the clamp, the end of the catgut secured by a knot, and a continuous suture applied around the clamp. The clamp is now withdrawn and the suture tightened. The advantages of this method are that it can be performed very rapidly; there is no loss of blood; the suture cannot slip, so that there is no danger of subsequent hemorrhage, and no raw surface remains. [F.T.S.]

5.—Carwardine describes a pair of **intestinal clamps** which may be locked together during an intestinal resection, so that they bring the ends of the bowel together for easy suturing. The advantages of this treatment are the possibility of union in layers, the steady approximation of the ends of the bowel for anastomosis, the use of only one hand for holding the approximated ends, the absence of any marked internal diaphragm when union is complete, and the availability of the independent forceps for use as intestinal clamps. [F. T. S.]

6.—Symes has made bacteriological examinations of the nasal discharges from 23 cases of atrophic rhinitis. In 20 out of the 23 cases, he found a bacillus resembling the Klebs-Löffler bacillus in morphological and cultural characteristics. In this connection the following questions naturally arise: Is this organism present in the normal nose or in other disease conditions than atrophic rhinitis? Is it a true diphtheria bacillus? From an examination of a series of healthy noses no organism was found in any way conforming to the type of the long, diphtheria-like bacillus found in the cases of atrophic rhinitis, although a bacillus of the pseudodiphtheria type was often found. The second question is more difficult to answer on account of the large number of types (20) of the true diphtheria bacillus. The author seems inclined to regard **atrophic rhinitis as a chronic form of nasal diphtheria.** The author cites many clinical facts in support of this theory. [J. M. S.]

8.—Lawrie reports a case of **extraperitoneal rupture of the urinary bladder** in which recovery took place. Two days after the injury a suprapubic incision was made and drainage instituted. The rupture was on the anterior and right wall of the bladder and was large enough to admit 3 fingers. Two operations were subsequently performed, one for suturing the bladder and one for suturing the abdominal wall. [F. T. S.]

9.—The influence of pure air and sunlight on the blood, and through it on all the other tissues of the body and not their influence on the lungs, is the factor that brings about the cure of pulmonary tuberculosis. Douty believes the same is true of **syphilis** and that the syphilitic can be much benefited by **open air treatment.** He thinks that mercury is not an antidote to the syphilitic poison any more than potassium iodide is. It probably helps the tissues of the syphilitic, but it is not a specific. During 5 years' observation of patients in high Alpine altitudes, he has come to the conclusion that 30% of the men patients who are tuberculous are also syphilitic. He hopes that the open air treatment for early syphilis may become more usual. [J. M. S.]

LANCET.

February 28, 1903.

1. An Address on Some Famous Medical Officers of the Army. NORMAN MOORE.
2. An Address on Gastro-Enterostomy and its Uses, with a Description of the Operation as Performed by the Author. A. W. MAYO ROBSON.
3. Lunacy and the Law. T. OUTTERSON WOOD.
4. The Gelatine Treatment of Hemoptysis. H. M. TICKELL.
5. The Use of X-Rays in Ophthalmic Surgery. M. S. MAYOU.
6. The Treatment of Epileptics. FLETCHER BEACH.
7. The Theory of Retinoscopy. E. KENNETH CAMPBELL.
8. The New Method of Treating Fractures of the Shaft of the Femur. J. P. LOCKHART MUMMERY.

2.—In this address, on **gastro-enterostomy** and its uses, Robson refers to the high mortality which this operation presented between 1881 and 1885, which was 65.71%. At present he states the mortality to be under 5%. Regarding the preparation of the patient for the operation it is said to be unnecessary in most instances to put the patient through a severe course of preliminary treatment, such as frequent lavage of the stomach and abstention from food before operation. Such treatment is exhausting to patients already debilitated. Cushing has shown also that the stomach contents speedily become aseptic if the mouth be cleansed and aseptic foods administered, and clinical experience shows that elaborate preliminary treatment is unnecessary to success. Robson's preparation consists in careful cleansing of the mouth and teeth and the administration of sterilized foods. The last light meal is given 12 hours before operation, the stomach is washed out about two hours, and a nutrient enema is given about one hour, before operation. The enema consists of brandy ℥i, liqu'd peptonoids ℥ii and normal salt solution ℥x. Great care is taken to avoid exposure of the patient on the operating table, and strychnine is administered to anticipate shock. Excepting when the posterior wall, because of adhesions or involvement in malignant growth, is inaccessible, the author prefers the posterior gastro-enterostomy. This operation produces free drainage of the stomach into the bowel and secures exact apposition by posture of the newly joined structures. Any complicated method of performing the operation is to be avoided as a routine practice and is usually unnecessary. Robson chooses a point for anastomosis 13 inches from the commencement of the jejunum in the anterior operation and a point from 6 to 9 inches for the posterior operation. In the anterior operation the point selected on the stomach is near the pylorus and as near to the greater curvature as possible. After anastomosis is complete, a few additional stitches are introduced into the proximal end of the loop, securing it at a higher level on the stomach wall, and also into the distal end, securing it at a lower level in order to obviate kinking. Robson prefers to use a simple suture or his bobbin for anastomosing the 2 structures. He does not like the Murphy button. When a continuous suture is desired it is well to interrupt it at several points in order to avoid drawing or puckering of the orifice. The plan of removing a portion of the mucous membrane from both bowel and the stomach is described. This is done in order to prevent contraction of the opening and has given satisfactory results in Robson's cases. In discussing complications which may follow the operation, regurgitant vomiting is first mentioned. It occurs more frequently in malignant than in simple disease. Its cause, however, is difficult to determine. It is best dealt with by lavage, by propping the patient in the semi-erect position, by abstinence from feeding by the mouth, and by securing a free action of the bowels. Occasionally it will be relieved by allowing the patient to drink freely of milk or some other fluid. Robson quotes numerous authorities to show that the vomiting is not due to the presence of bile in the stomach. His belief is that this regurgitant vomiting depends on obstruction of the passage outward of the intestinal contents either due to kinking or paralysis of the anastomosed jejunal loop, or later to adhesions. Another postoperative complication is contraction of the new orifice which occurs to some extent in all cases in which dilatation of the stomach is a marked symptom at the time of operation. Robson has not found that pneumonia and pleurisy have followed operations on the stomach with greater frequency than other operations on the abdomen. Cases of peptic ulcer in the jejunum after gastro-enterostomy have been reported by 7 writers. Adhesions subsequent to gastro-enterostomy causing intestinal obstruction are probably uncommon. A want of union in the newly joined viscera is a serious accident, proving fatal in nearly every case. It was much more frequent when only moribund patients were operated upon, but it is now seldom seen. Robson believes that it is more apt to occur when a Murphy button has been used than when a double line of sutures has been employed. The passage of the small intestine through the loop formed by the junction of the jejunum and stomach has been reported by Mayo, but is only possible after the anterior operation. As regards the condition of the patients subsequent to operation it has been found that the peristaltic power of the stomach has been immediately improved, though never rendered normal. The cases of hypo- and anacidity have not been changed by the operation, showing clearly that these conditions depend not on obstruction but on changes in the mucous membrane. Dilatation, if it has not lasted for too great a time, will certainly be overcome. When the stomach is greatly dilated and the duodenum is mobile, these 2 portions of the alimentary canal may be united, the operation being performed with little disturbance or exposure of the viscera. It is impracticable, however, when the pyloric region is extensively diseased or adherent. Although Robson has performed pyloroplasty on many occasions with excellent results, the fact that subsequent contraction occasionally takes place, especially if there is active ulceration going on at the time of the operation, has led him to prefer gastro-enterostomy to this operation. The author is a strong advocate of gastro-enterostomy in malignant stenosis of the pylorus incapable of removal and reports a number of cases markedly benefited and relieved to illustrate his point. It is believed that a degree of congenital stenosis is a frequent, though often unrecognized, cause of dilatation of the stomach in young adults. Several cases are reported which teach the important lesson that one ought not hastily to give a hopeless prognosis after gastro-enterostomy for tumor, for, when there is any doubt whatever about the malignancy of the growth, it is well to give the patient the benefit that is derived from the hope of cure. The case referred to also shows the advisability of making an exploratory operation in nearly all cases of tumor of the stomach. In cancer and other tumors of the duodenum producing obstruction to the onward passage of the stomach contents, gastro-enterostomy is preferable to resection; in hour-glass contraction of the stomach gastroplasty is in many cases the operation of choice and gives excellent results, but if the stricture be a long one and thickening be very extensive, gastro-enterostomy is the better operation. Care must be taken in these cases to make sure that the intestine is anastomosed to the proximal portion of the stomach. On several occasions the mistake has been made of attaching the bowel to the distal portion. In perigastric adhesions the operation of gastrolysis is usually entirely curative, but, when the adhesions are extensive, dense, short and firm, a posterior gastro-enterostomy had better be done. When acute or chronic gastric ulcer does not respond to medical treatment, gastro-enterostomy will give excellent results in many cases, but in these patients the operation must be selected according to the situation and condition of the ulcer. Later Robson will report a series of duodenal ulcers treated by the performance of gastro-enterostomy. When general medical treatment fails to cure gastric or duodenal hemorrhage, operation, with the idea of finding and securing, if possible, the bleeding point, or of performing gastro-enterostomy is indicated. In persistent spasm of the pylorus, or Reichmann's disease, Robson has given up the operation of stretching the pylorus in favor of gastro-enterostomy. As a rule, hyperchlorhydria responds to medical and general treatment, but, when this treatment fails and the life of the patient is made miserable, gastro-enterostomy is well worth consideration. Robson refers to a case of persistent gastralgia in which all medical measures failed to relieve the condition and in which gastro-enterostomy was followed by good recovery and ultimately complete restoration of health. Tetany occurring in gastric dilatation is undoubtedly very serious, the mortality being nearly 75%. A case is reported in which pyloroplasty was performed with a satisfactory result. Acute gastric dilatation is one of the most serious diseases that can be encountered. In the Leeds General Infirmary during the past 10 years there have been at least 4 fatal cases. Robson describes a case in which this condition arose and was relieved by the prompt use of lavage. Should this treatment not relieve the patient, rather than let him die, Robson says, the stomach should be opened and connected with the jejunum. He knows of no case in which this operation has been performed. In concluding his paper the author says that, if the procedure of gastro-enterostomy is to hold its place as one of the most beneficial operations in surgery, it must continue to be done with a very small mortality, which will be effected only by observing every care in detail before, at the time of, and subsequent to, the operation. [J. H. G.]

3.—Wood contributes an article on **lunacy and law.** He comments on the recent amendments of the British Lunacy Laws. [F. J. K.]

4.—Tickell has had most favorable results with **the gelatine treatment in hemoptysis.** The gelatine solution is injected per rectum. This method of administration is unattended by any disturbing complications and has the same effect in stopping hemorrhage as subcutaneous injections. The solution is prepared as follows: Fifty gm. of gelatine are dissolved in 1¼ liters of water and boiled very gently for an hour, when the volume is reduced to one liter. After cooling to body temperature, 250 cc. are slowly passed into the rectum from an ordinary irrigator. The injection is given three times a day until the sputum ceases to show blood. [F. J. K.]

5.—Mayou refers to the use of the **X-rays in locating foreign bodies in the globe** and in the treatment of rodent ulcer and trachoma. He first refers to the importance of immediate localization and removal of foreign bodies from the eye, as they are the most fertile source of sympathetic ophthalmia; are most likely to give rise to suppuration if left; and if left any length of time become rapidly encapsulated, often defying extraction with the electromagnet. The points to be determined with the X-rays before operation are the size and shape of the foreign body; the situation with regard to the intra-ocular contents; and the position of the foreign body with regard to the wound to be made in the globe for its extraction or with regard to the entrance wound. The best method of removing these foreign bodies is the employment of a small electromagnet. When the foreign body is in the vitreous, an equatorial incision is preferable to the radial, as its edges are more easily held apart and there is less danger of injuring the ciliary body. The use of the X-rays in rodent ulcer and in the treatment of trachoma is discussed and in both of these conditions the rays have given excellent results. [J. H. G.]

6.—Beach discusses **the treatment of epileptics.** He argues that errors of refraction are too often overlooked as the cause of epilepsy, and that the correction of the refraction often results in the cure of epilepsy. He favors the bromide treatment, administering ammonium bromide, as it is not so depressing as the potassium salt. He does not regard favorably the reduction of chlorides in the diet to make patients more sensitive to the use of bromides. He thinks well of the giving of iron tonics and cod-liver oil to maintain the nutrition while the bromides are being administered. He holds that the results of the treatment of epileptics in colonies have been most gratifying. [F. J. K.]

7.—Campbell reviews **the theory of retinoscopy** and its practical application. The article is illustrated. [F. J. K.]

8.—Mummery describes a new method of **treating fractures of the shaft of the femur,** which consists in applying a double inclined plane splint to the injured limb and then suspending the limb by means of a Salter's cradle. A splint of guttapercha is applied over the anterior surface of the thigh. The limb should be elevated until the pelvis is well raised from the bed. [J. H. G.]

MEDICAL RECORD.

March 14, 1903.

1. Some Observations on Vulvovaginitis in Children (with Special Reference to the Gonorrheal Form); Its Treatment and Possible Sequelæ. SAMUEL WYLLIS BANDLER.
2. Clinical Notes on a Series of Nine Consecutive Cases of Ectopic Gestation. HIRAM N. VINEBERG.
3. Mosquitoes, Quarantine and Some Statistics with Regard to Yellow Fever. QUITMAN KOHNKE.
4. The Indications for Opening the Pars Mastoidea. L. D. BROSE.
5. Hot Decinormal Salt Solution Injections in the Treatment of Hemorrhoids. LUCIEN LOFTON.

1.—Bandler states that a **purulent vulvovaginitis** is not very rare in children. It is due in the vast majority of cases to the gonococcus. It is likewise due to a small coccus found in the intracellular tissues, but which, in this writer's opinion, is not the gonococcus. He considers the best daily ambulatory treatment to be (1) irrigation with boric acid solution, (2) injection of 2% protargol solution, through the speculum, (3) washing the entire length of the vaginal canal by the aid of the speculum, (4) after which he advises the introduction of the protargol stick and (5) the subsequent use of strong silver solutions if necessary. The sequels of vulvovaginitis are discussed in detail. [T. L. C.]

2.—Vineberg presents clinical notes of a series of 9 cases of **ectopic gestation.** In 7 of these cases there was more or less **elevation of temperature;** in 2 the temperature had reached 102.6°, and in one case of those to 103.8°. The presence of the pyrexia is suggestive and does not bear out the usual teaching that in the differential diagnosis between inflammatory diseases of the adnexa and ectopic pregnancy the thermometer is of great aid in that it usually shows an absence of fever in the latter condition. [T. L. C.]

3.—Kohnke takes issue with Dr. Edmund Souchon, who contributed an article in the *Medical Record* of October 5, 1902, entitled: "On the Eradication of Yellow Fever in Havana." Kohnke believes that all quarantines against yellow fever, in so far as they have been successful in preventing the introduction of the disease, have been so because they prevented the entrance of infected mosquitoes. Whether this has been accomplished by detention for a period longer than the life of a mosquito or by the destruction of the insect in some other way, the achieving result has always been the excluding of infected mosquitoes. [T. L. C.]

5.—Lofton advises the use of hot **decinormal salt solution injections in the treatment of internal hemorrhoids.** He injects the solution as hot as can be borne by the hand, inserting the needle as near the base of the tumor as possible. The needle is thrust to about the middle point. Ten minims of the solution are first injected, the needle pulled out about a sixteenth of an inch, an equal quantity of the solution injected and the balance (to one dram or even 2 drams) placed just beneath the mucous surface which almost immediately turns a pink-red color, in 2 minutes becoming blanched. After a few applications the hemorrhoids slough away. The procedure is claimed to be almost painless. The author has employed it in 17 cases. [T. L. C.]

MEDICAL NEWS.

March 14, 1903. (Vol. 82, No. 11).

1. The Etiology of Colds. JAMES J. WALSH.
2. Surgical Treatment in Nonmalignant Diseases of the Stomach; Results and Indications. HENRI HARTMANN.
3. The Etiology of Ectopic Gestation. SAMUEL WYLLIS BANDLER.
4. Apparent Fetal Substitution; Medicolegal Note. ALLEN J. SMITH.
5. The Elective System in Medical Schools. DANIEL N. EISENDRATH.
6. The Symptomatology of Tabes; An Analysis of 140 Cases of Locomotor Ataxia. JOSEPH COLLINS.
7. Primary Tuberculosis of the Ear Followed by Mastoiditis: Report of 4 Cases. M. A. GOLDSTEIN.

1.—Walsh says a very striking indication that **cold** is due to microbic invasion is to be found in the fact that the process is nearly always accompanied with fever. This is due to an absorption of toxic materials into the circulation which disturbs the heat regulating mechanism. A distinct period of incubation can be traced, and the efficient cause of the illness is commonly further off than the patient imagines. The treatment advised when fever and chilliness occur is the use of calomel, hot drinks, especially cream of tartar lemonade, which acts as a diuretic as well as a laxative; a diaphoretic at the beginning of the affection will always give the patient comfort and may unload the system of enough depressed toxic material to enable it to react and bring about the abortion of a cold. [T. M. T.]

2.—Hartmann states in his article that the mortality in the operations for **nonmalignant diseases of the stomach** depends almost entirely upon the physician and the early diagnosis. [T. M. T.]

3.—Bandler, in his article on **ectopic gestation,** states that it occurs most frequently in multiparæ and that a sterile period of varying length precedes this pathological development; 65 multiparæ were affected as compared with 20 nulliparæ. Out of 100 cases reported only 10 ectopic gestations occurred in nulliparæ. The other 87 had borne children and 3 had aborted. In 24 cases it had occurred 5 or more years after the first labor; in 55 cases from one to 5 years after; and in 8 in less than 12 months. Veit found that in 52 cases of repeated ectopic gestation a sterile period of 2 to 11 years preceded the occurrence of this process. Between the 2 events was a period of 6 weeks to 6 years. This sterile period represents the time in which inflammatory changes in the mucosa may occur, either gonorrheal, puerperal or tubercular. These changes involve the uterine end of the tube more than the abdominal, and in the subsequent course of events, when healing does result, the uterine end improves slowly. [T. M. T.]

5.—Eisendrath believes that the **elective system** is no longer an experiment, which has been proven, and its general adoption is a step in the line of progress. He thinks that the elective system will be ultimately adopted on account of the crowded condition of the curriculum in medical schools. It will best dispose of the problem of large classes and of more direct contact between student, teacher and patient. [T. M. T.]

6.—Collins sums up his article by giving the frequency of the most conspicuous subjective and objective symptoms: Lancinating pain, 90; Romberg's sign, 85; loss of Achilles jerk, 88; loss of knee jerk, 84; Argyll-Robertson pupil, 77; ataxia of gait, 73; hypotonia, 72; paresthesia, 73; anesthesia, 67; analgesia, 58; bladder symptoms, 55; impotency, 50; crises, 20; ocular paralysis, 10; arthropathies, 5; trophic symptoms, 8; optic atrophy, 14; girdle sensation, 30; deep sensibility, 63; diplopia, 22. [T. M. T.]

NEW YORK MEDICAL JOURNAL.

March 14, 1903.

1. Some of the Complications of Abdominal Surgery. ROBERT T. MORRIS.
2. The Diagnosis and Treatment of Hereditary Syphilis. E. HARRISON GRIFFIN.
3. Some Observations on Tuberculosis. J. O. COBB.
4. Report of a Case of Inguinal Hernia with Incomplete Sac. J. SHELTON HORSLEY.
5. Transportation and the Ophthalmic Referee. JUSTIN L. BARNES.

1.—Morris, in considering some of the **complications of abdominal surgery,** mentions: (1) Those arising from anesthetics; (2) from the absorption of iodoform; (3) hemorrhage. He says, with our modern refinements in anesthetics we have fewer complications from this source than were formerly seen. He favors nitrous oxide as a preliminary to other anesthetics or else given with oxygen as a complete anesthetic. In several thousand administrations of the oxide he has not had one death. Chloroform is then spoken of and the alarming symptoms that it produces by paralysis of the vasomotor nerves, which can readily be overcome by the application of our resources. Ether and its dangers are then fully discussed. He thinks that the nephritis often attributed to ether anesthesia is, in many instances, due to a pre-existing toxemic irritant. Iodoform poisoning, he says, is very often mistaken for septicemia, but there is one point which will distinguish the 2 conditions, namely: In the first the wound looks well, the patient does not; in the second, neither the wound nor the patient looks well. Hemorrhage, if intraperitoneal, is not so grave as when the blood escapes externally, because the fluid portion of the blood is taken up by the lymphatics and returned to the general circulation. Gauze packing, he finds, is an unnecessary feature of the surgery of to-day. [P. B. B.]

2.—Griffin reports a number of case-histories to illustrate his paper on the **diagnosis and treatment of hereditary syphilis.** A good many cases called tuberculous and scrofulous conditions are often instances of heredity or tertiary syphilis. Too much diagnostic importance is laid upon the presence of Hutchinson's teeth. These teeth, he says, are a rarity, not the rule, being present in only 10 or 15% of all cases. Many cases of so-called hereditary syphilis he found to be tertiary manifestations and instances in which the primary stage had been overlooked and the disease allowed to progress unchecked. Mistaken diagnoses are due to 2 factors: (1) Hutchinson's teeth are looked for in every patient, and, if not found, hereditary syphilis is excluded; (2) the subject is not given the importance it deserves in medical teaching. [P. B. B.]

3.—Cobb **presents some observations on tuberculosis.** In speaking of the mortality he believes one million deaths occur annually from this, a partially preventable, disease.

Of the methods of infection he mentions inhalation, inoculation and sometimes ingestion. The first method, of course, is the most important. Tuberculosis, like all infections, depends much upon the numerical invasion. The bacilli, he believes, develop in the lymphatics or underlying areolar tissue, and not in the mucus within the air cells. Investigations would indicate that the bronchial glands constantly combat the invasion of the micro-organism, for tubercle bacilli are found in these glands in 42% of healthy people. The invasion by inoculation is slight and confined to lesions of the skin, with but mild systemic disturbances. Introduction by ingesta, he thinks, seldom occurs, from the fact that fatal lung cases seldom show evidences of intestinal or mesenteric infection. [P. B. B.]

4.—Horsley reports a case of **inguinal hernia with an incomplete sac** occurring in a man, 38 years of age. The explanation of the condition must be that the descending colon buried under the peritoneum at that portion of the gut is devoid of serous covering. Thus forming a pocket, it continued to work its way to the internal abdominal ring, dragging the peritoneum with it. Bassini's operation was performed, and the patient made a satisfactory recovery. [P. B. B.]

5.—From the many serious fatalities that occur, both on land and sea, from defective color-sense, vision and hearing of operating employés, the importance of testing the hearing, sight and color-sense of these persons is of the utmost importance. Barnes, therefore, presents a lengthy paper on the subject of **transportation and the ophthalmic referee.** Many railway and marine companies of the United States have adopted fairly exact methods of examination of their employés. He thinks that the testing of vision, color-sense and hearing should be required by the state and not left to private decision. He finds that two-thirds of the transportation companies rely upon the ophthalmic referee, while the remaining third does not protect itself and the public in the manner indicated. He gives a complete outline of the method of examination which should be conducted. [P. B. B.]

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

March 12, 1903. (Vol. CXLVIII, No. 11..)

1. On the Educational Value of the Medical Society. WILLIAM OSLER.
2. Limitations of the Uhlenhuth Test for the Differentiation of the Human Blood. A. E. AUSTIN.
3. Report of a Series of Cases of Movable Kidney. H. D. CHADWICK.
4. The Composition and Alcoholic Content of Certain Proprietary Foods for the Sick. CHARLES HARRINGTON.

2.—Austin has ascertained by experiment that **Uhlenhuth's test** is not as fully applicable as has been represented, and that only under the most limited conditions could it be employed; that other fluids of the human body, like effusions and exudates, were of little value, and that fluid from placentas could only be used when it was strictly fresh and that much longer time and more repeated injections were necessary than had been supposed from the first oversanguine reports of the earlier investigators. When all the restrictions that surround the test have been strictly observed, can we say with any degree of surety, this is human blood? [T. M. T.]

4.—Harrington states that the following **foods** were found to contain appreciable amounts of **alcohol**: (1) Liquid peptonoids contain 23.03% by volume of alcohol. 14.91% of total solids, and 0.17% of mineral matter; (2) Panopeptone contains 17.99% of solid matter (including 0.97% of mineral matter) and 18.95% by volume of alcohol; (3) hemapeptone contains 10.60% by volume of alcohol, 19.54% total solids and 0.37% of mineral matter; (4) nutritive liquid peptone contains 14.81% of alcohol by volume, 15.20% of total solids and 0.69% of mineral matter; (5) hemaboloids contain 15.81% by volume of alcohol, 6.36% of solids and 0.62% of mineral matters; (6) tonic beef contains 15.58% by volume of alcohol, 18.16% total solids and 1.04% mineral matter; (7) Mulford's predigested beef contains 18.72% by volume of alcohol, 10.39% of total solids and 0.20% mineral matter. [T. M. T.]

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

March 14, 1903.

1. Bacteriological Examination of the Blood During Life in Scarlet Fever, With Special Reference to Streptococcemia. LUDVIG HEKTOEN.
2. The Glycosuric Symptoms of Disease and its Mental Treatment. HEINRICH STERN.
3. Some Rare Forms of Chronic Peritonitis Associated With Productive Fibrosis and Hyaline Degeneration. ALBERT G. NICHOLLS.
4. The Growth of Tubercle Bacilli and Organisms Resembling it on Fruit and Vegetables. M. J. ROSENAU.
5. The Diagnosis of Brain Abscesses. HERMAN H. HOPPE.
6. The Diseased Middle Turbinate. CHARLES H. BAKER.
7. Typhoid Fever with Perforation of the Bowel, and Recovery. T. K. HOLMES.
8. The Typhoid Epidemic at Ithaca. (By our Special Commissioner.)

1.—Hektoen has made **bacteriological examination of the blood during life in cases of scarlet fever,** laying especial stress upon streptococcemia. A streptococcemia was found in a number of the cases studied. In 2 cases the bacillus typhosus was isolated from the blood and in two the staphylococcus aureus. He concludes that, so far as scarlatinal streptococcemia is concerned, his work shows that streptococci occasionally may be found in the blood of patients suffering from scarlet fever running a mild, short and uncomplicated course; that the streptococci occur with relatively greater frequency in the most severe and protracted cases in which there may also develop local complications such as joint inflammation; and, finally, that streptococcemia may not be demonstrable in fatal cases of scarlet fever. From his research he contends that no direct support can be given to the theory that scarlet fever is a streptococcus dsiease. [F. J. K.]

2.—See **Philadelphia Medical Journal**, June 21, 1902, page 1106.

3.—Nicholls contributes an article **on rare forms of chronic peritonitis**, associated with productive fibrosis and hyaline degeneration. He directs particular attention to a form of peritonitis which has recently come under his observation, of which there are several varieties. Anatomically there is more or less serofibrinous or fibrinopurulent exudation, while adhesions, plastic and fibrous, are also encountered. The characteristic features of this affection are a peculiar overgrowth of fibrous tissue on the peritoneal membrane, induration and deformity of the abdominal organs; and sheets of hyaline material due to transformation of the fibrous tissue exist in various parts. The process may be a diffuse one; usually most marked in the upper portion of the abdominal cavity; extension may even take place to the pleural and pericardial cavities. Clinically these cases usually present slight abdominal pain, ascites and alteration in the size of the liver. He points out that chronic peritonitis may be classified into 3 forms: (1) Chronic exudative peritonitis (showing a considerable outpouring of serous, serofibrinous or fibrinopurulent fluid with a few fibrous bands and loose plastic adhesions). (2) Chronic exudative and adhesive peritonitis (showing numerous and firm adhesions presenting less exudation). (3) Chronic hyperplastic peritonitis (presenting serofibrinous or fibrinopurulent exudation with more or less generalized adhesions, as a rule, together with the formation of firm nodules or sheets of hyaline fibrous tissue.) He then discusses at some length the chronic hyperplastic form and records histories of 4 cases. He classifies the cases of chronic hyperplastic peritonitis into 2 groups: (a) Sporadic forms of which there are two subgroups, (1) simple and (2) tuberculous peritonitis. (b) Diffuse forms of which there are three subgroups (1) simple, (2) tuberculous and (3) carcinomatous. [F. J. K.]

4.—Rosenau discusses **the growth of the tubercle bacillus and other organisms resembling it on fruits and vegetables.** He calls attention to the fact that a scientific diagnosis of tuberculosis by simply staining the bacilli cannot be made; however, for clinical purposes this tinctorial reaction still remains useful, but, in order to identify this organism, its pathological action on animals must be determined, and this is often a matter of weeks and months. He, therefore, concludes that the discovery of a medium on which tubercle bacilli will grow rapidly, and which, therefore, renders the process of cultivation a practical one for clinical work, is a problem which confronts us. He has found that a good growth of the human variety has been obtained on the following: Potato, cabbage, cauliflower, turnip, carrot, squash, celery, egg-plant, beet and radish, and a small or doubtful growth on apple, onion, cocoanut and pineapple. Different varieties of the "acidfast" bacilli also grow rapidly on fruits and vegetables, namely the avian tubercle bacillus, the bovine tubercle bacillus, Karlinski's bacillus of nasal secretion, Rabinovitch's bacillus of butter and margarine, and Möller's grass bacillus. He contends that these bacilli form a tubercle group showing in their extremes marked differences and several remarkable points of resemblance. This article is simply a preliminary note of the work now being done on this group of micro-organisms in the hygienic laboratory of the Marine-Hospital service. The author promises a further report. [F. J. K.]

5.—Hoppe discusses **the diagnosis of brain abscesses.** He writes that the difficulty in making a diagnosis in brain abscesses is (1) to determine whether or not an abscess is present and (2) in localizing it. He cites histories of a number of patients who were either operated on or who were suspected of having brain abscesses, and in whom the subsequent development failed to confirm the suspicion. In the cases of brain tumor the question of surgical interference arises only when the growth is located in the cortex, but in every case of abscess of the brain we may hope that surgical interference can at least remove the trouble and that, without surgical interference, death follows. He then discusses traumatic abscess, abscess following middle ear disease, tubercular abscess, metastatic abcess and the so-called idiopathic abscess. He divides the symptoms of brain abscess into 3 groups: (1) Symptoms due to deep-seated suppuration. (2) Symptoms due to increased intracranial pressure. (3) Focal symptoms. At some length he reviews the symptom complex. He emphasizes the fact that the surgeon sees only those cases in which the diagnosis is easy and the results are good, while the neurologist sees all, the doubtful and the fatal cases, and is not quite so sanguine as to results. [F. J. K.]

6.—Baker discusses **the diseased middle turbinate.** He discusses at some length nasal polypus and its treatment, pointing out that suppuration frequently accompanies this condition. He describes the operation for the removal of a polypus. He advocates the removal of the middle turbinate in all cases of recurrent polypus of the middle turbinate itself; in all cases of recurrent polypus of the hiatus semilunaris; in all cases in which the removal of polypus opens and reveals collections of pus issuing from the sinuses, and in cases in which by pressure the enlarged turbinate causes reflex nervous ailments, such as persisting headache, asthma, chorea, etc. He also calls attention to a modified cutting forceps with angular blades which he has found useful. He thinks that the removal of the middle turbinate does not unduly expose the sinus openings to external irritants in the inspired air. [F. J. K.]

7.—Holmes reports **a case of typhoid fever with perforation of the bowel followed by abscess; operation and recovery.** The symptoms of perforation in this case were those of agonizing pain in the abdomen accompanied with severe shock. Ten days after the perforation the bowels moved spontaneously. Many months later the patient was operated on, and an abscess containing 700 cc. of fetid, yellowish-white pus was evacuated. In liberating the intestines from old adhesions, a perforation fully 2 cm. in diameter was found which was closed with a silk suture reinforced by a second one. The patient ultimately recovered. [F. J. K.]

8.—Abstract will appear when article is concluded.

AMERICAN MEDCINE.

March 14, 1903.

1. Obstinate Subacute Rheumatism. JAMES J. WALSH.
2. On Transplantation of Tumors. LEO LOEB.
3. Fibroma of the Ovary With Ascites. THEODORE A. ERCK.
4. Analyses of the Fluids From Two Cases of Hydrops Cystidis Felleæ. TOLARD SOLLMANN.
5. Emphysema Due to Injury of the Upper Air Tracts by Vomiting and Protracted Hysteric Eructations Following Ether Anesthesia for Appendicectomy. FRANK BLATCHFORD.
6. Briefs on Physical Training. G. FRANK LYDSTON.

1.—Walsh report a case diagnosed as rheumatism in which the salicylates failed to give relief. The patient's history showed that the condition from which he suffered was gout. In a certain number of cases the obstinancy of the rheumatic symptoms in yielding to the salicylates is due to a nervous element in the patient. Patients who suffer from anemia, from whatever cause, not infrequently have a continuance of their rheumatic symptoms on account of the routine administration of the salicylates. Most of the cases of **obstinate subacute rheumatism are not simple rheumatic arthritis,** but consist in the joint affection developing in the presence of a diathesis, such as gout or some blood dyscrasia, or some toxemia, such as alcohol or lead, or a neurosis or a hypersensitive condition of the vasomotor system, all of which factors tend to hinder the normal reaction and prevent the prompt relief of symptoms that usually occurs. [T. L. C.]

2.—Loeb presents the results of a series of experiments dealing with the **transplantation of tumors.** His preliminary conclusions are: (*a*) A micro-organism living outside the tumor cells and passing through the pores of the Berkefeld filter is not, in all probability, the cause of the formation of sarcoma in rats. (*b*) A micro-organism living outside of tumor cells and resembling organisms like the tubercle bacillus, or belonging to the class of blastomycetes, is probably not the cause of the formation of sarcoma. Such a micro-organism would probably not be made absolutely ineffective by heating to 45° C. for half an hour. A microscopical examination of tumors not secondarily infected does not show any bacteria or blastomycetes. No giant cells characteristic of granulomata caused by the tubercle bacillus or by the blastomycetes can be found in these sarcomata. (*c*) The following possibilities remain: The formation of sarcoma is caused by an organism living outside the tumor cells, possessing, however, a similar sensitiveness to heat as do the tumor cells themselves. Such organisms would have to be, as we may conclude from the foregoing experiments, larger than red bloodcorpuscles, as they seem to be unable to pass, at least under ordinary circumstances, through filter paper. But since a careful microscopical examination of the tumors showed no structures other than tumor cells and their products of degeneration, and since also injection of the hyaline bodies referred to had negative results, the existence of such organisms would seem to be improbable. Still, further experiments ought to be made before these can with certainty be excluded. The remaining possibilities are that a very small micro-organism not capable of living outside of tumor cells is present; and, lastly, that a micro-organism is not the cause of tumor formation. It would, therefore, be impossible to produce tumors by the injection of micro-organisms alone, if a micro-organism incapable of living outside of tumor cells is present or if no micro-organism is the cause of tumor formation. Further, we may conclude from these experiments that no organism sensitive to cold can be the cause of tumor formation. [T. L. C.]

4.—Sollmann reports an analyses of the fluid from 2 cass of hydrops cystidis feleæ. His conclusions are: The contents of the human gall-bladder in cases of obstruction of the cystic duct, whether this is congenital or through a gall-stone, consists of a dilute solution of true mucin. of the molecular concentrations of the serum, devoid of bile acids or pigments, or ferments and of sugar. Traces of coagulable proteid may be present. No nucleo-albumin was found. The gall-stones producing the obstruction consisted essentially of cholesterin. [T. L. C.]

5.—Blatchford reports a case of **emphysema due to injury of the upper air tract consequent upon ether anesthesia.** The only explanation that can be offered for this emphysema is an injury to the larynx or upper part of the trachea, permitting the air from the normal air-passages to escape into the lymphchannels, as it does in cases of fracture of the trachea, fracture of the petrosal and ethmoid and frontal bones, and opening the sinuses of the nose; also in cases of fracture of the ribs, perforating the lung. Thus injury might have been sustained during the operation, or it might have been produced by the violent and protracted eructations following his first attack of vomiting. The eructations appear to Blatchford to have been sufficient to produce a rupture of the trachea or the laryngeal tissues, the extent of the traumatism was shown by the repeated expectoration of large quantities of blood. [T. L. C.]

DEUTSCHE MEDICINISCHE WOCHENSCHRIFT.

January 29, 1903.

1. A Case of True Hermaphroditism. GARRE.
2. The Mechanism of Strangulation of the Intestine. WILMS.
3. Further Contributions Concerning the Mitigation of Epithelioma Contagiosum in Fowls. E. MARX and A. STICKER.
4. Concerning a Serum Specific for Human Placenta. (Second Communication). W. LIEPMANN
5. Diabetes Mellitus in Gynecological Operations. (Continuation). H. FUETH.
6. The Symptomatology of Acute Inflammatory Processes of the Auditory Apparatus. A. EITELBERG.
7. Dilatation of the Tear Duct in the Newborn. E. A. HEINEMANN.

1.—The case observed was in a person of 20. It was impossible to determine the sex, and, since this was a matter of importance, operation was undertaken, and an object that seemed like the ovary and tube was extirpated, as were also portions of what was apparently a testicle. Microscopical examination showed that the tissues removed were actually portions of the ovary and testicle. The latter showed no evidence of spermatogenesis. This is said to be **the first case in which it has been positively determined during life that true hermaphroditism was present.** [D. L. E.]

2.—It is the general statement that, in strangulation of the intestine resulting from a fibrous band or from passage through a narrow opening, a small portion of the bowel first lodges in the opening, and then the remainder of the bowel that becomes strangulated slips in from above. Wilms insists, however, that this is not the case; and that, as a rule, the strangulation includes the lower end of the ileum, almost up to the point of its junction with the cecum. **His explanation of the fact that so large a part of the bowel passes into the hernial sac** is as follows: A small part of the intestine passes the constricted point; then peristalsis becomes excited and the fluid contents of the bowel are driven on to the lower portion of the incarcerated bowel; this portion becomes dilated and the fluid collects in it; thus dragging into the bowel that lies below this point. This process is repeated again and again, and the incarcerated bowel continually increases in extent by involving the portion of the intestine that lies below the originally incarcerated area. **The intestine does not simply slip in, it is dragged in by peristaltic movements and by the weight of the contents of the already constricted portion.** The author contributes some observations at operation and some experiments to demonstrate the correctness of his view. [D. L. E.]

3.—The authors have demonstrated that **epithelioma contagiosum may be transferred from pigeons to chickens.** At first they were unable to infect pigeons from these artificially infected chickens; but they now report a further series of observations in which they made attempts to infect 18 pigeons from chickens that had previously been infected from pigeons. Eleven of the 18 pigeons showed epithelioma contagiosum, but in a modified and very mild form. This modification of the virus is similar to that which occurs in variola when transferred to cattle. The authors consider that the **virus of epithelioma contagiosum is evidently readily mitigated.** [D. L. E.]

4.—Liepmann gives a detailed description of his method of producing a serum specific for human placenta. He says that **human placenta does not have a toxic effect upon the animal organism**, even in very large doses. A very slight degree of albuminuria was observed in isolated instances; but this was probably due merely to the injection of foreign albumin, and not to action on the kidneys. The author believes that he has now definitely shown that it is **possible, by means of this specific serum, to demonstrate the presence of placental tissues in the circulation**, for he has found that it reacts at once to the serum of a fetus and to the serum of a woman to which placental tissue has been added, while it will not react to normal serum or to the serum of nonpregnant women. He believes that this serum will help to throw light upon the question of the placental emboli, etc. [D. L. E.]

5.—Füth, having described 3 cases in which coma developed in diabetics after gynecological operations, discusses the **causes of the rapid development of coma.** It is possible that in a number of the cases in which this has occurred the coma was **due to the use of a strict antidiabetic diet for some time before the operation;** and it is also probable that the fasting that usually precedes important operative measures also contributed to the development of fatal acid intoxication. In some instances, however, dietetic measures could have had nothing to do with it. In such circumstances the marked nervous excitement that attends the prospect of an operation was probably of importance in producing the coma, but it must also be recognized that **narcosis itself has a specific tendency to produce acid intoxication** and it may readily increase an intoxication of this kind to such a degree as to produce violent toxic symptoms. One must realize, therefore, that **when diabetics are operated upon they undergo much greater peril than do most other patients.** Diabetics have, to be sure, been frequently operated upon, and the operations have at times been grave; but this does not controvert the previous statement. (To be concluded). [D. L. E.]

7.—Heinemann insists that one may, by proper examination, **often discover the presence of suppuration in the tear duct of the newborn.** This is due to the fact that the nasal end of the duct is often closed or but imperfectly patulous. Therefore, secretions collect in the upper part of the duct, which may readily become infected. Pressure upon the duct in these cases causes the extrusion of particles of detritus that have a mucopurulent appearance. **The condition is dangerous** because, if the slightest injury of the cornea occurs in these children, there is likely to be a grave infection that will endanger the vision. **The treatment should at first consist in massage of the duct,** carried out several times a day. It should at first be performed by the medical attendant, but the nurse or the mother may soon be taught to do it. If this is not successful, the duct should be opened with a probe. [D. L. E.]

MUENCHENER MEDICINISCHE WOCHENSCHRIFT.

January 27, 1903. (No. 4.)

1. Remarks Upon the Kidneys in Scarlet Fever and Diphtheria. O. HEUBER.
2. Further Communication Upon the Serotherapeutic Treatment of Basedow's Disease. O. LANZ.
3. Antithyroidin. P. MOEBIUS.
4. Atypical Myoma Operations. H. FREUND.
5. The Action of Ions and Their Therapeutic Application. V. PAULI.
6. Syphilitic Fibrous Strictures of the Stomach and Intestines. H. GROSS.

7. The Sounding of the Esophagus. H. STARCK.
8. A Case of Uremic Amaurosis. W. HAUENSCHILD.
9. A Contribution to the Knowledge of Monstrosities. K. KOMPE.
10. Another Case of Hemoglobinuria of Pregnancy. MEINHOLD.
11. Hofrat Richard, Freiherr v. Krafft-Ebing. FUCHS.

1. Heuber has examined the **kidneys obtained freshly from patients dying of diphtheria or scarlet fever.** He removed small pieces, placed them in 10% formalin, hardened for one day, and then cut in a freezing microtome. In 2 cases of scarlet fever he found that there was an exquisite hemorrhagic disease with predominant involvement of the glomeruli and secondary involvement of the renal epithelium, which had apparently degenerated and then been mixed with the blood that had been extruded. In the straight tubules casts were sometimes found. In the 2 cases of diphtheria the picture was different. The homorrhages were very much less and not found in the glomeruli, but only in the straight tubules. There was, however, primary degeneration of the epithelium which appeared to involve chiefly the loop of Henle. The epithelium was swollen, cloudy and contained numerous fatty granules. All 4 cases seemed to be uncomplicated examples of the disease. [J. S.]

2. (See Editorial).

3. (See Editorial).

4. Freund reports some very interesting cases. A woman of 24 years developed a **myoma** of the wall of the uterus, but, as she objected very much to the removal of the adnexa or to a laparotomy wound, the tumor was removed through a vaginal incision, and the ovaries sewed to the elongated portion of the cervix, which was allowed to remain. The patient has menstruated regularly since the operation. Another case was that of a woman of 49 years, who had suffered from leukorrhea for many years, which had prevented her from working. Examination showed the existence of a carcinoma of the cervix which had infiltrated the left lateral ligament and involved the bladder, and, therefore, was no longer operable. There were very numerous interstitial myomata in the body of the uterus. In order to relieve the leukorrhea, the body of the uterus and the adnexa were amputated. The patient made an excellent recovery. The operation, of course, can be regarded merely as palliative. The third patient presented still further complications. She was a woman, 40 years of age, a nullipara. She had profuse menstruation, intense pain in the sacral and abdominal regions, and there was obstinate constipation. Laparotomy had been performed without relief. Four months later a myomatous uterus could be felt, and at the same time tumors could be determined in the adnexa. A second laparotomy was, therefore, performed. The operation was exceedingly difficult and was in part performed by touch. It was found that the adnexa tumors were huge abscess cavities filled with pus. These were removed with the body of the uterus and the myomata that were found, and the patient made a complete recovery. The uterus was amputated by a supravaginal transverse incision. This has the great advantage of enabling the operator to study the conditions in the abdominal cavity. [J. S.]

5. Pauli believes that the action of salts in and outside the organism must be considered from the standpoint of the proposition: How far the ions loaded with electricity, or the molecules without electricity, are involved. He believes that we may learn something about the therapeutic action of salts by the application of the principle of the analogy of the colloid changes that occur with the processes in living substance. He calls attention to the importance of the knowledge of the effect on albumin of solutions of the various salts, and states that in salts in which the kat-ions have the predominant action precipitation occurs, and in those in which the an-ions have the predominant action no precipitation occurs. He gives a table in which these facts are illustrated, and concludes that the action of salts upon albuminous bodies depends upon the algebraic sum of the individual ion activity, and that the an-ions and kat-ions antagonize each other. It is not to be supposed, however, that the an-ions have any pharmacodynamic qualities. Some of them, particularly those associated with the nitrates, bromides and iodides, appear to have active resorbing qualities. There appears to be little knowledge of the therapeutic action of rhodan, although it is well known that it has a great influence upon metabolism. In many respects it has an action not dissimilar to that of iodine. Pauli has, therefore, employed it in a series of cases with the common symptom of increased vascular pressure. The results were invariably good. The patient became quieter; the attacks of pain, if any occurred, became less; vertigo, roaring in the head and other unpleasant symptoms disappeared; and the bloodpressure steadily diminshed. When he ceased giving the drug the symptoms all reappeared. In 4 cases of syphilitic cephalalgia the effect of sodium sulphocyanite was very prompt. The dose was based upon the assumption that one gm. of the sodium sulphocyanate equalled 2.15 gm. of sodium bromide and 2.82 gm. of sodium iodide. [J. S.]

6. Gross reports a case already described by Riegel. The patient was a man of 51 years, who had phlegmonous infiltration of the upper portion of the abdominal wall, caused by pericholecystitis. He also had pulmonary tuberculosis and symptoms of stenosis of the pylorus. An operation was performed, and shortly afterward he had intense distension of the transverse colon and died. There were numerous **syphilitic strictures of the intestinal tract.** He also mentions the case of a woman, 52 years of age, who had had symptoms of gastric ulcer, later of pyloric stenosis and a tumor attached to the intestine which evidently produced the stricture. An operation was performed, and an extensive fibrosclerotic adhesive peritonitis was discovered. This inflammation had caused contraction of the pylorus and of the ascending portion of the colon. Two artificial ani were made, the pyloric stricture was removed, and a gastro-enterostomy performed. The patient at first improved, but later she died, and at the autopsy very extensive adhesions were found. The microscopical examination showed that the process was syphilitic in character. Gross discusses very carefully the literature of this condition. [J. S.]

7. Starck discusses the knowledge to be obtained by **sounding the esophagus.** With a straight sound it is possible to recognize stenosis, but sometimes conditions which are not really strictures are falsely recognized as such. Moreover, there may be an insular malignant stenosis which cannot be detected. Moreover, when the stenosis is irregular, it is difficult to determine its size. Starck, therefore, recommends, in addition to the usual instrument, a sound with a bent end. This was first used for the detection of a diverticulum and is, therefore, spoken of as the diverticulum sound. He mentions several cases in which this sound was of the greatest value in making the diagnosis. He describes an instrument which he has finally devised for this purpose, which consists of a long flexible shaft composed of an English hollow bougie enclosing a steel spring. In the lower end there is a small screw into which a variety of different-shaped tips can be fastened. The upper end is a flattened handle. [J. S.]

8. A young soldier became depressed, vomited, had swelling of the scrotum and of the eyelids and albumin in the urine. Finally, he was transported to the hospital. Here he had a **uremic attack** from which he recovered, but later on awakening from sleep he found himself **blind.** Gradually his eyesight returned. The patient, however, developed edema of the lungs and died. The blindness in this patient was complete, although the eyegrounds were normal. [J. S.]

9.—Kompe reports 3 interesting **cases of deformity occurring in one family.** The father was vigorous and intelligent; the mother was small, the face rather infantile and her upper lip particularly short. The first 2 children were normal. The third had a simple harelip. The fourth child had absence of the central portion of the lip and of the intermaxillary bone, leaving a large opening in the median line. This child died shortly after birth. The fifth child was born 6 months after the father had been punished for some infraction of the criminal law, and the mother had consequently been exposed to nervous excitement. This child, a girl, had double harelip, double cleft palate, and prominent intermaxillary bone. In addition, there was a symmetrical defect in both hands and feet; that is, on each hand the third finger and the metacarpal bone belonging to it, and on each foot the third toe and the metatarsal bone belonging to it, were absent. The child lived for over a year. The cause of these 3 deformed children was certainly not heredity. The mother had been married young, her life had been very severe, and there had often been privations. The deformity was progressively more pronounced in each of the 3 children. Kompe also mentions another peculiar deformity that he observed in a person belonging to another family. The terminal phalanx of the right thumb was double and there were 2 complete finger-nails. [J. S.]

10.—Meinhold reports the case of a woman, 24 years of age, who had lived in a country in which malaria was common. She had had chlorosis, and during her first pregnancy she developed vomiting, pain in the stomach, palpitation, insomnia and attacks of fainting. A diagnosis of possible gastric ulcer was made, and the patient was given bismuth. Later she grew worse, and the urine was found to contain hemoglobin. After delivery the patient rapidly recovered. Aside from a slight icterus neonatorum the child was healthy. The clinical symptoms of this condition are a slightly yellowish color of the skin, pallor, insomnia, itching of the skin, weakness, **hemoglobinuria** and occasionally slight enlargement of the spleen and liver. The urine always contains albumin in addition to the hemoglobin. The cause is unknown. [J. S.]

11.—**Hofrat Richard, Freiherr v. Krafft-Ebing**, was born on August 14, 1840. He commenced his medical studies in Heidelberg, continued them in Zurich, and in 1863 obtained his degree. He was assistant in an insane asylum for 4 years and then commenced to practise as a specialist in nervous diseases in Baden Baden. In 1872 he was made professor in Strassburg. His facilities at this time consisted of one room in which 2 male patients could be placed, one room in which 2 female patients could be placed, and 2 small cells. These inadequate accommodations led him to accept a professorship in Graz. In 1886 he became professor of psychiatry and neurology; in 1889 he was called to Vienna and, in 1892, after the death of Meynert, he became full professor. In 1902 he resigned in Vienna, and on December 22, 1902, he died. His literary activity was enormous. He published a number of books and a great number of articles. [J. S.]

BERLINER KLINISCHE WOCHENSCHRIFT.

February 9, 1903. (40 Jahrgang, No. 6.)

1. Muscular Rigidity of the Spine. H. SENATOR.
2. Accommodation Paralyses. JOSEF HELBRON.
3. Contributions to Conservative Surgery. M. KATZENSTEIN.
4. The Theory and Practice of Heat Locally Applied. HUGO DAVIDSOHN.

1.—Senator reports the case-history of a man of 36, ill 5 years with what has been described as ankylosing or deforming spondylitis, **spondylitis rhizomelica**, with photographs illustrating his condition. Over 2 years before an indurated bit of muscle had been excised from his back, showing that the spinal musculature was first diseased, from the presence of chronic fibrous myositis, a possible cause of the spondylitis; or the condition might have been rheumatic, gonorrheal or syphilitic. Senator calls the disease **rigiditas dorsalis myopathica**, considering the muscle disease primary. All sorts of treatment were followed by improvement temporarily only. [M. O.]

2.—**Accommodation paralyses** do not interfere so much with the vision of people with myopic eyes as of those with hypermetropic eyes. Out of 30,000 patients paralyses were noted in but 103 cases, bilateral in 75 patients. In the great majority of cases the ciliary muscle alone was paralyzed. The cause of the condition was found in all but 10 cases. These causes Helbron divides into 3 groups, those due to some nervous disease, affecting the brain, cord, neuroses or even some congenital condition; those due to the infectious diseases, including syphilis, tuberculosis, etc.; and those due to intoxication from drugs, food, ptomaines, etc. Most interesting details are given. [M. O.]

3.—Katzenstein reports 11 cases of fractures, luxations and intra-articular injuries, all treated by **conservative surgery** with good results. These case-histories show that infection can be prevented by **operating without touching the wound with the fingers or hands**. Thus he was able to operate under absolute asepsis. [M. O.]

4.—Davidsohn describes, with diagrams, **the local application of heat** through coiled tin-tubes arranged in a tortuous position upon a rubber sheet, laid either on the mattress or cushion, hot water being allowed to run through the tubes, thus keeping the patient warm. For local dry heat sand can be used; for moist heat applied to a locality of small size, Davidsohn, as the result of his experiments, considers fango best. [M. O.]

WIENER KLINISCHE WOCHENSCHRIFT.

February 5, 1903. (XVI. Jahrgang, No. 6.)

1. Injuries From Lightning. S. JELLINEK.
2. The Early Diagnosis of Tumors of the Hypophysis. ALFRED FUCHS.
3. Agglutinins and Certain Precipitins of the Blood. ARTHUR KLEIN.

1.—Will be abstracted when concluded.

2.—Fuchs reports the case-history of a man of 30, who complained of visual disturbances for several months. His father died of tuberculosis, but the disease had not affected any of his children. Up to 4 years before he had always been thin and weak, having been excused from service in the army on account of general weakness. During the past 4 years he has grown stout and noticed frequent occipital headaches, sometimes accompanied with vomiting. Otherwise he was quite normal. Examination of his eyes showed a **probably progressive lesion near the optic chiasm**. The bilateral disturbances of vision with bitemporal hemianopsia speak for **tumor of the hypophysis**. There was neither acromegaly nor psychical symptoms. The presence of a tumor and the results of its growth are well shown in a radiogram, which, when compared with that of a normal human being or skeleton, shows the bony changes in he sella turcica, due to the pressure of the tumor. Potassium iodide and mercury are being given, though the condition is not considered specific. Opotherapy may be of use in such cases, or even operation. [M. O.]

3.—After reporting in detail a long series of experiments, Klein concludes that precipitates may be obtained in aqueous or normal salt solution extracts of erythrocytes, to which suitable serums are added, if these extracts are free from the stromata of the erythrocytes. These **erythroprecipitins** are not identical with the serum precipitins. The stromata of the erythrocytes are also agglutinated by suitable serums. In the extraction of erythrocytes with distilled water, the agglutinable substances are separated from those remaining in the stromata, the latter going into the solution.Neither stromata nor extracts in ether are agglutinated by adding serums. Precipitates may occur in various erythrocyte extracts with a certain serum, parallel to the agglutinating power of the erythrocyte extracts. **The presence of precipitating substances in erythrocytes** is proved by the observation that precipitates occur in mixtures of erythrocyte extracts. [M. O.]

DEUTSCHES ARCHIV FUER KLINISCHE MEDIZIN.

Band 73.

(Continued From Page 456).

8. Spindle-Shaped Dilatation of the Esophagus in Its Lower Section. O. ZUSCH.
9. Peripheral Neuritis as the Commonest Cause of Tabetic Paralysis of the Larynx. A. CAHN.
10. History of a Patient from Whom the Whole Temporal Lobe was Removed by Operation. A Contribution to the Knowledge of the Association of the Temporal Lobe to the Rest of the Brain. L. EDINGER.
11. From the Last Forty Years—Clinical Gossip. W. ERB.
12. Simultaneous Paralysis of the Cervical Sympathetic with Unilateral Apoplectiform Bulbar Paralysis. J. HOFFMANN.
13. The Occurrence of Paralysis to Light of the Pupil in Croupous Pneumonia. F. SCHULTZE.
14. The Relations Between the Internal and External Configuration of the Skull. G. SCHWALBE.

8.—Zusch discusses **spindle-shaped dilatation of the esophagus in its lower portion.** The commonest cause is, of course, spasm of the cardia, for which the following diagnostic points exist: A nervous or hysterical disposition; varying ability to swallow; occasional sudden transient dysphagia; variation in the results of sounding the esophagus; loss of power of eructation or vomiting, which is not present in paralysis of the esophagus; the return of water poured into the esophagus from a second sound after the first sound has been passed into the stomach, which does not occur in carcinoma of the cardia; and the fact that, if through a fenestrated sound water is poured into the esophagus, it ultimately reaches the stomach, whereas in cases of diverticulum part is retained in the esophagus. Other causes are esophagitis and atony of the esophagus. He discusses the history of this condition, tabulating 8 cases collected by Fleiner and adding 6 others that he has obtained from the literature. He then reports 7 additional cases in great detail, for which he gives the following summary of the diagnostic symptoms: There is a history of obstruction in swallowing from time to time; return of the food to the upper portion of the esophagus, especially at night, giving rise to coughing; evacuation of the esophageal contents, a sort of pseudo-vomiting, although true vomiting occurs rarely or not at all in these cases; pain, usually occurring at the time of spasm and located just back of the sternum; it is sometimes a tearing, sometimes a pressing pain. In the case of a boy, 3½ years old, it occasioned convulsions. The careful analysis of the contents of the esophagus and stomach contents showed that the former rarely contained free HCl. and the total acidity was diminished, whereas the latter contained free acid and the total acidity was fairly high. Lactic acid was usually present in the esophageal contents, but absent in the stomach contents. When the tube is introduced into the esophagus and the water poured into the funnel from a considerable height, the water rushing into the esophagus suddenly stops, proving that there is closure above as well as below the dilated portion. By this procedure the site of the ectatic portion can be determined. The introduction of the sound into the stomach was usually difficult and sometimes only accomplished when the patient assumed curious positions, indicating abnormalities in the structure of the esophagus and stomach. Occasionally it is useful to close the external end of the sound. The second swallowing sound is usually absent or very much delayed. The employment of bismuth followed by a Röntgen-ray examination was unsatisfactory. Percussion failed to show any definite area of dulness. In all the patients there was atony of the stomach, and in practically all the symptoms dated from childhood. In one patient, after eating, there was profuse secretion from the nose; in another bradycardia. In another case the patient was able to swallow by means of certain respiratory movements, and in another there was a peculiar form of eructation and vomiting. Zusch believes that the diagnosis is to be based upon the characteristic history, the recognition of a cavity above the stomach, the contents of which differ from the stomach contents physically and chemically; the recognition of the bipolar closure of this cavity and the ability to exclude organic stenosis of the cardia. He reports 2 additional cases observed in Fleiner's service, discusses rumination, which was present in the second of these, and reports 2 other cases in which this symptom was present. A differential diagnosis of this condition involves recognition of the absence of the evidences of a cicatricial stenosis of the esophagus; the exclusion of carcinoma by the long duration of the symptoms; the fact that benign tumors early give rise to dysphagia; that there is no evidence of the growth of fungi, and that the obstruction is so deep as practically to exclude external tumors pressing upon the tube. Sclerosis of the aorta sometimes gives rise to these symptoms and must be very carefully excluded by a general examination. Occasionally ascites, tympanites and tumors of the abdomen, causing slight nicking of the esophagus at the point at which it penetrates the diaphragm, are present. These conditions are, of course, readily recognized, and in case of spondylitis the same things may occur. The most difficult differential diagnosis is that from diverticulum of the esophagus, concerning which Zusch gives a careful discussion. The prognosis is relatively good, although there is a marked disposition to deterioration. The treatment consists in careful sounding with a thick soft sound, avoiding everything that would irritate the stomach; lavage of the esophagus; and, in the early stages of the treatment, feeding exclusively through the stomach-tube. It is also important to wash out the esophagus just before bedtime so that there may be no stagnation during the night. If a catarrhal process is present, the patient should swallow small quantities of alkaline water through the day. If any gastro-intestinal disorder is present, it should be carefully treated. The treatment is slow, requiring half a year or more. No operative method has as yet proven of benefit. [J. S.]

9.—Cahn reports 2 cases of **tabes dorsalis with paralysis of the larynx,** one of which had had laryngeal crises. In both the cases there was reason to believe that a peripheral neuritis of the laryngeal nerves was present. He discusses the literature of this subject, particularly those cases in which careful autopsy was made, which shows that in the majority of cases of tabetic laryngeal paralysis there is isolated degeneration of the muscles, degeneration of the recurrent nerve, either alone or in connection with the trunk of the vagus. There are no definite changes in the nuclei of the medulla, and even when slight changes are present the peripheral nerve degeneration is usually very pronounced. Clinically these cases were characterized by the median position of the vocal cords. When there was atrophy of the nuclei, there was sometimes bilateral, at others unilateral cadaveric position with loss of sensation. [J. S.]

10.—Edinger reports the case of a man, 19 years of age, who developed headache and vomiting, then diplopia, loss of visual power and, finally, choked disc. Three months later, when he was admitted to the hospital, there was bradycardia, the left facial nerve was paretic, but none of the other peripheral nerves was involved. Hearing was good. A diagnosis was made of a tumor, either in the posterior portion of the island, or in the temporosphenoidal lobe. An operation was performed and a cyst found in the temporal lobe. This was opened and found to contain a melanosarcoma, and its removal required also the removal of the entire temporal lobe. When the patient recovered it was found that he had a left hemiplegia, but this rapidly improved. The patient seemed lively, but evidently did not understand all that was said to him. He gradually improved, but there was hypesthesia in the left side of the face and astereognosis in the left hand. The visual field did not appear to be much involved, although objects coming from the left side were not as readily recognized as those coming from the right. Nine days after leaving the hospital, apparently much improved, he was found comatose in bed and died a few days later. The brain was removed and the right temporosphenoidal lobe found to be entirely absent. Edinger describes very carefully the secondary degenerations that occurred, which were found to involve the temporo-occipital, the temporoparietal and the frontal tracts. In the inner capsule the corticospinal and the corticobulbar tracts were also degenerated. Tracts were also found degenerated in the neighborhood of the corpus callosum and in the chiasma. The conclusion that Edinger draws from these studies is that the removal of the right temporal lobe gives rise to no characteristic symptoms.

Death in this case was due to the recurrence and extension of the tumor. [J. S.]

11.—Erb avails himself of the privilege of his long service in medicine to give a brief retrospect of his medical experiences. He learned much from Friedreich, whose clinical assistant he was, as Friedreich first called his attention to the use of electrotherapy. Erb is vigorously opposed to polypharmacy. He believes in scientific and not symptomatic treatment of disease, and he calls attention to the value of electrotherapy, hydrotherapy, climatotherapy, but believes very little in organotherapy. The most important factor in treatment is the general tonic action upon the whole system. Among the drugs he employs arsenic, quinine and a few others. He approves of iron in nearly all cases in which anemia is present. [J. S.]

12.—Hoffmann reports the cases of 3 patients in whom there was **bilateral bulbar-paralysis associated with paralysis of the cervical sympathetic.** The first, a man of 73 years, had hypalgesia on the right side, and thermhypesthesia of the whole half of the body, slight dragging of the right leg, and a tendency to fall to the right with vertigo. On the left side there was hypalgesia in the region of the fifth nerve, with loss of the corneal and conjunctival reflexes; narrowing of the lid, contraction of the pupil and retraction of the eyeball. There was complete paralysis of the soft palate with loss of the pharyngeal reflex, and reactions of degeneration and paralysis of the muscles of deglutition. The second patient, a man of 65, had on the right side hypalgesia and thermhypesthesia from the clavicle to the sole of the foot, deviation of the head to the right and a tendency to fall to the right. On the left side hypesthesia in the region of the fifth nerve, loss of the reflexes of the cornea and conjunctiva, some vasomotor changes in the cheek and mucous membrane of the nose, and an ulceration of the nostril, narrowing of the eyelid, contraction of the pupil and obliteration of the nasolabial fold. There was paralysis of the soft palate, dyspnea, loss of the palatal and pharyngeal reflexes, disturbance of taste and of breathing over the right lung and paralysis of the pharyngeal nerve. The gait was irregular, and there was some vertigo. In the third patient, a man of 43, there was on the right diminution of pain and temperature senses over the entire half of the body, vasomotor changes in the anterior portion of the foot. On the left side there was narrowing of the lids, contraction of the pupil, obliteration of the nasolabial fold, slight diminution of sensation in the region of the fifth nerve, paralysis of the soft palate, and loss of the palatal reflex, complete paralysis of the swallowing muscles, loss of the pharyngeal reflex, and paralysis of the recurrent pharyngeal nerve. The first 2 patients had extreme arteriosclerosis; the third had myodegeneration of the heart, and some valvular lesions. The common symptoms consisted of the crossed paralyses, and the paralyses of the muscles of deglutition. In all cases the symptoms appeared with almost apoplectiform suddenness. They all showed the typical symptoms of bulbar paralysis as distinguished from pseudoparalysis, and in addition Horner's symptom complex of paralysis of the sympathetic nerve, that is the changes in the eye. They proved that paralysis of the sympathetic nerve on the same side may occur in unilateral apoplectiform paralyses. In the second case the presence of an ulcer of the cornea and of other vasomotor and trophic disturbances seemed to indicate simultaneous disease of the fifth or the sympathetic nerve: and the curious vasomotor changes in the foot in Case III have been noticed in other cases of bulbar lesion. [J. S.]

13.—Schultze, after discussing some of the nervous symptoms of **croupous pneumonia**, mentions the fact that in many cases **the pupillary reflex to light is absent.** He gives the clinical notes of 4 cases in which this was the case. These symptoms occurred not only in cases of delirium or others producing the signs of meningismus, but in cases in which the nervous symptoms were comparatively slight. Probably the most important factor is the influence of the toxin. [J. S.]

14.—Schwalbe describes certain peculiarities in the contour of the skull. It is generally believed that there is no essential congruence between the inner and outer surface of the skull; that the outer form of the skull is largely due to the muscles and not to the influence of the growth of the brain. He discusses the different parts of the skull in detail, mentioning a number of points that have not hitherto been described. He finds that the position of different parts of the brain in many cases can be readily determined by the position of certain external features. Thus, the posterior portion of the temporal, sphenoidal and occipital lobes corresponds to the line of the supramastoid crest and the superior nuchal lines. He calls attention to the importance of the muscles of the skull in determining its shape. In some of the lower animals the position of the cerebellum can be distinctly seen. In a few cases there was slight elevation in the skull corresponding to the underlying convolutions. This is more distinct in some of the lower animals than in men. The details of this article cannot be satisfactorily given in an abstract, but it is well worthy of reference to the original. [J. S.]

(To be Continued.)

BOLNITCHNAJA GAZETA BOTKINA.

December 4, 1902. (Vol. XIII, No. 49.)

1. The Physiology of Brunner's Glands in the Duodenum. Z. I. PONOMAREFF.
2. On the Question of the Passage of Agglutinins Into Transudates (Under Normal Conditions and in Experimental Uremia). N. K. ROSENBERG.

1.—Ponomareff investigated in Prof. Pavloff's laboratory **the secretion of the portion of the duodenum containing Brunner's glands.** The secretion was obtained from dogs in which a portion of the duodenum was isolated by Thiry's method modified by Pavloff. The juice obtained by means of an artificial fistula was found to possess the following characteristics: It was colorless, thick and very viscid. On standing the mucus gravitated to the bottom of the vessel, leaving the fluid perfectly clear. The reaction was always alkaline, equal to 43·198 mg. of sodium hydrate per 100 cc. of the juice. The specific gravity was 1,005-1,020. Neither albumin nor fibrin could be digested, but when the juice was made acid by the addition of 0.5% of hydrochloric or lactic acid, digestion was accomplished, the digestion, however, being 5 times weaker than is the case with gastric juice. The juice was found to digest fats, convert starch and invert sugars and strongly activate the pancreatic ferments. The secretion of the juice was greatly increased after the introduction of fats. The author accounts for the presence of a peptic ferment in the duodenum by the supposition that under the influence of fats the gastric secretion is inhibited and its digestive power greatly reduced, while the secretion of the pancreas and duodenum is considerably increased. Under these conditions the peptic ferment of Brunner's glands completes the digestion of albumins. How this is accomplished in an alkaline medium when this ferment was found to act only in an acid medium, the author does not explain. [A. R.]

2.—Will be abstracted when concluded.

December 11, 1902. (Vol. XIII, No. 50.)

1. The General Foundations of Therapeutics. M. M. VOLKOFF.
2. On the Question of the Passage of Agglutinins Into Transudates (Under Normal Conditions and in Experimental Uremia.) N. K. ROSENBERG.

2.—Will be abstracted when concluded.

THE JOURNAL OF TUBERCULOSIS.

January, 1903. (Vol. V, No. 1.)

1. On the Relation Between Human and Bovine Tuberculosis. P. von BAUMGARTEN.
2. The Cinnamic Acid (Hetol) Treatment of Tuberculosis. A. LANDERER.
3. The Urinary Calcium Excretion in Tuberculosis. ALFRED C. CROFTAN.
4. The Early Diagnosis of Tuberculous Laryngitis. RICHMOND McKINNEY.
5. Methylene Blue in Consumption. HENRY HERBERT.
6. Tuberculosis of the Cervical Lymphglands. DANIEL EISENDRATH.
7. The Transmission of Bovine Tuberculosis to Man. ROBERT KOCH.
8. On the Lymphocytes of Tuberculous Exudations. ALFRED WOLFF.
9. On Interrupted Respiration. OTTO HEUSSEN.

1.—Von Baumgarten calls attention to the distinctive differences between bovine and human tuberculosis: The bovine affection predilects the serous membranes; the human prefers the parenchyma of organs. Bovine tubercles are not usually small miliary or submiliary nodules, but form larger nodules which may be pedunculated and attached to connective tissue-strands like pearls on a string. The bovine tubercle is more liable to calcification. He says that in 1891 he inoculated a calf with virulent tubercle bacilli, but only produced a slight local reaction. Six months later, at autopsy, no trace of tuberculosis could be found anywhere. He reports the addresses, especially Koch's, delivered at the International Tuberculosis Conference recently held in Berlin. He lays stress on the importance of the experiments carried out in Königsberg, where about a dozen people were inoculated with highly virulent bovine tubercle bacilli with negative results. He claims that experimental inoculation should not be made intravenously nor intraperitoneally, but only subcutaneously and always in small amounts. He agrees with Koch's views in everything except that the sputum is practically the sole transmitting agent. He admits that tuberculosis may be contracted by inhalation, but thinks that most cases are hereditary, either from an inherited constitutional anomaly which favors infection, or by "a direct transmission of the bacillus during the process of procreation, or during fetal development. [R. P. E.]

2.—Hetol is positively chemotactic, increasing the number of leukocytes two- to five-fold for a few hours. On caseous foci it causes circumvallation with leukocytes, fibrous encapsulation and finally complete transformation into a radiated cicatrix. Administration should be intravenous. Taken internally it has practically no effect. Three doses a week are given, beginning with 5 mg. and gradually increasing from 5 mg. to 14 mg. However, usually about 10 or 12 mg. are given. The maximum dose is one which just falls short of causing a rise of temperature. In uncomplicated cases about 90% or more are cured. In all cases 70% to 75% are cured. Small cavities may be healed. If there is mixed infection, lysargin may be beneficial. This is given intravenously in doses of 2 cg. to 4 cg. of a 1% aqueous solution. In otherwise hopeless cases in which large cavities are present and which cannot heal because of mechanical reasons, a thoracoplastic operation may be done. Tuberculosis of organs other than the lungs, with the exception of the brain, responds to hetol. Tuberculosis of the skin and lupus require cutaneous injections of hetol 1 part, alcohol 19 parts. [R. P. E.]

3.—Croftan shows that deutero-albumose is formed and excreted in tuberculous subjects, and that it has a selective affinity for calcium. He finds that the excretion of calcium is increased in tuberculous subjects and concludes that, with a uniform life and diet, a high and increasing calcium content of the urine is a suspicious sign of tuberculous infection. Injections of deutero-albumose produce pyrexia in tuberculous animals, but when combined with calcium the reaction is negative. Hence calcium salts may be of benefit in the treatment of tuberculosis. [R. P. E.]

4.—McKinney says that primary laryngeal tuberculosis is too rarely recognized to be worth considering, and that practically all cases are secondary to either pulmonary or glandular tuberculosis. Early symptoms are persistent laryngeal catarrh, evidenced by hoarseness, a peculiar sticking sensation in the region of the larynx, dysphagia and the general symptoms due to the pulmonary or other condition. The laryngoscope sometimes shows congestion instead of the characteristic pallor. Syphilis and carcinoma must be excluded. [R. P. E.]

5.—Herbert gives in detail 15 cases of pulmonary tuberculosis treated with methylene blue in doses of ½ gr. to 3 gr. 3 times daily. Nearly all the patients complained of stranguria, which, however, soon subsided. He concludes that methylene blue impedes the expectoration of the contents of the bronchial tubes, thus causing a choking sensation or even dyspnea. It reduces mucopurulent sputum to a mere purulent sputum, and on account of this concentration the number of bacilli is apparently increased. The drug has no local effect on tuberculous lesions of the lungs or throat, and no effect on the temperature. It relieves cough to some extent and may be given with advantage only in advanced cases with profuse mucopurulent expectoration. It is contra-indicated in sensitive and in hectic cases. [R. P. E.]

6.—Eisendrath describes the pathology of tuberculous lymphglands, and recommends operative treatment in all cases but the following: (1) When operation is not permitted because of slight involvement of glands. (2) When there is a strongly tuberculous family-history, and the pulmonary apices are suspicious. (3) In greatly debilitated anemic children, especially if complicated by chronic bronchitis. External applications, especially iodine, do more harm than good. As a preliminary to all treatment urge the removal of adenoid vegetations, diseased faucial tonsils and carious teeth. Advise corrective treatment for the chronic inflammatory conditions in the ear and nose. They are the fire, and the enlarged glands are the smoke. The operative treatment is described in detail. [R. P. E.]

7.—See **Philadelphia Medical Journal**, January 10, 1903, page 53.

8.—See *Deutsch. med. Woch.*, No. 41, 1902.

9.—See *Deutsches Archiv. für klin. Med.*, LXXIV, 1-2.

LA RIFORMA MEDICA.

December 27 and 29, 1902.

1. Contribution to the Study of the Pathogenesis of Progressive Pernicious Anemia. G. FINZI.

1.—Finzi deprecates the use of the terms primary or idiopathic anemia and holds them to be but the cloak of ignorance; believing all anemias to be secondary to some underlying cause, obscure or otherwise. Apropos of 3 cases presenting the symptoms of pernicious anemia, and all characterized by abnormal conditions of the mesenteric glands, tuberculous and otherwise, he discusses these glands as a possible factor in the production of pernicious anemia; concluding that extensive changes in them might well be considered as one of the causes of that condition; they being the site of formation and transformation of the morphological elements of the lymph and consequently playing an important part in the renewal of the blood material. That enlargement of the mesenteric glands is secondary to anemia, the author believes improbable, but holds rather that abnormalities of the glands are the result of infection from the intestinal mucosa, arising possibly from a chronic catarrh, parasites, tuberculosis or cancer. [R. L. F.]

IL POLICLINICO (SEZIONE MEDICA.)

December 1902. (Vol. IX. fasc. 12.)

1. Diabetes Insipidus as an Anomaly of Metabolism. A. FERRANNINI.

1.—From this standpoint Ferrannini has studied diabetes insipidus, directing his attention especially to the elimination of chlorides and nitrogen by the urine in this condition. He believes that the results of his work indicate the possibility of an excessive liability or instability of the chlorides in this condition, this constituting a striking anomaly of metabolism. Excessive elimination of nitrogen was noted in a certain proportion of cases; this bearing no relation to subnormal elimination of chlorides or the reverse. In his experience, modifications in the quantity of chlorides ingested by patients affected with diabetes insipidus more promptly and markedly influence the amount of its elimination than is the case in health; and a diet in which the chlorides are reduced to a minimum, and albumins are in excess, if continued for at least a month, decreases polyuria and finally reduces the quantity of urine to the normal. [R. L. F.]

January, 1903.

1. A Case of Pseudobulbar Paralysis from a Unilateral Cerebral Lesion in a Child of 5 Years. L. CONCETTI.
2. Tumor of the Right Cerebellar Lobe With Compression and Displacement of the Bulb. U. GABBI and R. CARACCIOLO.

1.—But 8 cases of pseudobulbar paralysis from a unilateral cerebral lesion have hitherto been described. Concetti reports the ninth case of this nature. The affection occurred in a child of 5 years and followed an attack of diphtheria; diphtheritic paralysis being definitely excluded from the diagnosis. At autopsy a thrombus was found in the trunk of the right middle cerebral artery, by which the bloodsupply was cut off from, and in consequence the function damaged in all, that are supplied by its branches. As in this area are included the corticobulbar and gangliobulbar centers, as well as the crossed fibers of the opposite hemisphere, the bulb was naturally deprived not only of the influence of the injured side, but also of the influence reaching it from the healthy side through the crossed fibers. The author draws the following conclusions: (1) It is demonstrated beyond doubt that the bulbar paralytical syndrome may occur with entire anatomical integrity of the bulb. (2) This pseudobulbar syndrome may, moreover, occur with unilateral lesions of the corticoganglionic centers. (3) That this pathogenetic condition may be realized, it is essential that the unilateral lesion be deep and extensive so that not only the direct corticogangliobulbar paths are destroyed, but also those which, derived from the opposite hemisphere, reach the bulb after having been crossed in the corpus callosum. [R. L. F.]

2.—Will be abstracted when concluded.

January 24, 1903.

1. General Anesthesia with Ethyl Chloride. V. GAUDIANI.
2. Contribution to the Study of Crural Vesical Hernia. G. MARIO.

1.—An article dealing with the advantages of ethyl chloride as a general anesthetic has for its author V. Gaudiani, who has anesthetized 35 patients by means of this substance; narcosis being prolonged as much as 35 minutes, and 8 cc. being employed in that time. Among the major operations in which it was used the author mentions abdominal and vaginal hysterectomies, laparotomies for appendicitis, etc. Whilst not believing it to be a universal substitute for ether or chloroform, Gaudiani believes it may well be substituted for either in minor operations and in major operations of short duration in view of its safety when properly used, the rapidity with which patients come from under its influence and absence of any of the after-effects seen from ether and chloroform. A special tolerance for this anesthetic is shown by children. The author makes use of a Gillard-Monet mask in ethyl chloride anesthesia. [R. L. F.]

2.—Mario reports the case of a patient in whom both an inguinal and a crural hernia were present. Operation upon the crural hernia revealed a voluminous lipocele, traction upon which excited a strong desire to urinate, the patient having refused general anesthesia. In a review of the literature bearing upon vesical hernia the author finds that its occurrence is almost always preceded by accumulation of fat, amounting, in some instances, to a true lipocele, as in his own case. By many observers such growths have been regarded as a potent factor in the production of vesical hernia, and Mario leans to the belief that in this case also the development of a lipocele from the abundant adipose tissue of the anterior vesical wall may have contributed, by its weight, to the escape of the organ through the ring. In view of the difficult recognition of such a hernia, and the frequent absence of symptoms, as in his case, in which manipulation alone revealed its nature through the excitation of desire for micturition, the author expresses the hope that an adequate means of local anesthesia may be found which would enable the surgeon to operate upon his patient in the conscious state, thus making apparent many organic functions which are annulled in general anesthesia. [R. L. F.]

IL POLICLINICO (SEZIONE PRATICA).

December 20, 1902. (Year IX, fasc. 8.)

1. Poisoning from Formalin. F. TESTI.

1.—Testi reports the case of a man who, by mistake, swallowed a mouthful of a 40% solution of formalin. In view of the few cases on record of poisoning from this substance, and the probability of its increasing use leading to more frequent accidental ingestion, he deems a detailed account of its effects to be valuable. These he describes as follows: The patient experienced an intense burning sensation immediately after swallowing the substance; this being followed by vomiting. The pain then became localized, especially in the pharynx, at the base of the tongue and upper part of the esophagus, so that deglutition became almost impossible. When seen by Testi, the patient's face was congested and his ocular conjunctiva hyperemic, as were also the buccal and pharyngeal mucosa, fauces and tonsils. For 2 or 3 days this condition remained unchanged, during which time the patient was able to swallow but the smallest quantity of liquid. Two large eschars then appeared upon the fauces and tonsils, which became detached by the sixth day, regeneration of the epithelium and subsidence of hyperemia ensuing within about 8 days. The author states that the general stupor, anuria and modifications of temperature, pulse and respiration reported in Klüber's case were at no time present in his; this, he thinks, may be accounted for upon the ground that the vomiting prevented absorption of the poison into the system, its effect being purely local. [R. L. F.]

January 3, 1903. (Year IX, fasc. 10.)

1. Immunizing Power of the Nucleoproteid of the Anthrax Bacillus. N. TIBERTI.
2. Localized Pruritus of Arsenical Origin. V. ARTURO.
3. A New Reflex Observed in Two Cases of Pott's Disease. C. FRANCESCO.

1.—Following the method of Lustig and Galeott, in the isolation of the nucleoproteid of the plague bacillus, Tiberti has carried on a series of experiments upon animals with the nucleoproteid of the bacillus of anthrax. He draws the following conclusions from the work done: (1) It is possible to extract from the anthrax bacillus, by chemical means, a substance which gives the same reaction as the nucleoproteid of bacteria. (2) Small doses of this substance inoculated into rabbits are capable of conferring immunity to anthrax infection in the majority of cases; and in some cases the fatal issue is retarded in vaccinated animals who succumb to the infection. [R. L. F.]

2.—Two cases, which Arturo describes, of localized pruritus unaccompanied with any morbid condition of the skin and induced by increasing doses of arsenic, carried as high as 15 to 20 mg., are noteworthy in view of the rarity of such a manifestation. In the first instance the pruritus was confined to the upper part of the internal surface of the thigh and genitals; in the second to the right axilla. The condition was most annoying and resisted all treatment; subsiding only upon suspension of the arsenic. Arturo believes that such pruritus is probably due to the irritative effect of the drug eliminated by the perspiration, and that it is prone to appear in those regions in which the sensibility and irritabilty of the skin is greatest. [R. L. F.]

3.—In a preliminary note Francesco calls attention to the occurrence in 2 patients affected with dorsal Pott's disease (sixth and seventh vertebræ) of a reflex not hitherto observed. Upon stroking longitudinally the sides of the knee, with the thumb upon one side and the index and middle fingers upon the other, he noted that the leg became flexed upon the thigh, sometimes as much as to a right angle; the latter also at the same time becoming flexed and slightly adducted. [R. L. F.]

January 10, 1903.

1. Stokes-Adams Disease. S. CERAULO.
2. Contribution to the Treatment of Tuberculous Peritonitis With Iodated Iodine After Durante's Method. R. MARTINORI.

1.—From a review of the literature bearing upon this subject Ceraulo concludes that the symptoms of this disease may be considered as chiefly of **bulbar origin**; the fundamental cause being atheroma, which induces anemia of the bulb; though cardiac sclerosis and fatty degeneration seem also to play a prominent part. The treatment in this condition he directs primarily to the arteriosclerosis, for which he believes the sovereign remedy to be sodium or potassium iodide. For the bulbar ischemia amyl nitrite is advised, as producing a speedy congestion; and, for the induction of cerebral hyperemia, opium or morphine is recommended. The author deprecates the use of digitalis for the heart, owing to the permanently slow pulse; preference being given to caffeine combined with sodium salicylate or benzoate, which act as cardiac and cerebral stimulants. A case in which atheroma was a prominent feature is reported by the author. [R. L. F.]

2.—Martinori reports successful treatment with injections of **Durante's solution**, in a case of **tuberculous peritonitis** in which relapse and reaccumulation of fluid occurred after 5 liters had been removed by paracentesis; 2 liters having been left owing to threatened collapse during the operation. A Pravaz syringeful of the mixture (metallic iodine gm. 1. potassium iodide gm. 3, distilled water gm. 100) was injected in the gluteal region daily for 20 days. General improvement and diminution in the amount of fluid occurred during this time, but, the patient being intolerant, treatment was of necessity abandoned for a time, and, consequently, a second relapse occurred. The treatment was resumed, this time with occasional intervals of a day or 2: 60 injections being given within about 2½ months. Improvement was quite marked: and after a third month's treatment, during which the iodine was increased to gm. 3, a complete cure was effected. [R. L. F.]

REVISTA DE MEDICINA Y CIRURGIA DE LA HABANA.

January 10, 1903.

1. Sarcoma of the Pelvic Cellular Tissue Occupying the Retroperitoneal Space at the Bottom of Douglas's Pouch. L. ORTEGA.

1.—This case, interesting because of its rarity, is reported by Ortega. The patient, a young unmarried woman, came to him with a history of severe pain in the lower part of the abdomen, continuous flow of blood from the vagina, vesical and rectal tenesmus and increase in the size of the abdomen, these symptoms having made their appearance 2 weeks previously and after excessive sexual excitement. Examination revealed the presence of a tumor which entirely filled the vagina; the space between it and the vaginal wall was too small to permit digital exploration for the purpose of determining its attachment. The vulvar end of the tumor gave the impression of a transversely lacerated cervix, and within it were what appeared to be bleeding fungosities. Upon bimanual examination, a tumor, the size of a fetal head and continuous with the vaginal tumor, was found. The patient had no fever, and, with the exception of the anemia naturally following prolonged loss of blood, there were no general symptoms. An attempt was made to curette what was supposed to be the uterus, but, severe hemorrhage ensuing, this was abandoned. A laparotomy was then performed which revealed a large tumor occupying Douglas's pouch and extending into the vagina as low as the vulva. At this point the tumor was ulcerated, and this it was which had given the impression of a lacerated cervix. Removal of the tumor was found to be impossible, owing to profuse bleeding upon incision, and to its diffuse attachments, which extended back to the retroperitoneal cellular tissue. Under the microscope sections of the tumor were examined, and it was found to be a small-celled sarcoma. [R. L. F.]

JOURNAL DES PRATICIENS.

December 27, 1902. (16me. Année, No. 52.)

1. Supraclavicular Adenitis in Phthisis. C. SABOURIN.
2. Injections of Metallic Silver in Therapeutics. LOUIS RENON.
3. The Nature and Treatment of Cardiopathies of the Menopause. C. FIESSINGER.
4. The Syphilitic Chancre and Some Secondary Symptoms. DARIER.

1.—**Supraclavicular adenitis**, while **frequent in phthisis**, is not present in every case. Yet it is of great diagnostic value when present. There may be a few or a great number of slightly enlarged glands, and they are frequently bilateral. The cervical glands may also be enlarged. There is no pain, nor does the swelling increase, remaining just the same for years. They rarely accompany apical tuberculosis, but are generally found with peripheral, subpleural lesions. Sabourin considers that the presence of enlarged supraclavicular glands confirms the diagnosis of doubtful phthisis. When they occur in children, good hygiene is indicated to prevent the appearance of phthisis in the future. [M. O.]

2.—Rénon reviews the technique which Follet used 6 years ago for **injecting metallic silver subcutaneously** in **the treatment of tuberculosis.** Several patients gained in weight, cough and expectoration decreased and disappeared, and they seem cured since, after one or 2 such injections weekly for varying intervals of time. [M. O.]

3.—Fiessinger reports 3 cases of fatal, aggravated **cardiopathies of the menopause**, one of myocarditis, one of cardiac dilatation and one of arteriosclerosis. In a similar case, of mitral regurgitation and stenosis, recovery followed. He reports a case of true cardiopathy of the menopause, in which the heart was unaffected, and without any other lesion of the viscera. The only results were hypertension and dilatation of the heart. Still another case-history follows, of a cardiopathy of the menopause, with the heart unaffected, but associated with uterine disease. There was great obesity. She recovered, also. On all cases hypotensive treatment was given, milk diet, digitalis, iodides, ovarine, theobromine, etc. Of the 3 divisions of the cardiopathies of the menopause, the cases in the first may or may not recover, the others generally recovering. [M. O.]

4.—Darier presented a number of cases of **syphilis, showing chancres and secondary manifestations, eruptions,** alopecia, etc. [M. O.]

January 3, 1903.

1. Some Remarks on Malaria. E. SCHOULL.
2. The Treatment of Appendicitis in the Country. PAUL BOUDIN.
3. A Severe Case of Typhoid Fever. LECREUX.
4. Chancre of the Tonsil. F. WIDAL.

1.—Schoull reports an epidemic of **malaria in Tunis** in November, 1900, following frequent rains. There were absolutely no mosquitoes in the neighborhood. Intramuscular injections of quinine acted well in all forms of the disease, those resembling typhoid fever and those affecting the lungs. Abscess never followed in true malaria: in other cases, however, abscesses occurred after the injections in 4 patients. In the prophylaxis of malaria Schoull gives quinine daily, increasing the doses if an epidemic appears. Arrhenal is only of value in chronic malaria, or malaria with cachexia. [M. O.]

2.—**In the country, appendicitis** is not very frequent, though symptoms of appendicitis often develop with indigestion, constipation, etc. Boudin gives a purgative, calomel as a rule, and waits. Such cases are easily cured. He reports several cases of this kind. He believes in curing the acute attacks and then having the appendix resected if necessary. [M. O.]

3.—Lecreux reports a case of **typhoid fever** in a man of 18 with high fever and marked ataxia, treated with cold sponging and brewer's yeast. After 16 days of fever he recovered. Symptoms were typical and marked. Lecreux calls attention to the use of **brewer's yeast** in this case. [M. O.]

4.—Widal presented a young girl with a **chancre on the left tonsil.** After waiting for the appearance of the eruption and other signs of secondary syphilis, he will begin specific treatment. He also showed a patient with indigestion and high fever, in which case the diagnosis could not yet be made. [M. O.]

January 10, 1903. (17me. Année. No. 2.)

1. General Neurofibromatosis. A. BRETON.
2. Sage in Country Practice. LIEGEOIS.
3. A Case of Hydronephrosis. DEBOVE.

1.—Breton reports a case of **Recklinghausen's disease, general neurofibromatosis**, in a man of 48. The patient was covered with subcutaneous tumors varying in size from that of a pea to that of a nut; at times and in places they were painful. There were also spots of pigment and vascular nevi. The symptoms and post mortem findings are given in full. As there was sarcoma of the suprarenal capsules with metastases to the lymphglands, liver, pituitary body and sella turcica, the condition was probably due to auto-intoxication. [M. O.]

2.—**The use of sage** is still widespread in the country in France. It is employed as a mouth wash and gargle; as sage tea in all acute febrile affections, laryngitis, bronchitis, influenza, typhoid fever, etc.; apoplexy; asthma; gastro-intestinal affections and intestinal worms; amenorrhea; for preventing night sweats; and in many external conditions, for rubbing, bathing, ulcers, prurigo, etc. [M. O.]

3.—Debove reports the death of a woman of 40, from **uremia**, with **Cheyne-Stokes** breathing and coma. Autopsy showed a **movable right kidney with hydronephrosis** and sclerosis; the left kidney contained many small cysts and lesions of chronic interstitial nephritis. Experiments show that opotherapy aggravates this condition. If medical treatment fails, the movable, hydronephrotic kidney should be removed by operation. [M. O.]

January 17, 1903. (17me. Année, No. 3.)

1. Apex Pneumonia in the Aged. THIROLOIX.
2. Diagnosis and Treatment of Acute Gonorrhea. AMBARD
3. Strangulated Umbilical Hernia. P. DARQUIER.
4. Syphilitic Aortitis. HENRI HUCHARD.

1.—Thiroloix reports a case of **pneumonia of the right apex in a woman of 81**, with recovery following three intravenous injections of 6 cc. of a 5-1000 solution of **collargol.** He claims that this medicament is inoffensive. As it was the only drug employed in this case, Thiroloix considers recovery due to its use. [M. O.]

2.—Ambard describes in detail the **diagnosis, prophylaxis and treatment of acute gonorrhea**, giving a complete résumé of the subject. [M. O.]

3.—Darquier reports a case of **strangulated umbilical hernia** in a woman of 49, reduced by compresses of ether after attempts at taxis had failed. [M. O.]

4.—Huchard relates the case-history of a woman of 48, treated for some time for angina pectoris. Examination showed marked arteriosclerosis and arterial hypertension, with a clangorous diastolic murmur suggesting **aortitis.** As there was a **history of having had syphilis 12 years before,** antisyphilitic treatment, potassium iodide and mercury, was given with satisfactory results. [M. O.]

NEUROLOGISCHES CENTRALBLATT.

December 16, 1902. (No. 24.)

1. The Designation "Myotonic Pupillary Movements." A. SAENGER.
2. The Relations of Energy to Psychical Activity. A. ADLER.
3. The Infraspinatus Reflex. A Reply to the Preceding Article of William Pickett, of Philadelphia. STEINER.

1.—Saenger insists that as he used the term "myotonia" because it described merely the behavior of the pupil. He did not intend to identify the pupillary phenomenon with Thomsen's disease, but thinks that it is, like this, probably a peripheral muscular condition. [J. S.]

2.—Adler discusses the **effect of various stimuli upon the cells of the central nervous system**, and believes that the psychological recognition of similar and dissimilar forms of energy is the basis of the ability to think. The more delicate the perceptive power, the sharper is the power of thought. The various feelings are the expression of the desire of the psychically active cortical layers for continued existence and appropriate activity. [J. S.]

3.—Pickett states that he had already described the infraspinatus reflex which Steiner claims to have discovered recently. Steiner insists that the reflex described by Pickett is not the same as that discovered by him. [J. S.]

Special Article.

A REVIEW OF THE RECENT LITERATURE ON THE INTERCOMMUNICABILITY OF HUMAN AND BOVINE TUBERCULOSIS.

By JOHN M. SWAN, M. D.,
of Philadelphia.
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Since the meeting of the Congress on Tuberculosis, in the summer of 1901, at which Koch made his famous address concerning the intercommunicability of human and bovine tuberculosis, much has been written on the subject. The published papers may be divided into (1) those showing either by indisputable proof or by circumstantial evidence that human tuberculosis is transmissible to animals, and, (2) those showing that bovine tuberculosis is transmissible to man.

In a review of the literature on tuberculosis published in the **Philadelphia Medical Journal**, February 1, 1902, I called attention to the experiments of Delépine which were undertaken immediately after Koch's views were made public. The most complete paper that has appeared since then is that by Ravenel[6], who has conducted experiments in the laboratory of the State Live-stock Sanitary Board of Pennsylvania. In 1898 he succeeded in infecting 3 out of 4 calves with tuberculosis by inoculating them, by the peritoneal route, with 10 cc. of human tuberculous sputum. The autopsies on the 3 calves that gave evidence of the disease confirmed the existence of tuberculosis in them. For several years he has endeavored to obtain material from cases of tuberculosis in children in which there was evidence of infection through the alimentary tract. He reasoned that, if a child contracted tuberculosis through the ingestion of milk from diseased cattle, bacilli of the bovine type ought to be found in the intestinal or mesenteric lesions. He obtained the mesenteric lymphnodes from a patient which Hand considered the clearest case of pure primary intestinal infection that he had ever seen. He isolated from these glands a culture that had the most intense pathogenic power for cattle. Two calves inoculated, one in the jugular vein, and the other in the peritoneal cavity, died in 19 and 27 days, respectively, and a grown cow that was inoculated both in the jugular vein and in the peritoneal cavity died in 18 days from pure tuberculosis. He concludes that he has either found a human tubercle bacillus having pathogenic power for cattle quite as great as any bovine germ, or else he has found a bovine germ in the mesenteric gland of a child. He believes that the latter is the case. From the mesenteric glands of another child he obtained a culture that showed a virulence far in excess of that usually found in human cultures, but that was not so marked in its pathogenicity as the one just described. He has also shown that a typical tuberculosis can be produced in young cattle by large and repeated doses of a human culture of moderate virulence and that a marked increase in the virulence of such a culture can be produced by successive passages through calves. He fed each of 4 pigs with 10 meals containing pure cultures of the tubercle bacillus. All of these animals contracted general tuberculosis, most marked in the lungs and ending in death, and 3 or 4 presented ulceration of the tonsils. These tonsillar lesions were typically tuberculous, and the cervical and mediastinal lymphnodes were markedly involved. In only one of these animals could any lesion of the intestine be found. In his feeding experiments he has often been impressed with the extensive involvement of the lungs, in animals infected by feeding and the slight injury of the intestines. In some animals it has been impossible to detect any involvement of the intestines. It is possible, therefore, that an infection gaining entrance through the digestive tract may appear first in the lung and then be erroneously attributed to a primary infection of the respiratory tract.

De Jong[10] has been able to inoculate the bullock, sheep, dog, goat and monkey with the human tubercle bacillus. Arloing[9] reports the results of 3 series of experiments in which he succeeded in infecting the cow, the sheep and the goat with tuberculosis by intravenous inoculation with human tubercle bacilli from different sources. The lesions found in these animals were confluent or discrete granulations in the lung, the spleen, the liver, the lymphnodes, the kidneys, etc., and were always characterized by early caseation.

Fibiger and Jensen[13] report 5 cases in which tubercle bacilli from a human source caused tuberculosis in cattle. In the case of an adult female, aged 42 years, who died of tuberculous enteritis, intestinal tuberculous ulcers were recognized at the autopsy. A mesenteric lymphnode from this patient was injected into a calf, and 6 months later this animal was killed and was found to have miliary tuberculosis of the lungs with some pearly bodies on the pleura. In the cases of 3 children and another adult, all of whom died of primary intestinal tuberculosis, inoculations of mesenteric lymphnodes produced tubercular lesions in calves. These authors have reached the same conclusion as has Ravenel; namely, that the virulence of tubercle bacilli, obtained from the mesenteric lymphnodes of children, for calves indicates that the bacilli are originally bovine in origin.

The latest experiments of Esser and Orth[14] show that human tubercle bacilli cause tuberculosis in different animals. Furthermore, the experiments of Dean and Todd[20] show that the pig will contract a rapidly fatal general tuberculosis as the result of inoculation with human tubercle bacilli.

There are numerous instances reported in which man has been inoculated with tuberculosis from bovine sources. Ravenel[5] reports the case of Dr. G., who, while performing autopsies on 2 cows, the subjects of experimental tuberculosis, wounded the flexor surface of his wrist. Four months later the scar showed evidence of infection, and a skin nodule developed rapidly, which was excised and inoculated subcutaneously into two guinea-pigs. Both animals developed generalized tuberculosis. Histological examination of a part of the nodule showed it to be a typical tubercle in which the presence of tubercle bacilli was demonstrated.

Krause[4] reports a case in which a butcher injured his thumb and, as a result, had a chronic inflammatory condition of the arm with enlargement of the lymphnodes. Three years later the lungs were normal, but an excised axillary lymphnode showed the characteristic histological changes of tuberculosis, and tubercle bacilli. The patient stated that about the time he received the injury to his thumb he was occupied in removing the skin from diseased cattle and handling them in other ways.

Hüls[3] reports the case of a family consisting of father, mother, 5 sons and 2 daughters, in whom there was no trace of hereditary tuberculosis and yet, in the course of 5 years, the entire family, with the exception of 2 sons, died of pulmonary tuberculosis. The cases appeared after a new race of cattle had been introduced into the district of which the father was an earnest supporter, raising them exclusively on his farm. These cattle were practically all infected with tuberculosis, and it was almost impossible to sell the meat on account of its infected condition. He believes that the circumstantial evidence is strongly in favor of the transmission from animals to man.

Heller[2] reports the case of a man who tried to remove a tattoo mark from his arm by tattooing with milk. As a result he developed lupus, in which the histological changes were those of tuberculosis.

In tracing infection from cattle to man, much stress has been laid on the variety of intestinal tuberculosis in children. In babies, so many of whom are nourished by artificial mixtures, the basis of which is cows' milk, there would seem to be a chance of demonstrating the infectivity of the bovine bacillus from the human animal. Many authors, among whom is Bovaird[1], claim that tubercle bacilli are found in milk only when the udder is diseased. On the other hand, Ravenel[6] is able, from actual experimental studies, to state that, while tuberculosis of the udder is the most dangerous condition, we cannot by any means regard the milk of cows with general tuberculosis, but without disease of the udder, as being safe for food. The danger is not limited to those herds which harbor one or more cows with udder tuberculosis, and he does not agree with the writers who attempt to belittle the dangers to which milk-fed babies are exposed by pointing out the comparative infrequency of tuberculosis of the udder.

The English observers have reported more cases of primary intestinal tuberculosis than have been reported from American sources. But primary intestinal tuberculosis does occur in the United States, 1% according to Northrup[16]. One of the most recent cases was published by Bovaird.[1] The patient was a male, aged 3 years, who had always been weak and sickly. In October, 1899, he had an attack of measles, which was complicated, toward the end of its course, by an attack of bronchopneumonia, with severe, ulcerative stomatitis and an eruption of boils on many parts of the body. The pulmonary signs cleared up, and the condition of the mouth improved, but subsequently the gangrenous process extended and signs of bronchitis appeared. During the progress of the gangrenous stomatitis the patient had from 4 to 6 semifluid stools daily which contained mucus and undigested food, but no blood. The patient died, and the autopsy showed tuberculous lesions on the intestine and the peritoneum and in the mesenteric and the bronchial lymphnodes, which leave no doubt that the primary infection was in the mesenteric lymphatics.

Wolff[15] reports a case of primary intestinal tuberculosis in which injections of the splenic pulp into guinea-pigs produced tuberculosis. The organs of these guinea-pigs produced pearl disease in a calf that had previously failed to react to tuberculin. Nicoll[17] also reports a case of primary intestinal tuberculosis.

It must be remembered, however, that primary tuberculosis of the digestive tract must not necessarily manifest itself in the intestine or in the mesenteric lymphnodes. The tonsil is frequently the seat of the primary lesion, and the extension from the tonsil to the mediastinal lymphnodes, by way of the cervical lymphnodes, and thence to the lung, is probably quite frequent (Weichselbaum[12]). Indeed, Flick[7] remarks that the shortest and quickest way into the blood is by way of the alimentary canal, and the probabilities are that this is the way by which the tubercle bacillus most frequently gets in. The route by the stomach, intestines, lacteals, thoracic duct and vena cava is continuous and direct.

It appears that the writers on this subject have shown conclusively that human and bovine tuberculosis are intertransmissible, and we can endorse Flick's statements that "stamping out tuberculosis in the human race and stamping out tuberculosis in domestic animals are undertakings which should run along parallel lines and not at cross-sections. They do not depend one upon the other nor should they be allowed to interfere one with the other."

Among recent papers criticizing Koch's unequivocal statements are those by Disselhorst[18] and Hamilton.[19] The latter author says that, in spite of what Koch has asserted, the general inclination at the present time is to regard bovine tuberculosis as equally virulent for man and most of the domestic animals. We read from the daily press, however, that Koch reiterated his statements at the last Tuberculosis Congress and that he characterized the American studies as incomplete.

Since the preparation of this summary Koch's paper has appeared in full[21]. He says that, in order to prove that tuberculous infection passed from one of the lower animals to man, the cases must fulfil the following conditions: (1) They must furnish certain proof of tubercle in general and, when possible, the primary focus must be supplied; such proof as may be obtained from the existence of unassailable clinical symptoms or, in the absence of these, the evidence of a necropsy. (2) Other sources of infection must be excluded with certainty. (3) In each case of alleged infection from milk infected with *perlsucht*, the condition of the rest of the people who have taken the same milk should be attended to. Of all the cases reported in the literature as being examples of infection from animals, in only 10 it is stated that a necropsy was held and only 7 of these are said to have had intestinal tuberculosis. In only 3 cases is it asserted that the milk came from a cow with tuberculous udders. In not a single one are other possibilities of infection excluded with certainty. In no case is anything stated about the condition of other people concerned.

It is undoubtedly true that the majority of cases of human tuberculosis are due to the human tubercle bacillus, but that is no reason why we should neglect the prophylactic measures of condemning tuberculous meat and tuberculous milk (Adami[8], Cattle[11]). It is, we think, a mistake to adopt extreme opinions concerning the organism causing the disease; while admitting that there are differences in the two varieties of tubercle bacillus, they probably belong to the same parent stock and have been modified by their habitual environment in man or in the lower animals (Ravenel[6], Arloing[9]).

REFERENCES.

1. David Bovaird. Jr. Arch. Pediat, December, 1901.
2. A. Heller. Münch. med. Woch., April 15, 1902.
3. Hüls. Münch. med. Woch., June 17, 1902.
4. P. Krause. Münch. med. Woch., June 21, 1902.
5. Mazyck P. Ravenel. Proc. Path. Soc. Phila., January, 1902.
6. Mazyck P. Ravenel. Proc. Path. Soc. Phila., May, 1902.
7. Lawrence F. Flick. Phila. Med. Journ., March 22, 1902.
8. J. George Adami. Boston Med. & Surg. Journ.. June 5, 1902.
9. S. Arloing. Gaz. Heb. de Méd. et de Chirur., December 20, 1901; La Presse Méd., Feb. 12, 1902.
10. D. A. de Jong. Sem. Méd., January 15, 1902.
11. C. H. Cattle. Brit. Med. Jour., February 22, 1902.
12. Anton Weichselbaum. Wiener klin. Woch., April 10 and 17, 1902.
13. Johannes Fibiger and C. O. Jensen. Berl. klin. Woch,, Sept. 22, 1902.
14. J. Orth. Berl. klin. Woch., August 25, 1902.
15. D. Wolff. Münch. med. Woch., July 31, 1902.
16. A. P Northrup. Brit. Med. Journ., September 17, 1902.
17. M. Nicoll. Arch. Pediat., May, 1902.
18. Disselhorst. Münch. med. Woch., July 8, 1902.
19. D. J. Hamilton. Brit. Med. Journ., September 27. 1902.
20. George Dean and Charles Todd. Lancet, November 1, 1902.
21. R. Koch. Deutsch. med. Woch., November 27, 1902. Brit. Med. Journ., December 20, 1902.

LA PRESSE MEDICALE.

December 27, 1902.

1. Hemapheic Jaundice.
A. GILBERT and M. HERSCHER.
2. The Ferments of Milk.
P. NOBECOURT and P. MERKLEN.

1.—**Hemapheic icterus** is a condition characterized by cutaneous, blood and urinary symptoms. The skin is of a slight yellow color, a sort of abortive jaundice; the face is most affected, while the palms of the hands and soles of the feet often show the icterus also. The blood-serum is hypercolored, with greenish reflections, showing the presence of biliary pigment by Gmelin's test. The urine is amber or somewhat brownish in color, leaving reddish stains. It gives Gubler's reaction with nitric acid, since it contains much urobilin and bile salts, rarely also biliary pigments. The condition is due to slight cholemia, accompanied with marked oliguria. In most cases the icterus is acholuric, because the biliary pigments in the blood-serum have been totally changed into urobilin. Very rarely it may be choluric. [M. O.]

2.—Nobécurt and Merklen review the work done by the discoverers of **the various ferments in milk,** giving in detail the differences between the ferments found in the **milk of human beings and animals.** They find that all are found in the milk of women, dogs and asses; but, while the rest are found in cows' and goats' milk, amylase and the salol-splitting ferment are absent. Thus it is that asses' milk, in its ferments, most approximates mother's milk. Investigations show that both amylase and the salol-splitting ferment exist already during intra-uterine life. Amylase is constantly present in the feces and urine of suckling infants. They conclude that the differences in the ferments found in breast-fed and artificially-fed infants are quantitative, not qualitative. The literature of the subject is fully reviewed. On account of the difficulty of experimentation upon this line, there is as yet but little known of the value of the ferments of milk. [M. O.]

Original Articles.

CRYOSCOPY,

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Cryoscopy (*kruos*, cold; *skopein*, to observe) is the determining of the freezing-point of a solution.

The honor of precedence in this field belongs to Raoult, who formulated the laws governing the freezing-point of solutions, which laws are also practically the laws of osmosis:

The degree of the freezing-point (*delta*), as well as the osmotic pressure, is dependent only upon the number of molecules in the solution, the nature, size and variety of molecules being immaterial.

The osmotic pressure of a solution being known, its *delta* can readily be determined from the following: The osmotic pressure of a 1% solution of cane sugar at 0° C. is equal to a column of mercury, 49.3 cm.

The *delta* of the same solution is 0.055°, whence, if the *delta* of a solution is —1°, the osmotic pressure of such a solution is equal to an 896.37 cm. column of Hg, or a 121.8 m. column of water.

For determining the *delta* of a solution the Beckmann apparatus is preferable. This consists of a special thermometer, graduated into one-hundredths of a degree, reading from +1° to —4°, and situated in a stout glass tube about 6 inches deep, one inch wide and with the mouth of the tube larger than the body for the reception of the stopper which maintains the thermometer in place, the lower end of the bulb being about ¼ inch from the bottom of the tube; the stopper also maintains a spiral stirrer, generally of copper, which rests on the bottom of the tube. A larger glass tube of similar design is used to receive the smaller one, into which it fits comfortably and without touching. The outer tube is supported from the center of the cover of the Beckmann jar, which is of 2 liters' capacity. The cover of the jar ought also to support an ordinary centigrade thermometer, the bulb of which should extend to nearly the bottom.

Salted, cracked ice, ether or carbon bisulphide may be used as a cooling medium. The ice mixture is preferred, being cheapest and easily prepared.

Fill the Beckmann jar about two-thirds or three-quarters with ice mixture, which should be salted sufficiently to lower the temperature to about —4° or —5° C., as indicated by the ordinary thermometer. Pour enough of the solution to be examined into the smaller tube completely to immerse the bulb of the thermometer, when same is in place. The cooling of the solution may be brought about by placing the smaller tube into the larger, which serves as a cold chamber, or the process may be greatly accelerated by introducing the smaller tube with the solution directly into the ice mixture contained in a separate vessel, as a pint-jar.

While the cooling takes place, stir the solution sufficiently to prevent the formation of ice in the tube and to insure a uniform temperature of the solution. As the solution becomes supercooled, depending upon the concentration of the solution, crystallization begins and the mercury is seen to rise rapidly. At this point introduce the tube into the large tube and stir more vigorously, noting carefully the highest point reached and maintained at least twenty seconds by the mercury. This point will indicate the freezing-point of the solution. The process takes from 5 to 10 minutes. At the time when the reading is taken the solution should be a uniform, moderately thick slush, containing no solid ice masses.

The Beckmann thermometer should be tested with distilled water about once a month, and corrections made in the readings as necessary, *i. e.*, should the mercury register +0.08° as the *delta* of distilled water, +0.08° must be added to the reading, which, we will say, is —1.4°, or the corrected reading is —1.32°, etc. Keep the thermometer, when not in use, at a uniform temperature, preferably below room temperature, and in vertical position. Should ice form *en masse* on the bottom or sides during the process, it must be completely melted and the process repeated. In these cases, in which ice is apt to form, the cooling mixture is probably too cold or the stirring inadequate. The crystallization of the solution can be hastened by dropping a little of the frost that gathers on the outside of the jar through a small hole in the stopper when the solution is supercooled. I believe the spontaneous crystallization following a greater supercooling yields results quite as accurate.

Though long known to physical chemistry as a very accurate means to determine the molecular content of a solution, cryoscopy was not employed in the examination of animal fluids until 1892. Dreser, in order to determine the osmotic pressure of urines in the determination of the amount of work spent by the kidneys in the formation of urine, introduced cryoscopy.

Dreser determined the *delta* of normal urines and found it to vary from—1.2° to—2.3° C. He likewise determined the freezing-point of normal blood and found it to be —0.56° C.

The smallest *delta* of urine observed by Dreser was —0.16°, in which case the *delta* of the blood was normal, or —0.56°, or a difference of 0.40°, corresponding to a 49 m. column of water. The greatest or lowest *delta* observed by Dreser was —4.72°, in which case the *delta* of the blood was —0.66°, a difference of 4.06° and equal to a 498 m. column of water. Dreser believed the value of the first case to represent very nearly the secretory activity of the kidney, or glomerular activity, and, because values representing at least ten times as much work as the supposed secretory activity were observed, he concluded that there must reside in the kidneys another factor, a resorptive one, far more powerful than the secretory.

From a comparative study Hufner concluded that in the narrow part of Henle's loops absorption of water and thereby concentration took place, having observed that animals, like the dog, which consume a small quantity of water and void a concentrated urine, have long, convoluted tubules, while others, as fishes, which consume much water and void a dilute urine, have relatively very short, convoluted tubules. In other words, concentration increases with the length of the tubules.

The bloodpressure is normally equal to a 2.72 m. column of water, from which Dreser concludes that there must be another factor than mere filtration residing either in the capillary wall or in the membranous epithelium, or in both. Dreser expressed his results corrsponding to the amount of work spent in hyper- and hypo-isotonic urines by mathematical formulæ, in which X represented the glomerular secretion and X_2 the urine as it left the kidney tubules.

Following this work of Dreser was the remarkable series of investigations by A. von Koranyi in order to determine the diagnostic significance of the osmotic pressure of different physiological and pathological animal fluids, particularly of the urine and the blood.

If we may judge the value of Koranyi's work by the widespread interest it aroused among scientific clinicians, it may be truly regarded as epoch-making, and, even though his theories may not be universally accepted, he still remains *"the"* exponent of cryoscopy.

Koranyi concludes that urea and sodium chloride (NaCl) are the urinary constituents that chiefly influence the *delta*, and that for practical purposes the other urinary constituents can be ignored because of their minute quantity.

His work is based on the theory that:

(1) The glomeruli furnish a practically pure NaCl solution of an osmotic pressure equal to the osmotic pressure of the blood, or a 0.91% NaCl solution, and with a *delta* of —0.56° C.

(2) Water is absorbed from the glomerular secretion by the tubular epithelium.

(3) Urea is excreted into the glomerular secretion through the activity of the tubular epithelium.

(4) For each molecule of urea excreted into the glomerular secretion, one molecule of NaCl passes from the glomerular secretion into the blood through the epithelium of the convoluted tubules, constituting a "Molecular Austausch" or interchange of molecules.

The theory he bases on the following observations:

(1) The glomerular secretion is very largely dependent upon circulatory activity; hence, in cardiac incompetency, when the circulation is slowed, besides a diminished secretion the water is more completely absorbed from the glomerular secretion, the NaCl is very much diminished and the urea correspondingly increased in the urine, the *delta* being quite low. In these cases digitalis or some adequate cardiac stimulant causes the reverse to be observed.

(2) In ligating the ureters the chlorides disappear almost entirely from the urine, while the urea increases very much.

(3) In anemic states with degeneration of the epithelial cells of the convoluted tubules there obtains a diminished absorptive power on the part of the tubular epithelium with a consequent diminution of the *delta*.

(4) The solid content of the urine is poor in the NaCl in comparison with the solids of the blood, and the loss in NaCl from the secreted urine is equivalent to the urea or the achlorides of the urine.

In his cryoscopical investigations of urines Koranyi determines the *delta*, the NaCl content (Volhardt's method) and the sodium chloride equivalent of the total solids; the latter thus:

The *delta* of a 1% NaCl solution is —0.613° C., from which the *delta* of any solution would equal that of a $\frac{\textit{delta}}{0.613\%}$ NaCl solution, or the examined solution and a $\frac{\textit{delta}}{0.613\,\%}$ NaCl solution are equimolecular. Let X be the volume of solution to be examined, then the *delta* of this solution is equal to the *delta* of a $\frac{\textit{delta}\ .X}{61.3 \text{ gm.}}$ NaCl solution, or $\frac{\textit{delta}\ .X}{6.13 \text{ gm.}}$ is the NaCl equivalent of the solid substances in solution; whence $\frac{\textit{delta}\ X}{6.13}$ minus the NaCl in the solution leaves the NaCl equivalent of the chlorine-free bodies in solution or the achlorides. The NaCl equivalent of the total solids in a normal adult's 24 hours urine ranges between 25 and 51 gm.

The *delta* of normal urines varies from —1.3° to —2.2°, the daily variation in a given individual, environments unchanged, being less than 0.1°. The relation $\frac{\textit{delta}}{\text{NaCl}}$ upon which the greatest importance attaches, varies from 1.23 to 1.69 in health.

By parallel examinations of the urine and the blood Koranyi shows that variations in $\frac{\textit{delta}}{\text{NaCl}}$ in the urine are dependent upon variations of the same factor in the blood; that the relative NaCl content of the urine rises and falls with the same changes in the relative NaCl content of the blood, relative meaning the relation of NaCl to *delta*; that diet causes marked changes in the *delta* of NaCl of urine and very slight changes in the same factor in the blood; that a small increase of sodium chloride in the blood causes a marked increase in the NaCl in the urine. Expressing these relations by a mathematical equation, he is able to show that the number of chlorine-free and chlorine-containing molecules of the blood maintain the same ratio as do the number of chlorine-free molecules in the urine to the total number of molecules in the urine.

In comparison with the blood there are wanting in the urine as many chlorine molecules as the urine contains chlorine-free molecules.

A certain parallelism was detected between the $\frac{\textit{delta}}{\text{NaCl}}$ and $\frac{\text{N}}{\text{NaCl}}$. N=nitrogen content of urine. In general $\frac{\text{N}}{\text{NaCl}}$ rises with the *delta* of NaCl, though not proportionately. The variations, minimum and maximum of $\frac{\text{N}}{\text{NaCl}}$ are as 100 to 166; those of $\frac{\textit{delta}}{\text{NaCl}}$ only as 100 to 127, showing that the value of $\frac{\textit{delta}}{\text{NaCl}}$ is little dependent upon the amount of albumin which is broken down and excreted in comparison with the NaCl. Nevertheless, the N content of the chlorine-free bodies is changeable, especially when in comparison with the excretable NaCl much albumin is destroyed, in which case the disintegration of the albuminous molecule does not go so far as when in comparison to the excretable NaCl little albumin is disintegrated. From which the extent to which katabolism is carried is determined, at least partly, by the quantity of NaCl the body can excrete.

Should, then, the kidney function become impaired and molecular oliguria result, with the consequent rise in the osmotic pressure of the blood, metabolism makes an attempt at compensation by bringing about:

(1) A diminution in the quantity of albumin broken down; here the N content of the urine sinks; (2) the same result would be brought about by a disintegration of the normal number of albumin molecules less completely; here the N content in the urine remains unchanged, the molecules being larger; or, (3) the increased osmotic pressure may lead to a diminished excretion of water, to increasing thirst and to the absorption of body-fluids, to plethora with hydremia and finally, dropsy, which, under the altered conditions, may be necessary for the continuance of the metabolic processes.

Koranyi's clinical summary follows:

I. *Urine.*—

1. In anemia the *delta* is less than —1.4°, increasing with improvement.

2. In nephritis the *delta* is very small, prognosis being more favorable with an increase in the *delta* and *vice versa.*

3. In anemia, kidney insufficiency and poor nourishment, molecular oliguria obtains, the degree of oliguria being a measure of the disorder.

4. With an acceleration of renal circulation the sodium chloride secretion increases more rapidly than the secretion of other solids; therefore the $\frac{\textit{delta}}{\text{NaCl}}$ is smaller than when the circulation is slowed, when, in turn, NaCl suffers most.

Should the $\frac{\textit{delta}}{\text{NaCl}}$ exceed 1.7, a slowed renal circulation may be diagnosed, the first indication also of slowing of the greater circulation in heart disease.

In hydrothorax or ascites, if the $\frac{\textit{delta}}{\text{NaCl}}$ increases, the exudate increases; if the $\frac{\textit{delta}}{\text{Nacl}}$ is constant, so is the exudate; if the $\frac{\textit{delta}}{\text{NaCl}}$ decreases, resorption is in progress.

5. In fever, if the $\frac{\textit{delta}}{\text{NaCl}}$ is less than 1.7, we should diagnose malaria, otherwise exclude it.

II. *Blood.**

1. With the *d* less than —0.56°, an anemia or a febrile condition without influence on the respiratory function is present, such as chlorosis, tuberculosis, cachexia.

With the *d* greater than —0.56°, there exists a respiratory or renal insufficiency or a combination; to differentiate, if under the influence of oxygen the *d* rises to —0.56°, the respiratory function only is at fault; if the *d* is uninfluenced by oxygen, the kidneys are at fault; if oxygen reduces the *d* only partly, but not to normal, both are deficient. Thus, in pneumonia, oxygen ought to bring the *d* to —0.56°, while in typhoid oxygen would have no influence upon the *d*, provided the lungs were unaffected.

3. If pus and blood appear in the urine which cannot be accounted for clinically, and the *d* be greater than —0.56°, probably one or both kidneys are the source. If only one kidney seems diseased and the *d* is not reducible to normal by oxygen, vicarious action has not yet developed fully on the part of the sound kidney. Either both kidneys are involved or the vicarious process is still in the developmental stage. If oxygen does reduce the *d* to —0.56°, administer oxygen until the *d* is normal and operate if indicated.

4. When the *d* is above normal in anemia or chlorosis, and if the *d* is uninfluenced by oxygen, renal epithelial insufficiency is the diagnosis.

Among the first to investigate the interchange theory and Koranyi's results was Lindemann, whose reported work rests upon the investigation of renal congestion as observed in various valvular and myocardial diseases, six cases; acute parenchymatous nephritis, four cases; chronic parenchymatous nephritis, in three of which the change to secondary contracted kidney was observed, six cases; primary contracted kidney, four cases, and upon the determination of the concentration of the blood in kidney diseases—a contribution to the study of uremia.

Lindemann opposes the interchange theory because he observed marked variations in the value of the quotient $\frac{\textit{delta}}{\text{NaCl}}$ upon which Koranyi places the greatest value, and because the different values of the *delta* and the NaCl permit of only slight changes in the percentage of the NaCl of the blood which is to be determined. Likewise, in some of the congestion cases, in which the current of the urine is slow and the interchange relatively complete, the N content was found to be very small, whereas in such cases it ought to be high.

Lindemann concludes that:

(1) Concentration of urine can be very exactly determined by the freezing-point method, the *delta* furnishing an estimate of the functional capacity of the kidneys.

(2) The determination of the *delta* with the daily amount of urine excreted permits of a differential diagnosis between albuminuria without nephritis and with nephritis.

(3) and (4) The *delta* in all kidney inflammations is much less than normal (—1.3° to —2.3°), being generally less than —1°, volume of urine excreted being moderate.

(5) The *delta* shows characteristic differences between parenchymatous and interstitial nephritides, the former having a greatly diminished concentration, together with a diminished excretion. It does not differentiate the acute and the chronic parenchymatous. Likewise, the secondary contracted kidney takes a position between the chronic parenchyma-

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*d represents the freezing-point of the blood, —0.56 being normal.

tous and the primary contracted kidney, the latter having a *delta* near to the normal.

(6) The *delta* of the urine is frequently less than the freezing-point of the blood.

(7) Restitution in the parenchymatous forms is characterized by the approach of the *delta* to normal.

(8) In the passage from the chronic parenchymatous to the secondary contracted kidney the *delta* gradually increases and attains to values similar to those in primary contracted kidney.

(9) The albuminurias in congestion of the kidneys, fever, cystitis and pyelitis are characterized by an absence in the diminution of the *delta*. Exceptions are seen in case of collapse, in which a small volume of urine is excreted and the *delta* is greatly diminished.

(10) If, in pyelitis or cystitis, a diminution in the *delta* is observed, the volume excreted being moderate, the passage of the inflammatory process to the kidney structure is diagnosable.

(11) The determination of the total solids in nephritic urines often permits of the conclusion of a retention in the blood of substances that should be excreted.

With reference to uremia, Lindemann says:

(1) in nephritis the *d* of the bloodserum is normal (—0.56°) until symptoms of uremia arise.

(2) In uremia there is an increase in the osmotic pressure of the blood, the *d* may be as low as —0.70°.

(3) This increase in the osmotic pressure is the common expression of the existing disturbance in uremia; it likewise explains most of the uremic phenomena.

(4) The phenomena following the injection into the circulation of large quantities of concentrated saline solutions are the same as those seen in uremia, being due to the inability of the eliminating functions and the body-tissues to prevent a rise in the osmotic pressure of the blood.

Richter and Roth claim that purely physical methods cannot furnish a differential diagnosis between renal sufficiency and insufficiency, sufficiency being the ability of the kidneys to excrete the varying quantities of metabolic products continuously.

That the examination of the blood may subserve practical purposes, there must be determined the following:

(1) The totality of retained products; (2) a physiological standard; (3) a method sufficiently simple to be available clinically.

They believe cryoscopy will answer these requisites by determining the concentration of the blood, a constant freezing-point (*d*) of the blood being a sign of renal sufficiency and an inconstant *d* a sign of renal insufficiency.

In nephritis, hydro- and pyonephrosis and kidney tumors the *d* is increased.

In double nephrectomy the *d* increased rapidly till death.

In a one-sided nephritis the *d* does not increase if the other kidney is normal and doing the work of compensation.

In experiments with hematogenous poisons the *delta* of the urine became diminished, pointing to a retention of solids in the blood.

(*a*) In cantharides or aloin poisoning, in which the glomeruli are chiefly involved, a molecular retention in the blood follows quickly and becomes decided. A ratio between the severity of the anatomical changes, the degree of retention of products and the *delta* of the urine and blood, is observed, the molecular retention furnishing a closer parallel to the anatomical changes than the albuminuria.

(*b*) In tubulonephritis, caused by potassium bichromate, there is less likelihood of molecular retention and no distinct ratio between the anatomical lesions and molecular retention.

(*c*) From potassium oxalate, infarcts in the tubular epithelium, interstitial hemorrhages and small cell infiltrations with plugging of the tubules were observed with a diminution in the amount of urine secreted and a consequent molecular retention in the blood.

In cases of molecular retention in the blood the NaCl is often found to be present in quantities less than normal.

Richter and Roth believe that surgery gains most from cryoscopy.

J. Kiss criticizes Dreser's work. When the *delta* of the urine and the blood are the same, Dreser offers no explanation, the natural conclusion from his formulæ being that in such a case no work is expended, a conclusion manifestly incorrect, especially when we find the freezing-point of milk and bile to be the same as the *d* of the blood, the products of glandular activity, just as urine is the product of glandular activity.

Kiss considers Koranyi's theory, Ludwig's filtration theory adapted to Dreser's formulæ, and finds the only reason for the "molecular interchange" in supposing the kidney-glandular activity to be a special kind of osmosis. If this were granted, it would remain to be explained why the glomerular secretion is a 0.91% NaCl solution (for such a solution has the same freezing-point as the normal blood, or —0.56°), while the blood contains only about 0.58% of NaCl. The water absorbed by the tubular epithelium is from three to five times the volume of urine excreted; a physical explanation is unable to show why water passes from a more concentrated to a less concentrated solution.

Further, because the *delta* of NaCl and the same factor in the blood vary little, Koranyi concludes that there must be a relationship, which he expresses by an empirical equation, from which, by arbitrary deductions, he shows a common relationship which does not appear in fasters, in those on milk-diet or when the NaCl of the urine is small in comparison with the molecular content of the urine. Kiss believes the concentration of the blood to be determined by the nervous system, though the kidneys play an important role.

Consequently, he holds that the *d* of the blood is not a sign of the intensity of kidney insufficiency, but that an abnormal value in the *d* of the blood points to disturbance in the organism. He considers a *d* of the blood greater than —0.56° no absolute contra-indication to a surgical operation.

Kiss determines the specific gravity from the *delta* of the urine, and *vice versa*, by the formula *delta*
S—1
(*S* being the specific gravity), provided fever is absent and albumin is removed if present.

Kiss thinks cryoscopy has served a good purpose in having directed attention to the molecular concentration of the urine and the blood, but possessing nothing superior to specific gravity.

Waldvogel advises rapid stirring in the presence of excessive amounts of urates and phosphates. In purulent urines the *delta* is, as a rule, greater after the pus is removed by filtering, from 0.03° to 0.07°. He advises against the removal of albumin, especially by boiling, because of the consequent molecular changes.

Waldvogel observed a febrile albuminuria which differentiated itself from acute parenchymatous nephritis not only by the absence of a marked albumin content and casts, but also by the absence of a diminished concentration. He saw other cases of albuminuria in which a renal lesion could not be diagnosed from the *delta*, the $\frac{\textit{delta}}{\text{NaCl}}$ and the $\frac{\textit{delta}}{\text{N}}$ determination.

From such observations his hopes in the clinical application of cryoscopy of the urine fell, not only as a diagnostic aid, but also as a prognostic measure.

In double nephrectomy he observed the concentration of the blood to increase gradually, the increase being uninfluenced by venesection, by the transfusion of normal saline solutions or of distilled water. He found that the concentration of the blood may be much increased, yet the animal appear normal, and that convulsions do not always accompany marked uremia, wherefore he does not wait till the convulsions come on before transfusing.

In answer as to how a sound kidney acts upon the removal of its mate, Waldvogel says the volume of urine excreted is markedly diminished during the day following the operation, the volume returning to normal by the first or second day after the operation. Then follows an excessive excretion, followed by a gradual sinking to the normal. The *delta* of urine may be abnormally small on the day following the operation, increasing gradually so that *delta* times *v*, the volume, becomes abnormally high a few days later. If the *delta* does not increase in value, the increased volume may suffice to bring about a sufficient excretion. If in a few days after operation, even if normal conditions have been established, a sudden rise in the $\frac{\textit{delta}}{\text{NaCl}}$ and a corresponding fall in $\frac{\textit{delta}}{\text{N}}$ and a diminution in $\frac{\textit{delta}}{v}$ values be observed, the remaining kidney is diseased. Waldvogel does not sustain the "molecular interchange theory.

Casper and Richter, in a remarkable work covering ninety well-selected cases, show that the sufficiency of the total kidney function cannot be determined from the examination of the urine only. They not only determine the *d* of the blood, but, wherever indicated, they catheterize the ureters and test the permeability of both kidneys with methylene blue (Achard and Castaigne) and the power of each kidney separately to form and excrete sugar under the influence of phloridzin. They show that, even if N be retained, a diminished functional capacity of the kidneys cannot be diagnosed, nor can the NaCl determination, though very important, or the *delta* determination, make the diagnosis absolute, because the latter, especially, must vary with the amount of water excreted. On the other hand, they believe the determination of the *d* of the blood will determine the total kidney sufficiency. To determine the functional capacity of one kidney, they collect the urine from each kidney separately by catheterization and find that the *delta* of the urine from a diseased kidney is invariably diminished, ranging between 0° and —1°. The sugar formation and excretion is likewise retarded or altogether absent, while methylene blue appears more quickly or more slowly, depending upon whether the lesion is of a parenchymatous or of an interstitial nature. A few cases from Casper's work illustrate the results of this method very strikingly:

CASE 1.—Right-sided renal colic. Urine from right kidney showed a *delta* of —0.95°, sugar .8%, N. 24%. Urine from left kidney showed a *delta* of —1.06, sugar 1.2%, N. 38%.

CASE 2.—Tumor in right hypochondrium. The separate examination of the urines from the two kidneys showed no changes. The operation revealed an adrenal tumor.

Likewise did Casper diagnose nephralgia from calculus, inasmuch as the nephralgic kidney furnished a urine resembling nephritic urine, Casper believing nephralgia to be a frequent cause of nephritis.

Strauss established the important fact that normally the values for the *delta*, the NaCl and the N content vary continually, but that physiologically the variations are the same in the urines from both kidneys. Pathologically these values vary in the urines from the two kidneys at a given time, being less in the affected kidney or in the kidney most severely affected.

Strauss believes that, unless the quantity of liquids taken into the system and the amount eliminated be determined and the associated metabolic processes be at the same time investigated, no diagnostic value can be attached to the *delta* of the urine.

Strauss, as well as Kimmell, have frequently diagnosed nephralgia by the methods mentioned and believe it to be a cause of one-sided nephritis and and an indication for splitting the kidney capsule.

Of the numerous French works on cryoscopy, that of Claude and Balthazard may be considered as fairly representative and very complete. From an abundant material in Bonchard's clinic they follow out Koranyi's theory very faithfully and conclude that cryoscopy with the aid of the NaCl determination is evidently unable to establish a morbid entity, which can only be established by an etiological and anatomopathological study, on the one hand, and by the symptomatology and evolution, on the other. It points only to disturbed function, being a very delicate method to appreciate circulatory modifications consequent upon incompensation and modifications brought about by therapeutical measures, as digitalis, gymnastics, etc.

Bouchard considers the determination of the mean molecular weight of urinary bodies of great importance. The formula $M=\frac{KP}{C}$ gives the molecular weight, when P is the weight of the total urinary content minus the NaCl in 100 cc. urine, C the *delta* of the same substance in 100 cc. urine, K a constant equal to 18.5. The mean molecular weight is always above 60, the molecular weight of urea. In health the mean weight ranges between 62 and 68, and in disease it may go to 112.

Bouchard's argument rests on the statement that the more perfect the nutrition, the more complete is the destruction of albumin, the smaller will be the end molecules of katabolism, the more urinary N will be found in the form of urea, the more rapid and complete will be the elimination, and the less danger will there be of a retention of molecules of katabolism.

Lesné and Merklen find the *delta* of the urines of the newborn very small, about —0.25° during the first month, increasing to —0.41° during the second month and gradually increasing. The NaCl eliminated is also quite small. In gastro-enteritis both the value of the *delta* and the $\frac{\textit{delta}}{\text{NaCl}}$ increase very much, especially in acute cases, due, they say, to renal stasis.

Under the direction of Dr. George Dock I have investigated the cryoscopy of urines in the clinical laboratory at the University Hospital for more than a year. As the material from all the departments was available, I was afforded a rich assortment of pathological urines, including cases of congestion of the kidneys, acute and chronic parenchymatous and interstitial nephritis, renal calculus, malignant tumors of the kidney, diabetes, uremia, valvular and myocardial diseases, blood diseases, acute exanthemata, infectious diseases, postoperative cases and cases from the neural clinic.

The Beckmann aparatus was used and the method as described above. The NaCl was determined by Volhardt's method, and the urea by the Doremus apparatus. From the study of a large number of normal urines and over 400 determinations of pathological urines we are led to conclude that:

(1) Cryoscopy cannot replace, but only supplement, the older qualitative tests and microscopical examination of urines.

(2) It is probably the most delicate test we possess in detecting and estimating the effect of therapeutic measures directed toward cardiac and kidney lesions.

(3) It permits of reasonable accuracy in diagnosing renal insufficiency and the type of renal lesion present, though the examinations should be prolonged over a number of days; our conclusions coinciding with Lindemann's.

(4) Uremia cannot be diagnosed from the examination of the urine alone.

(5) Cryoscopy of the urine from each kidney, obtained by ureteral catheterization, and especially when supplemented by the phloridzin and methylene blue tests, becomes a very delicate and reliable test in determining a unilateral kidney lesion and the degree of insufficiency of the affected kidney.

Because of an insufficient number of cryoscopic examinations of the blood, we cannot criticize the "interchange" theory of Koranyi.

Finally it becomes my pleasant duty to express my gratitude to Prof. Dock, my former chief, for his many wise suggestions and continued interest in my work.

BIBLIOGRAPHY.

1. Dreser. Archiv. v. exper. Path. u. Pharmacol., Bd. XXIV, H. 5 and 6.
2. v. Koranyi. Zeitschrift f. klinische Med., Bd. XXXIII, XXXIV, Centralbl. f. d. Krank. d. Harn u. Sexual Organ, XI, 1900. Deutsche med. Woch., XVII-XVIII.
3. Lindemann, Deut. Archiv f. klin. Med., Bd. 65.
4. Richter u. Roth. Berlin klin. Woch., Nos. 30-31, 1899.
5. Kiss, J. Berlin klin. Woch., 1899.
6. Waldvogel. Deut. med. Woch., No. 46, 1900; No. 16, 1901.
7. Casper and Richter. Urban u. Schwarzenberg, '01, Wien.
8. Casper. Berl. klin. Woch., '01.
9. Strauss. Berl. klin. Woch., .01'
10. Kuemmell. Berl. klin. Woch., '01.
11. Claude et Balthazard. La Cryoscopie, '01.
12. Bouchard. Compt. Rend. Hebd. de la Soc. de Biolog., 1899.
13. Lesne et Merklen. Soc. de Biolog., '01.
14. Senator. Deut. med. Woch., '00.
15. Rumpel. Aerzt. Verein in Hamburg, Oct., '02.

TRUNECEK'S SERUM, AND ITS VALUE IN DISTURBED CEREBRAL FUNCTIONS CAUSED BY CIRCULATORY CHANGES, WITH REPORT OF TWELVE CASES.*

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The influence of the circulation on the function of the brain is of greater consequence than in any other organ of the body. Anemia, active or passive congestion, hemorrhage, vasomotor disturbances may all lead to permanent or transitory derangements of the cerebral functions.

A softening secondary to an embolism or to a thrombosis, transitory paresthetic, paralytic or only paretic symptoms of a monoplegic or hemiplegic character so frequently met with in arteriosclerosis, are the *bête noire* in neurological therapeutics. Iodides, nitrites (A. Gordon, "The Effect of Nitroglycerine in Vascular Disturbances of Functions of the Brain," *Therap. Monthly*, December, 1901) and mercurials are all means by which we can expect some amelioration of symptoms, but as to the possibility of a permanent removal of the cause of the disturbed functions, we are still at a loss. Syphilitic infiltration of the cerebral vessels, however, is practically the only affection the amelioration of which can be obtained to a far greater degree than in any other case.

The therapeutic arsenal in disturbed cerebral functions of a circulatory character is, therefore, meagre. For this reason, any newly announced remedy, no matter from what source it comes, should not be looked on with suspicion, and an impartial trial should be given it.

In April, 1901 (*Semaine Médicale*), Trunecek, of Prague, reported for the first time the effect of a combination of inorganic salts, especially devised by him for treatment of symptoms caused by arteriosclerosis.

The principle of his treatment consisted mainly in introducing into the circulation a dissolvent for calcium phosphate, which, as we know, is the main salt found in the walls of sclerosed bloodvessels.

In view of the fact that calcium phosphate is not soluble in water, but only in a solution of sodium phosphate and magnesium phosphate, which are found in normal bloodserum only in a feeble proportion (0.15 cgm. of the first, 0.48 cgm. of the other) and of sodium chloride which presents 70%, Trunecek conceived the idea of throwing these normal alkaline constituents into the general circulation of aged people, whose blood is relatively poor in these salts. The clinical experiments conducted by him in a number of cases with arteriosclerosis gave him the best possible results, and these are the conclusions he arrived at: All the usual symptoms, as dyspnea, asthma, vertigo, angina pectoris, also general health and strength, are greatly benefited by this serum. This is due, in his opinion, to the excess in the blood of salts, which show a favorable effect upon the process of regeneration of the vascular endothelium, which is usually altered in arteriosclerosis. Moreover, he states that the nutrition of the cardiac muscle is also greatly benefited and the heart-beats become more regular. The disappearance of dyspnea he explains by the increase in the alkalinity of the blood in general and especially of the blood in the medulla, the center of respiration.

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*Read at the Philadelphia County Medical Society, February 11, 1903.

Whether all these theories concerning the beneficial effects of his serum are correct or not, we do not wish to discuss, but the favorable results obtained from it are striking and must certainly appeal to every one who is interested in the progress of therapeutics.

Trunecek soon found followers. Léopold-Lévi, Tessier, Thiroloix, Goldschmidt, Marmisse and Merklen reported a number of cases with equally favorable results. The first writer, particularly, made a special study of the subject and applied the remedy to various marked conditions depending upon arteriosclerosis.

It is to be noted that the serum as first advocated by Trunecek was administered by hypodermic or intravenous injections. Léopold-Lévi, however, tried it in enemata and internally. The latter form gave him as good results as the subcutaneous form. He altered Trunecek's formula for the internal administration as follows:

Sodium chloride, 10 gm.; sodium sulphate, 1 gm.; sodium carbonate, 0.40 gm.; sodium phosphate, 0.30 gm.; calcium phosphate and magnesium phosphate, of each, 0.75 gm. M. ft. Cachets No. xiii.

The contents of each cachet corresponds to 15 cc. of the fluid serum or 150 cc. of bloodserum.

The original formula of Trunecek's serum is: Sodium chloride, 4.92 gm.; sodium sulphate, 0.44 gm.; sodium carbonate, 0.21 gm.; potassium sulphate, 0.40 gm.; distilled water, q. s., 100 cc.

Owing to the fact that this inorganic combination had proved to be so successful in the hands of competent and authoritative men for relieving the general troublesome symptoms caused by arteriosclerosis, we on our part attempted to apply the treatment to disturbed cerebral functions caused by circulatory changes of any origin.

As we mentioned above, the majority of cases have reference to the hypodermic treatment, but, as some writers reported a few unfavorable cases with the same mode of administration, we decided upon the internal treatment according to the modfied formula given by Léopold-Lévi. And these are the results:

CASE 1.—Mrs. M. B., aged 56 years, arteriosclerosis. Suffered from persistent vertigo, slight dyspnea, attacks of loss of memory and fainting spells. The iodides were used but without avail. Trunecek's serum was then administered (2 capsules a day). At the end of the ninth day results began to show; patient could go upstairs (5 flights), attacks of vertigo became very rare, dyspnea and fainting spells disappeared; she could memorize old and recent events.

CASE 2.—Mrs. A. G., aged 64 years, slight arteriosclerosis. Occasional attacks of angina pectoris. Marked loss of memory. Vertigo. Noises in the head upon exertion. Occasional confusion. A trial of iodides, nitroglycerine and milk diet gave no improvement. Trunecek's serum gave the following result: No more confusion. Vertigo only occasionally. Noises in head persisted. Results began to show on the eleventh day of treatment.

CASE 3.—Mr. V. O'N., aged 62 years, arteriosclerosis with chronic lead poisoning. Albuminuria, vertigo, cephalea, confusion, intelligence impaired. A protracted course of treatment with the usual means. Milk diet, iodides, nitrites gave some improvement. Far greater improvement was obtained with Trunecek's serum. When, however, the treatment was combined (the serum with the iodides), the patient's condition improved still more; the confusion totally disappeared, intelligence considerably better, but the vertigo remained as before. Cephalea became less pronounced. Results began to show on the seventeenth day of treatment.

CASE 4.—Mrs. R. M., aged 35 years, systolic murmur at the apex. History of inflammatory rheumatism 15 years ago. Attacks of vertigo and attacks of impairment of speech. At first no medical treatment, as the cardiac compensation was good. Regulation of the diet and of the mode of living made the condition less severe. Trunecek's serum was tried very cautiously and in gradually increasing doses. Great amelioration of symptoms. Vertigo much less marked; attacks of aphasia at longer intervals and of shorter duration. Results began to show on the tenth day of treatment.

CASE 5.—Miss M. P., aged 27 years. Attacks of vertigo and fainting spells. Chlorosis was present and proved by the blood examination. (Hemoglobin, 55%; erythrocytes, 3,500,000; leukocytes, 8,000; differential count normal in proportion, but the red cells showed marked poikilocytosis and a great many cells almost empty in the center). Iron, arsenic and appropriate régime gave some improvement, but it was too slow. When Trunecek's serum was added, marked improvement followed in the condition of the blood (hemoglobin rose to 75%) and especially in the cerebral symptoms which apparently were due to cerebral anemia. Results began to show on the fifteenth day of treatment.

CASE 6.—Mr. V. B., aged 54 years, arteriosclerosis. Frequent attacks of right hemiplegia transient in character, also paresthetic disturbances on same side. During the attacks the speech would also be impaired. Regulation of diet, iodides, also nitrites whenever the pulse would show high tension, improved the condition. However, the amelioration was slight. When Trunecek's serum was substituted for the iodides, the improvement was remarkable, as not a single attack occurred during 3 months, a fact which was surprising to the patient. As soon as the medication was discontinued, the attacks returned. The patient is still under this treatment, but the attacks are much milder in character and occur at longer intervals than prior to this treatment. Results began to show on the eighth day of treatment.

CASE 7.—Mr. Ph. L., aged 62 years, arteriosclerosis. Attacks of hemiplegia identical to those of Case 6. The iodides gave better results than Trunecek's serum. Because of vomiting brought on by each dose of the drug, it was discontinued.

CASE 8.—A. S., aged 35 years. A double murmur at the apex and the aortic area. Right monoplegia, aphasia, agraphia and amnesia. The symptoms were not very much pronounced. Iodides improved the patient but slightly, so did Trunecek's serum administered alone. When the drugs were combined, the symptoms cleared up to a great extent.

There is now only a slight misinterpretation of sentences and some words left out; but the paretic condition of the arm, aphasia and agraphia disappeared. Results began to show on the twentieth day of treatment.

CASE 9.—Miss M. McL., aged 27 years, valvular lesion. Attacks of vertigo, fainting spells, tingling sensation in the right arm and leg at times. Attacks of migraine affecting also the right eye. The ordinary cardiac remedies improved the patient. When they were substituted by Trunecek's serum, the symptoms returned. The drug was discontinued.

CASE 10.—Mr. P. L., aged 75 years, arteriosclerosis. Left hemiplegia of transitory character. Troublesome paresthetic symptoms on the same side (burning and sometimes numbness). No benefit was obtained from the iodides. Trunecek's serum removed the paresthetic disturbances entirely. Results began to show on the tenth day of treatment.

CASE 11.—Mrs. A. C., aged 35 years. Right hemiplegia with aphasia due, probably, to a thrombosis of specific degeneration of 3 months' standing. Trunecek's serum associated with the iodides gave great improvement, while the iodides alone gave only slight relief. Results began to show at the end of 2 weeks' treatment.

CASE 12.—Mr. G. P., aged 45 years. Complete left hemiplegia. Absolute intolerance of Trunecek's serum.

Of the twelve cases reported, three gave negative results, and, among the nine successful ones, some gave only slight and some considerable improvement.

A question naturally arises: What is this beneficial effect due to? Do we find ourselves really in the presence of a dissolution of the calcareous deposits in the walls of the arteries and of a regeneration of their endothelial layers in cases of arteriosclerosis, as Trunecek believes? We certainly cannot affirm it, as there is no evident proof yet. If, on the other hand, we consider the improvement in cases free from arteriosclerosis, in purely cardiac cases, or only in cases of anemia, as my report shows, we must then look for an explanation in some probable change in the physical or chemical properties of the blood or in the bloodpressure. The latter consideration appears to us to be in its place, as the experiments conducted by Tessier and Léopold-Lévi (*Compt. Rend. de la Soc. de Biol.*, January, 1902) demonstrate with evidence that in the majority of their cases a marked diminution of tension in the peripheral circulation was noticed.

Whatever the intimate effect of Trunecek's serum upon the circulatory disturbances of the brain may be, the results obtained permit us to arrive at the following conclusions:

1. The combination of the inorganic salts known under the name of Trunecek's serum may be a valuable remedy in some cases of disturbed cerebral function caused by circulatory changes.

2. Not only by hypodermic and intravenous administration, but also internally this remedy may give favorable results.

3. When the iodides, nitrites and other means used in such cases are without avail, Trunecek's serum should be given a trial. Sometimes a combination of both may be necessary.

4. Several days, at least a week, must elapse before the desirable results can be expected.

Finally, there are cases in which the remedy is absolutely useless.

The nine cases in which I obtained more or less good results have been under my observation since February, 1902. This period of time is, of course, not sufficient for a final opinion. The utility of any new remedy can be decided only after a rigorous and prolonged comparison of its effects with those obtained from other means of treatment. But so far we can say that Trunecek's serum deserves a trial.

THE OPERATIVE TREATMENT OF GOITER.

By INGERSOLL OLMSTED, M. B., TOR.,

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The goiters which are common in this country have hitherto, with few exceptions, been treated by the physician. The medical treatment, as Osler says, is very unsatisfactory. It consists usually in the external application of iodine or some other counterirritant, and potassium iodide, ergot, thyroid extract, etc., internally.[1] Electricity in its various forms has also been used, but with very uncertain results. The operative treatment is the only one to be relied on.

Professor Theodor Kocher, of Bern, is a pioneer in this branch of surgery, and to him, more than to any other surgeon, is due the credit of making popular this treatment.

During the summer of 1901 I remained two months in Bern, and through the kindness of Professor Kocher saw a large number of thyroidectomies.

He gives the following indications for the operation[1]:

(1) As soon as the goiter becomes dangerous, that is when attacks of dyspnea appear, or inflammatory changes occur or there is the slightest suspicion of a malignant degeneration.

(2) All enlarged thyroids, classed as deep, having a tendency to grow toward the aperture of the thorax, even if they are movable, should be considered dangerous.

(3) All goiters that have reached considerable development from the formation of single large colloid nodes can only through operation be actually removed. Medical treatment acts principally on the accompanying hyperplastic parts.

(4) When, with moderate goiter, symptoms like those of Basedow's disease appear, accompanied with an increased development of the goiter, an operation is the best means of warding off that dread disease. To these may be added the goiter in most cases of Graves's (Parry's) disease.

In my cases I have endeavored to follow very closely the method practised by Kocher, differing only in the matter of drainage and suture of the wound. It is as follows:

The patient, having been thoroughly prepared for operation, is placed on a special mattress on the operating table. This mattress elevates the shoulders and allows the head to hang over, thus bringing the field of operation well into view. The head is covered with a rubber cap, which keeps the hair out of the way. A half sheet, hollowed out for the neck, is placed over the patient and held in position with tapes. This sheet passes just beneath the chin and then is carried up over a screen two feet high and attached to the upper end of the table. The sheet which is sterilized, effectually prevents any contamination from the patient's face reaching the field of operation. A small piece of gauze is placed beneath this sheet over the patient's mouth, to collect any mucus. The hands of the patient are tied to the table on either side by means of cuffs around the wrists. A broad band is also passed over the knees and attached to the table on either side. Sterilized sheets are placed over the patient so as to exclude everything from view, except the field of operation. The skin is now gently scored with a sharp knife where the incision is to be made. A 1% solution of cocaine is injected into the skin and the subcellular tissue along the proposed line of incision. A 10 cc. syringe, armed with a fine needle is used. The needle perforates the skin near the median line and passes through the subcellular tissue till it reaches the outer end of the scored line, when the cocaine solution is gradually injected, thus infiltrating the skin as the needle is withdrawn. The opposite side is treated in a similar manner.[1] About 20 cc. of a 1% solution of cocaine are used, and extremely seldom is it necessary to inject any more, as the patient rarely complains of any pain. A bowed incision is made with its convexity downward, across the tumor from the outer surface of one sternomastoid muscle to the other. The incision extends through all the tissues down to the muscles of the neck. All bleeding points caught, the large vessels being divided between forceps, this flap is reflected upward together with the fascia covering the muscles. The muscles are now separated in the median line along the whole length of their course, as well as the outer fibrous capsule of the goiter. If the goiter be very large and sufficient room cannot be obtained by retracting the separated muscles, their upper attachments may be divided a little on either side of the median line with scissors. This will invariably give room enough, and, after the tumor is removed, they may be stitched back in place. The lateral lobe is now dislocated from its bed by passing the finger in between it and the fibrous capsule. Any veins running between the capsule and the goiter are divided between forceps and carefully ligated. This permits the lobe to be pulled out quite easily,as a rule. By shoving back the capsule from the upper and outer horn of the lobe, the superior thyroid artery may be isolated, doubly ligated and divided. The inferior thyroid artery is now carefully isolated from the recurrent laryngeal nerve and ligated. It is important at this point to get the patient to say "ah," so as to insure the safety of the nerve. The thyroidea ima veins are clamped and divided, the isthmus separated from the trachea with the sound, crushed with clamp and ligated with strong ligature. The clamp will crush a large voluminous isthmus to almost nothing, so that there is practically no danger of hemorrhage from this source. There only remain now a few attachments of the gland at the side of the trachea, and it is as well to leave some glandular tissue here as a protection to the recurrent laryngeal nerve, as otherwise there is a danger of the nerve becoming injured later. All bleeding points having been carefully caught and ligated with fine silk, the muscles are brought together with interrupted sutures in the median line, and the skin wound closed with subcuticular suture.

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*Read at the meeting of the Canadian Medical Association, Montreal, September, 1902.

The important points of the operation are:

Absolute asepticism, ligation of all bleeding points, avoiding the wounding of the gland proper and the preservation of recurrent laryngeal nerve.

It appears to me that, if the dressings are carefully applied so as to bring the tissues well in apposition, one need rarely use drainage, even in large goiters. In the case of exophthalmic goiter it would be wiser perhaps to put in a drainage tube for the first 24 hours, for here it is thought the absorption of thyroid secretion may produce death.

With cocaine anesthesia the operation can be performed with very little inconvenience to the patient, while at the same time the operator, by getting the patient to phonate, can assure himself of the safety of the recurrent laryngeal nerve. The goiters of Graves's disease can be operated on under cocaine with much greater security than under a general anesthetic. In fact, considering the dangers of chloroform and ether in exophthalmic cases, it is doubtful if one be justified in using them when operating on the thyroid.

That the operative treatment of Graves's disease is becoming more popular is evidenced by the greater number of cases reported in the journals. The most recent and important paper on this subject is by Dr. Albert Kocher.[2] He reports 93 cases taken from the hospital and private practice of his father, Professor Kocher. Of these 93 cases, 59 were operated on with the following results: 45 were cured, 8 very much improved, 2 very slightly improved, 4 died.

He advises a combination of partial excision and ligature of the supplying arteries.

The results thus obtained are very encouraging, and although the thyroid gland is not the cause of Graves's disease, it certainly has a very great influence on its course. Its connection with this disease is well described by von Mickulicz[3], who says: "The goiter is not primary, but is one of the co-ordinate symptoms of Basedow's disease. The hypertrophy of the thyroid gland is due to the same cause which produces the manifold trophic disturbances in the other organs and tissues. The hypertrophy of the thyroid calls forth an increased function. The goiter seems to act as a multiplicator of the symptoms." This conception of the subject explains the results of surgical therapy.

Of the twelve patients on whom I have operated during the last year, eleven were for simple goiter and one for exophthalmic goiter. In the first four patients drainage was used, and in the last eight the wound was closed completely without any drainage. The subcuticular suture of silver wire or catgut was used in all except the first. I prefer the wire suture. No antiseptics were used during or after the operation, and rubber gloves were always worn. The dressings consisted of silver foil, sterilized gauze and bandage. On the fifth day this dressing was removed and the skin suture withdrawn. The line of incision was now supported by collodion and gauze. The wound was found completely healed on the fifth day in every case, except the first and second. In each of these cases a silk ligature came away some months later. The average time of residence in the hospital was seven days.

Six of the goiters may be classed as medium and six as large in size. Cases 3, 8 and 12 showed signs of Graves's disease, which disappeared after the operation. Case 4 was one of Graves's disease.

CASE 1.—In this patient I first ligated the two superior thyroid arteries and eight weeks later removed the left half of the gland. The patient was a young girl, 22 years old, with marked exophthalmos, tachycardia, tremor, systolic murmur and loud bruit over the veins of the neck and thyroid gland. Graefe's sign was absent, but Stellwag's and Möbius's signs were present. Great perspiration with frequent attacks of diarrhea and excitability were prominent symptoms. Prolonged rest in bed with ice-bag to heart and usual treatment had been tried without effect by Dr. G. R. Simpson, to whom I am indebted for this case. The ligation of the arteries produced some improvement, especially in the pulse. After the second operation the improvement was gradual, but progressive. She was operated on November 15, 1901. On September 12 of this year, Dr. K. C. McIlwraith, of Toronto, kindly examined her for me and reported that she had absolutely no signs or symptoms of Graves's disease. Although it is only ten months since the operation, the result is certainly most encouraging.

CASE 9 was that of a girl, 21 years of age, with a very large bilateral goiter. She had had the goiter for seven years, but only during the last three had it been troublesome. She had marked dyspnea, dysphagia, palpitation of the heart and loss of memory. She could not walk a block without being compelled to stop and gasp for breath. In her case I removed all of the left lobe and about three-fourths of the right. The trachea was compressed and "tape-like" in appearance. The operation was performed on April 10, last, and since then there has been a wonderful improvement. From a dull, stupid, slow-moving girl, she now is a bright, active, intelligent being. She told me a few days ago that she could do three times as much work as she could before the operation. She says she has no palpitation of the heart or choking sensation.

The resulting scar in all of the patients has been very slight and I feel sure that in a year or two can scarcely be seen.

REFERENCES.

1. Kocher Th., Chirurg. Operationlehre 4 auf S., 206.
2. Mitteilungen a. d. Grenzgeb. d. Med. u. Chirurg. Bd. LX, 1 und 2 H.
3. Verhandlungen der Dtsch. Gesellsch. f. Chir. Bd. 1, 1895. S. 21.

PSYCHOPATHIC EPIDEMICS.*

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There are literally hundreds of pernicious movements which are in these times infecting our national life. It is my purpose to sketch a few of them in this paper.

They are all to be looked upon, so it seems to me, as epidemic psychoses. They essentially resemble the innumerable epidemics of abnormal mentality which have been born, have lived and have died during the centuries. Whatever differences there may be are of degree rather than of kind.

As for the distinctly religious manias which are the forerunners of these epidemics—an enumeration of merely their titles would fill a volume of goodly size. In the study of them it will be found that the insane have oftentimes exerted a noxious influence upon the sane. It will be observed that these epidemics have certain characteristics in common. Any given cult despises and decries all the rest. Some are offshoots from others—enterprises conducted by malcontents who have cut away, generally for the reason that they have considered their profits from the previous movement to have been disproportionate to their deserts. The adherents of each cult incessantly tell us that their tenets are the only true ones. There never was a true system other than the particular one under consideration. No given leader can ever, by any accident, make an untruthful statement. Each strives, with most consummate assurance, to outdo all others in extravagant claims to have achieved marvelous results, especially in the cure of disease. They are alike in employing, in support of their assumptions, such biblical expressions as have become heart-food for the pious.

All such movements appeal to the emotional, the weak-minded and the hysterical. Factitious mystery surrounds them all. Many of them unite several functions, pretending, as they do, to be a religion, to raise the dead, to heal the sick and to perform miracles. The alchemist, for instance, was a fortune-teller or a necromancer, in addition to which he pretended to cure all maladies by touch or charm and to work miracles of every kind. He seldom confined himself strictly to his alleged science, the sorcerer or necromancer to theirs, or the medical charlatans to theirs. One of the most remarkable facts in connection with these delusions is the ease with which one or another of them have seized upon whole communities and peoples. The Schopenhauerite would no doubt explain this on the assumption that it is by reckless, chaotic will and not by intellect that collections of people are dominated. Fundamental factors in their development are unquestionably imitation, suggestion and the contagion inherent in social excitements. Le Bon, in his book entitled "The Crowd, a Study of the Popular Mind," has set forth the processes by which these mental contagions, these psychopathic epidemics, come to be potent factors in human retrogression. He states that "the mental quality of the individual in the crowd is without importance. From the moment they are in the crowd, the ignorant and the learned are equally incapable of observation." It will surprise the student how imitative and gregarious mankind can be. An erratic, abnormally-minded individual may influence his fellows, however sane they may be to begin with, and an erratic abnormally-minded community may be the result. And a point well worthy of consideration is that, in the beginning, such movements are apt to be disregarded by the reasonable portion of the community because of their very absurdity, until, like the cloud no bigger than a man's hand, they develop in the course of time an enormous capacity for producing mischief.

We may comprehend better the phenomena we are considering if we reflect upon how little the world's greatest minds in the realm of metaphysics have been in accord. The nature of the deity, or if there be any deity at all, are problems which have thus far been solved only upon the basis of dogma pure and simple. The evolutionist tells us that the origin of life was when the sun first shone upon and vivified a morsel of "primordial protoplasm"; granting this, we are still uninformed how the sun was brought to shine and how the protoplasm came into existence. Descartes established—to the satisfaction, I believe, of all philosophers—the formula *cogito, ergo sum*. But beyond this his speculations have been subjected to most diverse criticism; and Carlyle asked, fittingly enough, "alas, poor cogitator, how far hath that brought thee?" Only a century ago did Kant prove to the satisfaction of most thinkers that time and space are but forms of human thought; yet Herbert Spencer declared he could not comprehend Kant's reasoning.

When, then, the greatest minds have reached so few mutual conclusions, how near to the truth may we expect the average mind to come? Nevertheless, the most unimaginative cannot refrain from occasional speculation upon the universal mysteries. "A man might as well be content to die as to cease philosophizing." The appetite for the marvelous and the inscrutable is ingrained in the minds of all men and women. And if one's thoughts upon the higher abstractions be unguided. if one have formed no habit of distinguishing genuine thought from spurious thought, it is no great wonder that such a thinker can be influenced to follow after "crazy seers and seeresses."

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* Read before the New York County Medical Society.

A word as to the rank and file in these movements.

Such unfortunate people are, no doubt, especially numerous in our times of unphysiological living and of unsettled problems. Most of these unsettled problems await solution in the religious world. Religion continues unaffected through all disputation. Religion will exist as long as we mortals pass from the present life into the unknown. The sentiment of religion arises largely out of our uncertainty regarding that other life. Religious problems will represent themselves until the veil which conceals from us the hereafter shall be lifted. Religion endures; but religions are changing—they are in process of development.

In all hard-fought battles it is the hangers-on and the camp-followers who rob the wounded and the dying in the fight. And it is such mercenary enterprises as I shall describe which stand ready to gather whatever is materially profitable in the religious controversies of our times.

It is not agreeable to contemplate to what depths many of these people have descended. The behavior of those in the cult called Christian Science, or Eddyism, is typical. With no other assistance than the incantations pronounced over their pain-racked bodies, they have, at the behests of their "healers," let their little children die without so much as putting a drop of water to their lips. By disobeying the law designed to prevent the spread of contagious diseases they have given the health authorities in various cities a very great deal of anxiety, and their disregard of the most ordinary sanitary precautions has given rise to much unnecessary suffering and illness and not a few deaths among the rational portion of the community. They set forth the wildest imaginable explanations for the constantly recurring failures of their "healers." In their stupid fanaticism they demand of the authorities that the teaching of such subjects as physiology be abandoned in the public schools. Of their substance they give to Mrs. Eddy and her associates without measure. They pay to the "mother church" in Boston a per capita tax, a sort of modern Peter's pence. Many individuals have contributed vast sums, and of the Christian Scientists who have "passed away" there were those who have bequeathed large fortunes for "the cause." Without hesitation they disrupt their family ties. Their credulity is boundless. They speak of Mrs. Eddy in the most reverent manner. They call her "The Mother of the Christian Science Church," or "Mother Mary." One of their hymns begins with "Jesus loves you; so does Mother." The press has stated that in 1900 crowds of Christian Scientists, including delegates from nearly every State in the Union, visited Concord; "but very few, if any of them, got a glimpse of her, though many of them enjoyed the privilege of kissing the front-door step at Pleasant View." Many display toward her a fanaticism excelling that shown the misleaders of mankind in medieval times. Many exalt her above Him whose name she and they most outrageously take in vain. Many actually worship her as a deity. With bated breath, faces aglow with ecstacy, and eyes luminous, quivering, paranoiac, directed anywhere but straight at *your* eyes, they will tell you they adore her—she might walk upon them—she might step upon their necks—at her command they would jump from the housetops, and would know that if she were to tell them to do this no harm would or could befall them. They ascribe to her absolute infallibility. She cannot do or think or speak wrong, and if she were to seem to be wrong, it would be because the perverted minds of others misunderstood or maliciously misrepresented her.

Our time does not permit a consideration of the mental epidemics of eras other than our own. I shall, however, for purposes of comparison, make mention of Franz Anton Mesmer, who flourished in Paris at the close of the sixteenth century. He made, during his brief career, an immense impression. He had a few ill-comprehended phenomena as a basis for his claims. He mingled a vast amount of nonsense and misinterpretation with vague glimpses of fact, with uncertain discernment of truths. Multitudes flocked to his temple of "animal magnetism." Not only the ignorant, but also many among the educated and the enlightened in the most brilliant capital of Europe were his disciples. People believed in Mesmer then, and many thousands presented themselves as living proofs of his power to cure the gravest diseases. Like his congeners of our day, he accumulated an immense fortune. And it is very likely that he differed from most of them in one particular. He is said to have sincerely believed in himself. His career was magnificent, but it was very short-lived; and his lapse into obscurity was complete.

One would suppose now, at the beginning of the twentieth century, when men generally think sanely and reasonably, when we have come to substitute for superstition the habit of accounting for physical manifestations upon scientific bases, when science has made evident the value of sanitation, hygiene and clean living in producing happiness and well-being and in dispelling disease, that such movements would be impossible. As a matter of fact, it is difficult to conceive how they could ever have been more numerous than they are nowadays. A great many of them have emanated from, or near, Boston, a region resourceful in the production of cults which have for their basic principle dissatisfaction with the universal scheme. Some of my hearers may remember Perkin's tractors. Many will recall the blue-glass craze. Many will recall the movement, managed by Andrew Jackson Davis, known as the Poughkeepsie Seer, who published some twenty or thirty volumes of a Harmonial Philosophy. One Thomas Lake Harris, at one time a friend and fellow-worker with Davis, separated from him very early in his career and founded a religion of his own in which the inner breathing, esoteric meaning of the Scriptures, sortes biblicæ, celestial consorts and many other mysteries played a part. He founded a community in the United

States and influenced many, notably Laurence Oliphant, the writer, and his wife. Hermetic societies, Christotheosophical societies and many like movements may be recalled.

The history of the theosophical movement is sketched by Mr. Podmore in his book, "Studies in Psychical Research." The Theosophical Society began in 1874, with Madame Blavatsky's letter describing the spirit materializations at the Eddy brothers' house. Her letter states that there were 11,000,000 spiritualists at the last census in the United States, and that the number had already grown to 18,000,000, almost 50 per cent. ("Madame," states Podmore, "was always a little vague in her arithmetic.") Then came the Katie King exposure which made spiritualism less popular in America. Shortly after there was a secession from the Orthodox American Spiritualists and the establishment of a new organ, the Spiritual Scientist, and, finally, the proofs of Mme. Blavatsky's fraud and that of the whole theosophical movement, laid bare shortly after her death in 1892. "In fact," states Podmore (and his words may be applied to practically all of the cults we are considering), "many of the leading members of the Theosophical Society present, in the light of this inquiry, a pleasantly ambiguous blend of charlatanry and simplicity." "Nevertheless," continues Podmore, "it would be rash to prophesy, even now, notwithstanding all the damning evidence of fraud, notwithstanding the loss of the unique personality of the foundress, that the movement is near dissolution. To most men who have given themselves over to a false belief there comes a time when the ears are deaf and the eyes are closed and the heart is hardened, so that they will not even believe the testimony of the false prophet against himself. With such men and against such a contention, argument is no longer even possible."

A society called the "Holy Ghost and Us" Society was organized in Concord, New Hampshire, the present address of Mrs. Eddy, in 1893. The so-called "Reverend" Mr. Sanford was present on this occasion. He carried the propaganda of this society's tenets into Maine. He told his followers that he had been directed by the Lord to ascend "Beulah Hill" and commence work upon a building there.

Upon Beulah Hill, then, near Shiloh, in Maine, the "Church of the Living God" was built within a few months, at a cost of one hundred thousand dollars, by Sanford and those who believed in him. When we consider how very poor the country folk in this region must be, the cost of this building was comparatively enormous and their sacrifice must have been very great. This "temple" was dedicated on August 18 of the year of grace 1899. It is described as one of the largest and most magnificent buildings in Maine. Great numbers of people were present at the dedication; half of the States in the Union were represented. Sanford's object, so he stated, was to evangelize the whole world. It is declared that many people suffering from "troubles of long standing" came to Shiloh, and after praying for a time announced that they were cured. Sanford's method was to place his hand on the sufferer's shoulder and to say, "In the name of Jesus Christ I command you to come out of him." The services began at five in the morning and lasted through the night. Collections were a very conspicuous part of the ceremonies. It was planned that parties should leave for Europe to carry on the work of "evangelization" there. A party left in June, 1899, taking with them a white chariot, that they might more easily attract attention.

The influence of Sanford over his dupes was, for the time being, complete. They trusted him implicitly. The New York *Times* states that they lay prone and he walked upon their bodies. They showered money upon him. He accumulated an immense fortune. Finally he disappeared, and it was given out that he had left for Europe toward the end of August. It was understood, however, that he was still in Maine and that his pretended departure was for the purpose of misleading his many creditors. On September 2, 1899, an attachment was placed on the "Temple of Truth" by a contractor who could not collect his debt. Since then Sanford's movements were veiled in obscurity until June 16, 1900, when sixty religious enthusiasts, mostly women, left Chicago for Maine. They came from Kansas City, where Sanford had been holding meetings in a tent. They formed a second detachment of converts sent from the West. Sanford had promised them good places in "Heaven," which he told them was to be found at Shiloh, in Maine.

The Rev. A. B. Simpson is the guiding spirit and controlling genius of the "Christian Missionary Alliance." He was at one time a pastor in the great Presbyterian Church, and it is understood that he still maintains a formal membership there. His missionary enterprise, however, is a personal and almost a private one, entirely disconnected with any church foreign missions, and, for reasons which will appear, Christian ministers have latterly absented themselves from his services.

His ability to exert a powerful psychical influence over those whom he addresses is truly wonderful. And crowds of emotional people have given him great sums, ostensibly for missionary work in foreign lands. It is estimated that during his entire career he has procured in money, watches, jewelry, horses and carriages, houses and lots and other valuables that his frenzied subjects could give or promise to pay, the equivalent of a very large gross sum, undoubtedly in excess of a million dollars.

Toward the end of 1899, however, he was less successful, evidently for the reason that these large sums which religious enthusiasts placed in his hands led to inquiries regarding their disposition. In brief, as the New York *Sun* put it editorially: "We do not charge him with malfeasance or dishonesty. But what we do say, and say emphatically, is that Mr. Simpson's conduct looks bad, and that his methods are the same which in all ages have been used by sharpers to play upon superstition and to victimize credulity."

Almost none of the incidents of Mr. Simpson's meetings could be contemplated without a sentiment of pity. It is declared that Mr. Simpson and his associates accomplished many faith-cures. "Praise the Lord," said one woman, "for having cured my eyesight. It was this way: You see I went into a drugstore to buy something and there I left my glasses. When I came out the Holy Ghost told me I didn't need them. I read my Bible all the way home. Things are a little blurred sometimes, but I know I will get over that when the Lord wills it." A consumptive asked Mr. Lelecheur (one of Mr. Simpson's associates) if a person could be cured and yet have symptoms. "I want to know," said he, "if we should thank God and consider that he had cured us just the same." "That," said Mr. Lelecheur, "is the work of the devil trying your faith." A woman, who was almost blind, asked if she could keep on her glasses. She was told to keep them on "till the Lord told her to take them off." Another woman asked excitedly: "I want to know if an unconverted person can be cured by our prayers? This person," she continued, "went insane at the last convention." Mr. Lelecheur looked rather puzzled. Finally he said that, if a band got together and prayed for him, it might restore him to sanity. "God tells you what to do with your bodies as well as with your souls," said a leader. "Some of the people who have come here say 'the Lord healed me,' but they are afraid to walk up the hill." An old German woman advanced and, addressing a leader, said: "I have given to the Lord all that I had this morning. Now I would like to speak a few words to the glory of God." "No time now," said the leader, moving her away, and she went back with a puzzled look on her face. Some happenings at these grotesque meetings were not without humor. A male hysteric, after giving up his money, his jewelry and his coat, was with great difficulty prevented from further divesting himself. At one session it was announced that $8,000 had been collected, whereupon Mr. Simpson said, "Oh, my friends; what the Lord can do with people who are simple-minded is marvelous." Mr. Simpson introduced the Rev. Stephen Merritt. Mr. Merritt is a minister, a faith curist and a very prosperous undertaker. He said: "God will give you money. He'll pour it into your laps. I used to say, 'Here I am, Lord, not a foot of land do I own.' And now (drawing himself up and putting his hands deep down in his pockets) I believe I'll be a bloated millionaire some day."

The name of Dowie, combined with those of Sanford and Simpson, completes a symmetrical triumvirate. His career resembles theirs; it need detain us but a moment. John Alexander Dowie, the "Divine Healer," has during the past year or more confined his pernicious activity mainly to Chicago. He declares that "through divine power" he can heal every conceivable ailment. Considering his short career he has achieved rather an unusual proportion of "failures," that is, deaths. The following is a specimen treatment, as carried out by some of Dowie's associates:

Millie Logan, an insane girl, was confined in a small dark room in the "Zion Auxiliary." Some eight healers inflicted blows upon her, pinched her, twisted her limbs, and bound her hand and feet for hours at a time. This torture was inflicted to "drive the devils out." The insane girl, during her long detention by these people, had been deprived of proper food and sufficient clothing. Presently she was discovered by the authorities, who sent her to the Kankakee Insane Asylum. Here, upon examination, the results of the above treatment were revealed.

We cannot more than mention Dowie's transcendent genius in making of pseudoreligion a paying investment; he seems to have eclipsed even Simpson in this respect.

(To be continued.)

A CASE OF DIABETES MELLITUS IN A YOUNG CHILD.

By JAMES HENDRIE LLOYD, A. M., M. D.,
of Philadelphia.

Diabetes mellitus in young children is sufficiently rare to justify the reporting of an individual case. Several such cases have been reported recently, notably one by Swartzlander, in the *New York Medical Journal*, for October 18, 1902, in a child, aged about three years. The special features to be noted in such cases are the obscurity of the symptoms, and the possible action of such a cause as trauma, shock or heredity.

In very young children it is obvious that a mistake or oversight in diagnosis may readily occur. The one symptom to attract the attention of the mother or nurse is usually the excessive thirst, a thirst which is urgent and often shown in very characteristic ways. Failure of nutrition is also usually rapid, and a general appearance of ill health quickly supervenes; this, however, may readily be misinterpreted. In very young children polyuria is not so likely to attract notice as in older patients. In these young patients the progress of the disease is almost always very rapid and the result seems to be uniformly fatal. The extremely rapid course is in marked contrast to the course in most of the cases in adults.

As for the causation, it is noteworthy that in not a few cases there is a history of heredity. Injuries, such as a fall on the head, and other diseases, such as hydrocephalus and tubercular meningitis, figure in the histories of a few cases. The essential cause, however, is just as obscure as in the cases of adults.

The case, which came under my observation a few years ago, was as follows:

D. G., white, male, aged two years and 2 months. The parents were in moderate, comfortable circumstances, and the child had apparently been well nourished and attended. Five weeks before his death, and when the child seemed to be in his usual good general health, he was operated on, under ether, at a hospital in this city, for a "contraction of a finger." He was under ether for about three-quarters of an hour. He apparently recovered from this slight operation perfectly. About 10 days later the mother began to notice that the child was ill. He began to lose flesh, was restless and uneasy and cried constantly for water. So urgent was his thirst that he literally screamed for water whenever he heard it flowing; he would run to the water-tap in the kitchen whenever left alone, and plead for more water. At this time the mother noted that he was passing more urine than usual; his diapers were constantly wet, and when dried would be stiff. Several times when the child's urine fell on the floor, the mother said she had noticed a slight sediment on the spot after it had dried. When I first saw the patient, about 4 days before his death, he was becoming emaciated and looked very ill. He had a peculiarly dry mouth and was calling for water constantly. The mother drew my attention to a sickening sweet odor of the breath. This symptom, together with the history, excited my suspicion, and this suspicion was confirmed by a urine analysis. The urine had a specific gravity of 1040 and reacted strongly for sugar to Fehling's test. The child failed rapidly and died in coma 4 days later, about 3 weeks after the mother first noticed that he was ill.

This patient's grandmother, who was still living, was said to have diabetes, but as she resided in another city, I could not confirm this statement by personal observation.

The fact that this young child had been subjected to a surgical operation, and had been under ether for nearly an hour, only about ten days before the onset of the symptoms, is not to be overlooked. Whether this operation and etherization may have acted somewhat like a shock or a trauma is, of course, a matter of speculation.

I am indebted to Dr. Maurice Ostheimer for the following notes on the literature of the subject.

True diabetes mellitus is exceedingly rare in children under three years of age. A hasty search through the literature has resulted in the collection of about 40 cases, several of which were undoubtedly cases of alimentary glycosuria, a condition observed in one infant at birth (Garnerus, *Deutsche med. Woch.*, 1884, 10, 677), and in 2 children when 2 weeks old (Kitselle, *Providence Medical and Surgical Journal*, 1852, and Simon, *Révue Mensuelle des Maladies de l'Enfance*, 1885, 3, 484). Harker (*British Medical Journal*, 1885, I, 413) noted glycosuria in a child of two years, following too much sugar. But in 36 of the cases no doubt exists that the disease was true diabetes mellitus. Stern (*Archiv für Kinderheilkunde*, 1889, II, 81) found 6 cases under one year of age out of 117; Külz (*Gerhardt's Handbuch*, 3, I, 275) found 7 under two, 14 under three years, out of 146; Wegeli (*Archiv für Kinderheilkunde*, 1895, 15, I) found 3 cases under one year, 13 under two, 26 under three years, out of 108; and D'Espine and Picot (*Traité Pratique des Maladies de l'Enfance*, 1899, 327) noted 23 cases under two years out of 270 cases under 16 years of age. From 1851 to 1860 the autopsy reports of the Registrar-General for England and Wales showed 32 deaths from diabetes in children under three years, 10 of them being under one year; from 1861 to 1870, 8 cases under one year and 68 under three years, out of 6,496 deaths from diabetes mellitus. We find 8 under one year, 25 under two years, 36 under three years of age.

The fact should not be forgotten, however, that temporary glycosuria may occur in infants following the ingestion of sugar, malted milk or other carbohydrates. Both Holt and Koplik draw attention to this fact. Gross (*Jahrbuch für Kinderheilkunde*, 1892, 34, 106) has studied this question, and found that alimentary glycosuria may occur in the chronic gastro-enteritis of infancy, due to a lowering of the sugar assimilation limit and to the effect of the intestinal bacteria upon the milk sugar. Among the causes of the condition noted were acute hydrocephalus, cerebral and spinal traumatism, tubercular meningitis and heredity. The sex of the infants was in most cases not mentioned. Other statistics show an approximate equality in this respect, though some observers found more females affected than males. The symptoms varied, glycosuria alone being marked in some cases. That the prognosis is very unfavorable is shown by the fact that death was noted in 26 of the cases, though it may have resulted in more. Külz found that the younger the child was affected, the sooner death followed.

Undoubted Cases of Diabetes Mellitus in Children Under 3.

1, Child, 3 months old, fed upon condensed milk. Disease hereditary; death. Nichues, *Dissertation*, Würzburg, 1891.

2. Infant, 3 months old. J. P. Crozer Griffith, *Proceedings Phila. County Med. Soc.*, September, 1902, 126.

3. Child, 3 months and 5 days old, with polyuria, glycosuria, genital eczema from the passage of urine, coma, and death, in one week. W. B. Bell, *Edinburgh Medical Journal*, 1896, 41, 2.

4. Child, 6 months old, with acute hydrocephalus, ill 3 weeks; death. Rösing, *Dissertation*, Würzburg, 1855.

5. Infant, 7 months old, following after a fall, injuring the head: ill 3 months; death. Rossbach, *Berliner klin. Woch.*, 1874, 258.

6. Child, 8 months old; ill 3 months; death from gangrene of the lung. Hagenbach, *Jahrbuch für Kinderheilkunde*, 1879, 13, 421.

7. Child, one year old; ill one month; death. Hauner, quoted by Bergesio, *Gaz. med. di Torino*, 1884, 35, 1.

8. Child, somewhat under one year; ill 23 days; death. Busch, *Jahresberichte über die Fortschritte der Med.*, 1876; quoted by Stern, *Archiv für Kinderheilkunde*, 1889, 11, 81.

9. Child, one year old, with acute hydrocephalus; ill 3 weeks; death. Rösing, *Dissertation*, Würzburg, 1855.

10. Child, one year old; ill but a short time; death. Jacoby, *Jahresberichte über die Fortschritte der Med.*, 1874; quoted by Stern, *Archiv für Kinderheilkunde*, 1889, 11, 81.

11. Child, one year old; death. Griesinger, *Archiv für phys. Heilkunde*, 1859; quoted by Stern, *Archiv für Kinderheilkunde*, 1889, 11, 81.

12. Child, one year old; glycosuria; death. *Casper's Wochenschrift*, quoted by Dreyer, *Deutsche med. Woch.*, 1897, 23, 596.

13. Child, one year and 3 weeks old: ill one month; death. Pavy, *Deutsche med. Woch.*, 1866, 477.

14. Child, one year and 3 weeks old; thirst, polyuria, glycosuria, coma and death; ill 8 weeks. W. H. Deane, *Medical Record*, 1888, 33, 97.

15. Infant, 14 months old, with polyuria, thirst, loss of of flesh, glycosuria, coma and death 10 days from the beginning of treatment. C. W. Smith, *Indiana Medical Journal*, 1896, '97, 15, 262.

16. Child, 15 months old. Bell, quoted by Stern, *Archiv für Kinderheilkunde*, 1889, 11, 81.

17. Child, 18 months old. Dewees, quoted by Griesinger, *Archiv für phys. Heilkunde*, 1859, 1.

18. Child, 18 months old, with death 18 days after the first symptoms appeared. Duflocq and Dauchez, *Revue de Médecine*, 1893, 546.

19. Child, 18 months old, with loss of flesh following influenzal otitis media, polyuria, bulimia and thirst; ill one year; death. F. W. Garber, *Transactions Michigan State Med. Soc.*, 1893, 17, 82.

20. Child, 18 months old; disease hereditary; ill 4 months; coma and death. Conolly, *Medical Times and Gazette*, 1877, 60.

21. Child, 20 months old, with tuberculous meningitis; ill several months; death before reaching 2 years. J. L. Brown, *American Journal of Obstetrics*, 1868, 75.

22. Child, 21 months old. A. Baginsky, *Lehrbuch der Kinderkrankheiten*, 1899, 424.

23. Child, 21 months old, with thirst, glycosuria and polyuria; ill 4 weeks; death. Child had had several falls, always injuring the back. J. Y. Dale, *Medical News*, 1887, 51, 676.

24. Child, 21 months old; ill 6 weeks; death. Anderson, *Medical Record*, 1887, 33, 1, 248.

25. Child, 22 months old, well up to 12 months of age, though birth was premature, because the mother had severe nephritis. J. Tyson, *Practice of Medicine*, 1897, 751.

26. Child, 2 years old; ill 9 months; death. Dreyfuss, *Dissertation*, Würzburg, 1886.

27. Child, 2 years old. A. Baginsky, *Lehrbuch der Kinderkrankheiten*, 1899, 424.

28. Two children, 2 years old; disease hereditary in one; death. Pavy, *Deutsche med. Woch.*, 1866, 477.

30. Child, 2 years old, with enuresis, polyuria, thirst, loss of flesh, and death in 3 months. Dreyer, *Deutsche med. Woch.*, 1897, 23, 596.

31. Child, 2 years old. Ebstein, quoted by Dreyer, *Deutsche med. Woch.*, 1897, 23, 596.

32. Child, 2 years and 5 months: ill 6 weeks: death. Günther, quoted by Külz, *Gerhardt's Handbuch*, 3, 1, 275.

33. Child, 2 years and 5 months old; ill 18 months; death. Dickinson, *Diseases of the Kidney*, part I.

34. Child, 2 years and 6 months old, following a fall: ill 7 days; death. Anderson, *Medical Record*, 1887, 33, 1, 248.

35. Child, 2 years and 6 months old. F. T. von Frerichs, *Ueber Diabetes*, 1884, 184.

36. Child, under 3 years of age. Bouchardat, *Du Diabète Sucré*, 1852, 128.

Cases of Alimentary Glycosuria, in Children Under 3, Formerly Classified Under Diabetes Mellitus.

1. Child, 2 weeks old; ill 3 months; recovery. (The physician's own child.) Kitselle, *Providence Med. and Surg. Journal*, 1852.

2. Child, 2 weeks old, with diarrhea and pure lactosuria, occurring with marked infantile atrophy. J. Simon, *Revue Mensuelle des Mal. de L'Enfance*, 1885, 3, 484.

3. Child, had glycosuria soon after birth, with polyuria; recovery when 3 months old. H. Garnerus, *Deutsche med. Woch.*, 1884, 10, 677.

4. Child, aged 3 months, glycosuria: recovery. Caron, quoted by Bouchut, *Traité Pratique des Maladies des Enfants*, 1873, 679.

5. Infant, 4½ months old, with glycosuria following the abuse of carbohydrates; ill over 4 months; recovery. Libero Bergesio, *Gaz. med. di Torino*, 1884, 35, I.

5. Child, 17 months old; disease in the family; recovery. Caron, quoted by Bouchut, *Traité Pratique des Maladies des Enfants*, 1873, 679.

6. Child, 2 years old, from eating too much sugar; recovery. Harker, *British Medical Journal*, 1885, 1, 413.

ARCHIVES DE MEDECINE DES ENFANTS.

January, 1903. (Vol. 6, No. I.)

1. The Cerebrospinal Form of Typhoid Fever.
P. MOIZARD and H. GRENET.
2. Pseudomembranous Laryngitis Complicating Measles.
R. LINSBAUER.
3. Erythema following Vaccination. H. DAUCHEZ.

1.—Moizard and Grenet report a case of **typhoid fever** in a boy of 5, **who always caught cold easily.** His symptoms for one week before admission to the hospital had been **headache, anorexia, insomnia, cough and constipation.** Examination showed **enlarged** axillary and inguinal **glands only.** There was **pain in the neck,** and **the muscles were stiff. Rales** were noted, **with dyspnea.** He **vomited without nausea or effort,** and **Kernig's sign** was noticed. **Lumbar puncture** failed to reveal any cellular elements, nor did the fluid contain iodide, though this was given internally. The **Widal reaction** was **positive.** Recovery followed in 4 weeks. The diagnosis depended on the presence of the Widal reaction and the absence of leukocytes in the cerebrospinal fluid. Such cases are relatively rare: the literature is fully quoted. [M. O.]

2.—**When pseudomembranous laryngitis complicates measles, Klebs-Löffler bacilli are usually found.** Linsbauer reports 50 cases observed in 10 years, 29 of them ending fatally. The condition was laryngeal in 31 cases. The resulting laryngeal stenosis was worst 7, 6 or one days after the eruption appeared. Linsbauer advises antitoxin in all cases of measles upon admission. Intubation was performed in 34 cases, and secondary tracheotomy was never necessary. Before the employment of antitoxin, intubation was done in 76% of cases; since antitoxin, in 55% of cases only. [M. O.]

3.—Dauchez reports 2 cases of **erythema following vaccination** in 2 infants, brother and sister. The eruption was general, circinate and polymorphous, with urticaria and pruritus. He believes that the eruption attended the use of virulent vaccine. [M. O.]

Health Reports.

Health Repots: The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon-General, U. S. Public Health and Marine-Hospital Service, during the week ending March 14, 1903:

SMALLPOX—United States.

			C.	D.
ALABAMA:	Mobile.	Feb. 28-Mar. 7.	11	
CALIFORNIA:	Fresno.	Feb. 1-28.	23	
	Los Angeles.	Feb. 22-28.	4	
	Sacramento.	Feb. 22-28.	3	
	San Francisco.	Feb. 22-Mar. 1.	8	
COLORADO:	Denver.	Feb. 22-28.	10	
FLORIDA:	Jacksonville.	Feb. 28-Mar. 7.	3	
ILLINOIS:	Alton.	Feb. 28-Mar. 7.	1	
	Chicago.	Feb. 28-Mar. 7.	12	
INDIANA:	Elwood	Mar. 1-8.	6	
	Evansville	Feb. 28-Mar. 7.	5	
	Indianapolis.	Feb. 28-Mar. 7.	19	8
IOWA:	Davenport.	Feb. 28-Mar. 7.	1	
KANSAS:	Wichita.	Feb. 28-Mar. 7.	2	
KENTUCKY:	Lexington	Feb. 28-Mar. 7.	1	
	Newport.	Mar. 1-8.	1	
LOUISIANA:	New Orleans.	Feb. 28-Mar. 7.	3	
MASSACHUSETTS:	Fall River	Feb 28-Mar. 7.	2	
	New Bedford	Feb. 28-Mar. 7.	1	
MICHIGAN:	Ann Arbor.	Feb. 28-Mar. 7.	1	
	Marquette.	Feb. 28-Mar. 7.	1	
	Port Baron.	Feb. 28-Mar. 7.	5	
MISSOURI:	St. Louis.	Mar. 1-8.	5	
NEBRASKA:	Omaha.	Feb. 28-Mar. 7.	2	
NEW JERSEY:	Jersey City.	Mar. 1-8.	1	
	Newark	Feb. 28-Mar. 7.	3	
NEW YORK;	Buffalo.	Feb. 28-Mar. 7.	1	1
OHIO:	Cincinnati	Feb. 27-Mar. 6.	1	1
	Cleveland	Feb. 28-Mar. 7.		2
	Dayton.	Feb. 28-Mar. 7.	5	
	East Liverpool.	Feb. 1-28.	2	
PENNSYLVANIA:	Erie.	Feb. 28-Mar. 7.	3	
	Johnstown	Feb. 28-Mar. 7.	1	1
	McKeesport.	Feb. 28-Mar. 7.	1	
	Philadelphia.	Feb. 28-Mar. 7.	17	4
	Pittsburg.	Feb. 28-Mar. 7.	27	1
SOUTH CAROLINA	Charleston.	Feb. 28-Mar. 7.	2	1
TENNESSEE:	Memphis.	Feb. 28-Mar. 7.	3	
UTAH:	Salt Lake City.	Feb. 28-Mar. 7.	26	
WISCONSIN:	Greenbay.	Mar. 1-8.	1	
	Milwaukee.	Feb. 28-Mar. 7.	6	

SMALLPOX—Foreign.

AUSTRIA:	Prague.	Feb. 7-14.	6	
BELGIUM:	Antwerp	Feb. 7-14.	1	
	Liege	Jan. 31-Feb. 7.	1	1
BRAZIL:	Rio de Janeiro	Jan. 17-Feb. 6.		14
CANADA:	Hamilton.	Feb 28-Mar. 7.	1	
	Winnipeg.	Feb. 1-28	2	
CANARY ISLANDS	Las Palmas.	Feb. 7-14.	32	
GERMANY:	Hamburg.	Feb. 14-21.	1	
GREAT BRITAIN:	Birmingham.	Feb. 14-21.	8	1
	Dublin.	Feb. 14-21.	2	
	Leeds.	Feb. 14-21.	9	2
	Liverpool.	To Feb. 21.	105	5
	London.	Feb. 14-21.	7	
	Manchester.	Feb. 7-21.	52	3
	Sheffield.	Feb. 7-21.	4	
INDIA:	Bombay...	Feb. 3-10.		53
MEXICO:	City of Mexico.	Feb. 15-22.	2	1
RUSSIA:	Odessa.	Feb. 7-11.	3	1
	St. Petersburg.	Feb. 7-14.	75	14
	Warsaw.	Feb. 19-26.		2
SPAIN:	Barcelona.	Feb. 1-15.		4
	Malaga.	Jan. 1-31		3
	Valencia.	Feb. 1-15.		3
STRAITS SETTLEMENTS:	Singapore.	Jan. 10-17.		4
SWITZERLAND:	Zurich.	Feb. 7-14	1	

YELLOW FEVER.

BRAZIL:	Rio de Janeiro.	Jan. 16-Feb. 6.		75
MEXICO:	Vera Cruz.	Feb. 21-28.	3	3

CHOLERA—Foreign.

INDIA:	Bombay.	Feb. 3-10.		
	Calcutta	Jan. 31-Feb. 11.		33

PLAGUE—Foreign.

BRAZIL;	Rio de Janeiro.	Jan. 16-Feb. 6.		4
INDIA:	Bombay.	Feb. 3-10.		649
	Calcutta.	Jan. 31-Feb. 7.		142
	Karachi.	Feb. 1-8.	38	39
MEXICO:	Mazatlan.	Feb. 7-14.	41	20
	Mazatlan.	To March 6	302	2250

PLAGUE—Insular.

HAWAII:	Hilo.	Mar. 9.		1

The Philadelphia Medical Journal

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See Advertising Page 8

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The Cocaine Habit.—We wish to call special attention to the paper by Dr. Simonton in this issue of the **Journal** on the increase of the cocaine habit among both white and colored persons in Pittsburg. We have little doubt that what Dr. Simonton describes in Pittsburg can also be found in many other cities and towns. We believe that our readers will agree with us that this is a most serious public evil. It is getting to be such a flagrant abuse that neither the medical profession nor the general public can any longer remain blind to it. Dr. Simonton's paper is a revelation. It shows that in one city this cocaine habit has become a sort of popular craze; that the lowest and most ignorant, and hence the least resistant, classes of the people have taken to this appalling habit with absolute abandon; that some of the druggists are conniving at this business from the basest commercial motives; and that some stringent law is required to check this rapidly growing popular vice.

Cocaine is by far the most seductive, the most dangerous and the most debasing drug known to mankind to-day. It is worse than morphine in its enslaving power, in the rapidity with which it obtains control of its victims, and in its ruinous effects. It is even worse than alcohol when it becomes the agent of social debauchery. The fact that this drug is now established in its malign influence among thousands of the poorest inhabitants of a large city, is cause for genuine alarm, and should be the signal for prompt and radical action.

The Sale of Cocaine by Druggists.—Dr. Simonton has demonstrated without a doubt that some druggists in Pittsburg are entirely oblivious of, or indifferent to, the moral aspect of this grave question. They have been detected selling this poison right and left to whomsoever applies for it, without question and without safeguard. The appalling evidence is complete that an unlicensed and profitable trade, of immense proportion, is driven by some of these tradesmen without the slightest regard to legal or moral responsibility. The profits from this unholy traffic must be very great, and the unconscionable nature of it is still more apparent from the fact that the stuff is much adulterated, and that the poor victims do not even get their money's worth of the poison.

We recognize with pleasure the fact that these reproaches do not apply to all the druggists of Pittsburg. There are high-minded men among them, as shown by Dr. Simonton, who are repelled by this base traffic and will not engage in it. But the number of those who are yielding daily to this temptation, and are even competing to hold this trade, is too large. The remedies must lie in an aroused public sentiment, in a protest from the better druggists themselves, and in an appeal to the Legislature.

An Appeal to the Legislature to Control the Sale of Cocaine.—It is Dr. Simonton's object to lay this subject before the Legislature of Pennsylvania during its present session. To this object we wish to give our earnest support. The members of that body should have Dr. Simonton's paper, and give it careful perusal. Although we have never been enthusiastic on the subject of controlling men's appetites by legislation, we recognize that there are special features in this business which demand legislative action.

The sale of intoxicating liquors is carefully controlled by license, but the sale of such poisons as cocaine is entirely too open and untrammelled. We are familiar with the fact that the sale of poisons is regulated in a measure by law, but such law is evidently not adequate to control these cocaine shops. Such a poison—such a nerve-destroying drug—as cocaine should absolutely be prohibited for sale except by prescription, and even then in very limited quantities. The legitimate use of this drug is very limited. Physicians have long recognized that it requires to be used with utmost care, and that it should never be entrusted to the patient. We cannot conceive of any circumstances in which it is allowable to prescribe cocaine for the patient's own use. If there is any one drug which should never pass out of the hands of the physician, it is cocaine. Its use especially in nasal sprays and in gargles, except by the physician himself, is in our judgment unwarranted.

There is no drug that has probably done more harm and less good than cocaine. Ophthalmic and general surgeons find legitimate use for it, but they are not the ones who are responsible for its abuse. Its administration by the nose and mouth is the true source of danger. The drug itself, or any nostrum containing it, should not be allowed to be sold except by prescription, and the penalty should be heavy.

The Regulation of the Sale of Cocaine.—Dr. Simonton's paper has struck home. He has pointed out to us the widespread use of cocaine and drawn a graphic picture of the results which follow its use. From the standpoint of public health he has shown how easily this deadly drug may be procured, and the necessity which exists for prompt legislation which shall govern its sale. The great popularity of many patented catarrh cures depends upon the exhilaration which follows their use, and this effect depends largely upon the cocaine which these so-called cures contain. The average cocaine fiend is an innocent victim. He has been led to try this or that remedy with no knowledge of the effects which will follow. There is another class among these slaves who have been led to try the drug directly for the effect, the temporary exhilaration which makes worldly troubles so far removed. Dr. Simonton's paper is a stern arraignment of the retail druggist who, by dispensing cocaine at a tremendous profit, has in many instances built up a thriving business upon the wrecked lives of the victims whose paths to perdition he has rendered so easy. One Pittsburg druggist whom Simonton mentions, acknowledged that he sold some 24,000 grains a month, which figures out a profit of $6,120 a year. The extent to which the indiscriminate sale of cocaine is carried may thus be estimated. It is undoubtedly true that the present enactments relative to the sale of poisons are by no means sufficiently drastic, and we call the particular attention of our readers to the excellent suggestions of Dr. Simonton covering these points. It may be aptly said that competition is the life of trade, but a competition which leads to the sale of cocaine or like drugs simply for the purpose of holding trade or preventing a neighboring druggist from securing such trade, cannot be looked upon as other than most nefarious. To the credit of the pharmaceutical profession it must be said that by no means all of its members countenance such a traffic. Nevertheless, the ease with which cocaine is to be obtained shows patently enough that there is need of legislative as well as moral reform.

The Clinical Aspects of Cocainism.—It is doubtful if the slavery of any drug addiction equals in its thraldom that exerted by cocaine. The drug began to be used extensively consequent upon the studies of von Anrep and Karl Koller in the early eighties. Many a hay-fever sufferer has been aware of what Wood has called the peculiar delirious beatitude following its application, and the efforts to cure other drug habits, such as morphinism, by its use, have resulted only too often in making the patient a slave to both drugs. In the average case the symptoms of cocainism are ushered in with disorders of digestion, loss of appetite, salivation and emaciation. It is, however, upon the central nervous system that the chief pathological effects are exerted, and these are said to be a degeneration similar in character to that produced by the continuous use of morphine. A most dramatic picture could be drawn of the chain of symptoms to which the victim will soon fall heir. Insomnia, tremors, sometimes convulsions, hallucinations, and even delirium and insanity are often encountered in conjunction with various paresthesias. The first principle of treatment will depend upon the desire of the patient to be cured; without hearty co-operation on his part not much can be accomplished. The cocaine victim must have his drug at any cost, the craving for it overmasters his moral sense. On this account treatment in an institution would seem to hold out the only rational hope of success. The peculiar susceptibility of the colored race to cocaine is an interesting fact pointed out by Dr. Simonton. The widespread prevalence of the habit will prove a surprise to many, and it is well that the attention of the medical profession and publicists should be directed to this condition of affairs.

The Value of Cryoscopy to Therapeutics.—Last week we published an interesting paper on cryoscopy from the pen of Dr. Grim. The subject suggests the following thoughts: Therapeutics will only progress through the increase in the number and definiteness of indications. Of the making of many drugs there is no end, and yet there is reason to believe that we possess now in the pharmacopeia an ample variety of medicaments for the treatment of most of the ills to which flesh is heir. Not impossibly, from time to time, new specifics will be discovered; not impossibly all the infectious diseases will ultimately be treated by the products of their causes, but even then there will remain still a considerable number of conditions for the relief of which we must resort, in addition to diet, hygiene, exercise and climate, to the administration of certain drugs. Among these are the chronic forms of heart disease to which we have already made allusion, particularly with reference to the value of bloodpressure as an indication for treatment. Recently most elaborate investigations have been made for the purpose of determining the molecular concentration of the blood and urine in kidney disease (Rumpel, *Münchener medicinische Wochenschrift*, 1903, Nos. I, II, III). Now it appears that in the freezing-point of the blood, which is one of the best tests of the molecular concentration, we have a particularly fine reaction for the purpose of indicating the accumulation of dangerous substances, and the withdrawal of water that is an alteration of the molecular concentration in the wrong direction. As a result in cases of kidney disease it may be of the greatest use in guiding our treatment and prognosis. Take, for example, a case in which the urine contains abundant albumin, perhaps some pus and some casts. It may be due to a bilateral nephritis, particularly dangerous to the life of the individual. Under these circumstances an examination of the blood will show that its freezing-point has been reduced from —0.56° C. to perhaps —0.60° or —0.70° C. Or we might find that the freezing-point of the blood remains normal at —0.56° C. If the former were true, the prognosis would be alarming, the treatment correspondingly energetic. If the latter, we could be reasonably sure that at least one kidney was doing its work efficiently, and experience has shown that one kidney is perfectly capable of maintaining the normal molecular concentration of the blood. If these observations are sufficiently confirmed, and, indeed, they are themselves confirmatory of the work of other men, particularly the French clinicians, then we have in this method a most delicate indication of the severity of the case, and of the need for treatment.

It will be objected, perhaps, that it is more important to have an indication for a certain drug and not merely for the general institution of therapeutic measures, and that the determination of the freezing-point of the urine leaves us as much in the dark as ever regarding the nature of the treatment to be employed. However, evidence of severe kidney disease with a normal molecular concentration of the blood is at least an indication for considering surgical intervention, and in these latter days, when we have still been unable to throw off our inheritance of polypharmacy and overdrugging that has descended to us from our ancestors of the Middle Ages, the knowledge at least that no active drug is required is a boon.

There is, however, another direction in which it can be of the greatest aid to therapeutics: that is, in the control of the results of treatment. There is nothing more unsatisfactory than an attempt to depend upon the statements of the patient as to whether or not they are better. When we can weigh and measure the effect of our drugs as the surgeon, in a way, weighs and measures the effect of his operative procedures, as the neurologist weighs and measures the improvement in an atrophic muscle after the application of electricity and massage, then we shall begin to know what drugs are capable of doing the most good, and what measures are of the greatest benefit to our patients. Cryoscopy applied to the blood and urine may not prove all that is claimed for it, but at least the attempt is in the right direction.

The Cerebral Cortex as the Apex of the Reflex Arc.—The localization of reflex centers has been the theme of active discussion almost since the discovery of reflexes, which after all is only a thing of the last century. Experimental investigations and clinical observations at first seemed to indicate that the problem was not particularly complex, and that its definite solution was almost, if not entirely, attained, but more careful study showed that there were so many exceptions to these rules that it was more probable that the rules themselves were at fault than that physiological anomalies in the nervous system were so exceedingly common. Take, for example, the reflexes of the lower extremities; it seemed fairly obvious that most of them had their arcs in the lumbar and sacral enlargements of the spinal cord, but then, total transverse lesion of the cord abolished them, which was apparently (and perhaps only apparently) not in accordance with this localization, and not infrequently they were affected in the most peculiar way by cerebral lesions.

There can be little doubt that at least one of the reflex arcs (it is the fashion now to assume two arcs for each reflex) is completed in the upper lumbar segments. For a long time the plantar reflex has been more or less neglected; lately the discovery of the Babinski phenomenon has called renewed attention to it, and it has been exhaustively studied, but chiefly as a clinical phenomenon, and in fact some neurologists attach relatively little importance to it. Munch-Petersen (*Deutsche Zeitschrift für Nervenheilkunde*, Band 22, H. 2-4) has recently made a very careful study of it in various conditions, chiefly with the idea of finding out where the reflex center is situated. Premising first that all the phenomena of this reflex indicate that it has a single center, he studies its condition in various lesions of the peripheral nerves, of the cord, of the internal capsule and, finally, of the cortex of the brain. He finds that in all these conditions there is much evidence to prove that the tracts for voluntary motion and the motor tracts of the reflex are coincident throughout their extent. He calls attention to certain interesting phenomena observed in testing the reflex, that is, when the sole of the foot is pricked with a needle, there is an involuntary upward movement of the foot, and when a threat is made to prick the foot the same involuntary upward movement not infrequently occurs, and sometimes it may be produced merely by exhibiting the needle to the patient. He further has observed that only a quantitative not a qualitative alteration takes place in this reflex in functional nervous disease, and from all these facts, which, indeed, are but briefly given in this summary of his paper, he concludes that the reflex center must be situated in the cortex of the brain. Of course, this theory is not new, for many observers have insisted that the centers for the tendon reflexes were wholly in the cerebral cortex, and, therefore, it would seem plausible that the centers for the skin reflexes should be in the same situation. Although Munch-Petersen's article will probably convince few of those who hold positive opinions upon this subject, nevertheless, it is an interesting, clear and logical presentation of his side of the dispute, and, therefore, will command respect, and will at least serve to stimulate more careful observation of, and attention to, this phenomenon.

Heavy Damages.—The *Philadelphia Press* applauds the juries in damage-suits for their growing tendency to find for large damages in cases against the railroads and trolley companies. The *Press* thinks that the public has no more effective way to force the railroads to provide for the safety of their passengers than by making it more costly to kill a man than to carry him safely. This is a doctrine that will appeal to the public—especially when the public gets hurt in a railroad accident—but it is one that can readily lead to abuse.

The following cases are referred to as instances of big damages in recent or comparatively recent trials: A verdict for $70,000 against the New York Central R. R. for the death of Mr. E. F. Walton in the tunnel accident; a verdict for $39,000 in the case of C. S. Boyd in Philadelphia; a verdict of $10,000 in a Philadelphia court for a woman who had "injured her spine"; an award by a Brooklyn jury of $24,250 for a little girl's leg; a verdict in Arkansas for $50,000 to a woman for the loss of her husband; and, finally, the record breaker of $90,000 in the case of Mrs. H. Baldwin vs. the New York Central R. R.

It used to be said that a man's life was not worth more than $5,000; but in Pennsylvania, as well as in New York, juries are not restricted within any limit in finding damages. Consequently large damages are getting to be more and more the order of the day. We suppose, however, that judges still have some discretionary power, and can set verdicts aside.

Physicians are interested in this subject because they are called as witnesses in such cases, and should have a clear knowledge of how much their services are worth. To most experts it will doubtless seem that testimony that helps to secure a large award is worth more than testimony that secures a small one. This, however, is a matter for individual judgment. Finally, it should remain within the discretion of the court to see that extortionate damages do not stand.

Against Cremation.—A few days ago an English judge, in sentencing a murderer to death, condemned the practice of cremation. He said that, if the bodies of the three women whom this murderer, Klosowski, had killed with poison, had been cremated, the criminal could never have been convicted, and that the case was a warning to those persons "who thought that the graveyards should be shut up."

Sir Henry Thompson, the well-known and venerable surgeon, who keeps himself interested in everything, has replied to the judicial strictures on cremation. He claims that such precautions are adopted before cremation that any poisoner who endeavors to get rid of the body of a victim by that method is almost sure to be detected. Both in England and in France, says Sir Henry, the "keenest inquiry" is made in every case.

This is an interesting statement, but we confess that we should like to be informed more in detail as to what the "keenest inquiry" consists of. Only a rigid autopsy in every case, with expert toxicological tests, would be an absolute guarantee, and it is hardly conceivable that such tests are made in every case before cremation in England and France. We are certain they are not made in this country. Until we know more in detail what Sir Henry Thompson means, we shall continue to see some point in the criticism of Justice Grantham.

Dr. Guillotin and Dr. Gatling.—It is a remakable fact that physicians should have been the inventors of two of the most terrible instruments of death known to mankind. And it is likewise noteworthy that both these doctors should have been actuated by motives of mercy when they inflicted their deadly inventions on the world. Dr. Guillotin, as is well known, was something of a statesman and also a sanitarian. As a member of the National Assembly he concerned himself about the health of his colleagues, and, as Justin H. McCarthy tells us in his recent history of the French Revolution, carried a motion that the seats in the Assembly chamber should be cushioned, although "we associate the name of Guillotin more with man's thinking apparatus than with man's sitting apparatus." He really did not invent the instrument that bears his name, but adapted it from the Italians, and urged its adoption in a remarkable speech, in which he told his hearers, "We cannot make too much haste, gentlemen, to allow the nation to enjoy this advantage," and claimed for his pet machine that "It whisks your head off without hurting you in the least." Guillotin's motive was entirely humane; he was horrified at the method of hanging criminals then in vogue. But he lived to hear La Sainte Guillotine dubbed forever with his own name, and he spent some of the most bitter years of his life trying to save some of its allotted victims.

We are reminded a little of Dr. Guillotin and his "decapitizer" when we read of Dr. Gatling and his gun. Dr. Richard J. Gatling, recently deceased, was a graduate in medicine, educated in Indianapolis, and successful in practice, but his inventive genius led him to construct a gun that would fire 1000 shots per minute. According to the *Medical and Surgical Monitor*, the friends of Dr. Gatling were so horrified at the thought of this death-dealing instrument that they tried to persuade him to abandon the thing, but Gatling replied that the invention was humane; that the machine was a labor-saving one; that it would do the work of one hundred men, and that consequently ninety-nine men could stay at home and attend to the arts of peace while one man went to war with a Gatling gun. As more soldiers were killed by camp diseases than in actual battle, the Gatling gun, by cutting down the number of men in camp, would be a life-preserver. Inspired by these motives, Dr. Gatling kept on improving his gun.

Perhaps his logic was correct. It is a well-known fact that modern warfare is getting to be so dangerous that nations are afraid to indulge in it. This makes for peace. But, however that may be, we cannot help but associate the names of Dr. Guillotin and Dr. Gatling as humanitarians and logicians.

"Virchow's" Archiv.—It rarely happens that it is desirable or advantageous to place the name of an editor at the head of a publication. *Von Graefe's Archiv* was an exception to this; the greatest authority in his specialty impressed so powerfully his personality upon the publication that by right his name was prefixed to it. A still more striking example occurs in the case of the *Archiv für pathologische Anatomie und Physiologie und für klinische Medicin*, which will always be known by the scientific world, as *"Virchow's Archiv,"* or more conveniently simply as *"V. A."* No medical publication has ever been so notable as this. We say this advisedly. The *Lancet* in England has had a longer existence; the *Semaine Médicale* has had a vastly greater circulation; even in America the *American Journal of the Medical Sciences* has represented the very best product of American medical investigation; but *Virchow's Archiv* has been peculiar in the fact that it represents the medicine of the world in its broadest sense in a series of articles which for average excellence have never been approached. Israel, in a brief article at the beginning of Volume 170 of the *Archiv*, gives us an idea of how this has been accomplished. Virchow was not only the *"Herausgeber,"* he was also the editor of the *Archiv*, and an editor in the strictest sense of the word, reading and selecting the original articles, correcting them if necessary, supervising the corrections made by the author himself, criticising and sometimes altering the illustrations, paying a personal attention to the excellence of the translations made of articles sent to him in foreign languages, and insisting above all things upon clearness of expression. Naturally as the publication became more successful, the labor of the editor became greater. The material increased to an alarming degree, and finally it was found necessary to convert the *Archiv* into a regular periodical, rather than to publish Hefte when a sufficient number of papers had accumulated, Virchow arguing that in addition to authors there must be a purchasing public, and that this public had a right to expect a limit to be set to the size of the publication.

The effect that Virchow produced upon the science of pathology is perhaps unmeasurable, yet in a way we can appreciate it in part, and many efforts have been made to estimate it more or less closely. But the effect of his editorial supervision of the enormous amount of original material that was offered to his *Archiv* and his advice and assistance to the authors can never be known.

Current Comment.

HIPPOCRATES AND GALEN.

"Hippocrates, great as he was, might have found more than one equal among his contemporaries, but the second century can boast of but few men of genius, the most famous of whom was far inferior to Hippocrates. This was Claudius Galen (131-200), a man who not only knew all there was to know in his age, but possessed sufficient talent and originality to acquire the position of a medical dictator, and to maintain it for more than a thousand years. . . . Hippocrates separated medicine from philosophy; the great aim of Galen was to re-unite them. Hippocrates thinks little of theory and much of observation; Galen, if he does not absoluely reverse the order, at least considers them of equal importance. To Hippocrates medicine is before all things an art, 'the Art' as he continually calls it; Galen considers this as its lowest aspect, but his object is not so much to convert it into a science as into a philosophical system, and he accepts in its fullest sense the dogmatic motto: 'The physician who is also a philosopher is godlike.' . . . The medieval period . . . was essentially an age of authority in all things, bodily, mental and spiritual. Hippocrates, or one of his immediate pupils, had said: 'Science and belief (opinion) are two things, the one begets knowledge, the other ignorance.' It was hardly likely that the 'Ages of Faith' would adopt such a teacher, especially when Galen, like an infallible Pope, was ready with a fixed rule for every case, and with a theory, or at least an assertion, to explain every difficulty. But though Galen is inferior to Hippocrates, and though his followers persisted in retaining his livery till it was antiquated and outworn, thereby bringing ridicule both on themselves and their master, we must not let this blind us to the greatness and importance of his work. Some of it . . is of permanent value. Much more of it was the best that could be done under the circumstances."

—*Dr. E. Theodore Withington.*

AN EXTRAORDINARY FACT AND AN EXTRAORDINARY SENTENCE.

We have often paid the penalty, but the lesson has not been learned. So far are we from having learned it that even now, when the Ithaca epidemic of typhoid fever is the subject of such general thought, when we stand aghast that a university town should be poisoning the flower of our young men, proposed legislation forbidding the cutting of ice for domestic use at any point between Waterford and Coxsackie on the Hudson River or within 3,000 feet below any town of more than 10,000 inhabitants on the river, though supported by testimony to the effect that ice polluted by eighty sewers is sold for domestic purposes in New York, an honorable senator and a delegation of ice dealers oppose the bill on the ground that it would deprive 10,000 men of a means of livelihood!

—*New York Medical Journal.*

Correspondence.

DIABETES IN INFANCY.

By WILLIAM OSLER, M. D., of Baltimore, Md.

To the Editor of the **Philadelphia Medical Journal:**

In connection with your interesting paper on this subject I would like to call attention to the fact that in the *Phthisiologia* (1689) Richard Morton reports a family in which three of the children died of what he jocosely calls *Hydrops ad Matulam—dropsy of the chamber-pot,* the popular name for diabetes. What is still more remarkable, he describes a fourth case in the same family, also a child, which gradually recovered on a milk diet.

CONGENITAL ABSENCE OF THE UTERUS.

By E. S. CORSON, M. D., of Toungoo, Burma.

To the Editor of the **Philadelphia Medical Journal:**

Recently a Karen woman, about 20 years of age, came to me stating that her menses had never appeared, and that, although married for 3 years, she had never conceived.

I made an examination and found externally the appearance of the parts were normal. On attempting to introduce my finger into the vagina, I found it entirely obstructed by a corrugated slightly elastic mucous membrane. I examined closely with a probe for any perforation, but none was apparent. After the bowel had been emptied by enema, I made an examination per rectum, and failed to find the slightest trace of the uterus or ovaries or any body simulating them. I therefore came to the conclusion that the woman was devoid of vagina, uterus and ovaries. She complained of no discomfort, and the reason for the desire for the examination was due to the husband's wishing to know the exact condition of things.

SPINAL SYMPTOMS CAUSED BY MORPHINE.

By W. W. KEEN, M. D., of Philadelphia.

To the Editor of the **Philadelphia Medical Journal:**

Dr. Gordon's letter on page 497 of your issue of March 21. 1903, recalls a personal experience which I have often related to some of my friends as a very unusual result of morphine. Until I read Dr. Gordon's letter I have never seen a similar experience recorded, though it may have been done.

In the spring of 1866, after two years of very close study abroad, I had a severe attack of insomnia in Paris. I tried every means to induce sleep before resorting to any drugs. Finally in desperation, one night I took ¼ gr. morphine, and, as this had no result, in an hour or two I took a second ¼ grain. Not only did not sleep come, but, an hour or two later, when I got out of bed to bathe my head in hopes that that might help me fall asleep, I was very much surprised to find that I walked with a distinct spastic gait. When I struck my knee against any article of furniture in the room in the dark, instantly a spasm closely resembling a strychnic spasm was produced. Of course, knee jerk, ankle clonus and Babinski's signs were not known at that time, and I have no other clinical phenomena to record than the spastic gait and the strychnic spasm.

Naturally, I did not touch morphine again. On a few occasions since then I have had ¼ gr. of morphine given me, but I never have experienced the same peculiar symptoms. I presume that the nervous condition that I was in at the time accounted for them. By the next morning I was entirely over them and placed myself under the care of Prof. Lasègue. He soon put me on my feet.

Reviews.

Les Obsessions et la Psychasthénie, par les Professeurs F. Raymond et Janet. Avec 22 Graveurs dans la Texte. Paris. Felix Alcan, Editeur. 1903.

This book is a vast receptacle for clinical histories of patients with all kinds of obsessions, fixed ideas, algias, phobias, deliria of contact, tics, insanities of doubt, imperative conceptions, impulsions and neurasthenic whims. It is such a book as only two French authors could have written, for, even though others had had the clinical opportunities to gather together all this mass of biographical detail, it is doubtful whether they would have had the patience to chronicle it. The work may be called an encyclopedia of obsessions. Anybody can find in it almost any kind of an obsession that he wants. From the simple neurasthenic to the most pronounced victim of a dominating impulse; from the woman who has an "algie de l'anus" (with very bizarre results) to the lunatic who has genital hallucinations about the eucharist; from the agoraphobiac and claustrophobiac to the dipsomaniac and the pyromaniac, all are here. Every poor devil under the sun who has ever known what it was to be haunted by an imperative conception, can find his likeness in the pages of this book. After glancing through it (for one can hardly take the time to read it in detail) one sees that brusk old Dr. Samuel Johnson, with his mania for tapping posts, was a mild type of the impulsive crank. He is not to be compared with the choice examples set forth by MM. Raymond and Janet.

The book is of enormous bulk, containing about 540 closely printed pages, and is made up largely of very prolix biographical and clinical histories. Hence, it is not a book to be approached in a light mood; but, as we have said, it is encyclopedic, and furnishes a mine of cases for all psychiatrists who are looking for frightful examples. The high reputation of the authors will give the book currency as a work of reference. and their treatise will be likely to remain unique, for we imagine no one will ever have the hardihood to attempt to rival it. [J. H. L.]

The Practical Medicine Series of Year-Books. Comprising ten volumes on the Year's Progress in Medicine and Surgery. Issued Monthly, under the editorial charge of Gustavus P. Head, M. D., Professor of Laryngology, Chicago Post-Graduate Medical School. Volume VI. General Medicine. Edited by Frank Billings, M. S., M. D., Head of Medical Department and Dean of the Faculty of Rush Medical College, Chicago. With the Collaboration of S. C. Stanton, M. D. May, 1902. Chicago. The Year Book Publishers, 40 Dearborne St.

The volume before us for review is a series of abstracts from current literature on general medicine. It collects papers on typhoid fever, malaria, yellow fever, dysentery, mountain fever, Malta fever, tropical fevers, glandular fever, peritonitis, hysterical tympanites, diseases of the liver, diseases of the pancreas, diseases of the esophagus, diseases of the stomach, diseases of the intestines, trichinosis, filariasis, actinomycosis, glanders, mumps and sunstroke. The abstracts are well made and the book will be of value to anyone who wishes to review the latest writings on any of these topics. [J. M. S.]

News and Notes.

AMERICAN

PHILADELPHIA AND PENNSYLVANIA.

German Hospital.—A bronze tablet in memory of the late J. D. Lankenau was unveiled in the main hall of the German Hospital, March 18, on the occasion of the 86th. anniversary of Mr. Lankenau's birth. For 30 years he was president of the Hospital. The tablet bears the following inscription: Memorial to John D. Lankenau, born in Bremen, March 18, 1817; died August 30, 1901. President of the German Hospital from 1869 to 1901. In memory of his munificence and the love and affection cherished for him by everyone connected with this institution. "The life we spend for others is a life not spent in vain." The last sentence was Mr. Lankenau's motto. Addresses were made in German and English.

Department of Public Health and Charities, Philadelphia.—The bill creating the Department of Public Health and Charities in the city of Philadelphia, which had already passed the Senate, was passed by the House of Representatives, March 18, and has gone to the Governor. It empowers the Mayor of Philadelphia to appoint a director of public health and charities. The salary of the director, the number and salaries of his assistants, and the regulations for the department are to be fixed by ordinances of Councils. Supervision of public health regulations and the management of city charities are to be transferred to the new department.

University Hospital.—Miss J. B. MacPherson, superintendent of the University Hospital, has resigned that position. Miss Marian A. Smith, at present head nurse of the Philadelphia Hospital Training School for Nurses, has resigned that position in order to accept the superintendency of the University Hospital. It is believed that Miss Smith will be succeeded as superintendent of the Philadelphia Hospital Nurses' Training School by Miss Lydia Whiton, who declined an offer to join the staff of the University Hospital. These changes will all occur about May 1.

The Health of Philadelphia.—During the week ending March 21 there were 247 cases of typhoid fever reported, with 27 deaths, as compared with 272 cases, with 38 deaths, in the week previous. Of these cases, 53 occurred in West Philadelphia. Quite a number of cases have occurred in Somerville, at the East end of Germantown. There was a marked decrease also noted in the number of scarlet fever cases reported, 62, with 4 deaths, as compared with 101, with 2 deaths during the preceding week. The number of cases of diphtheria shows a slight increase, 48 cases with 7 deaths having been reported, compared with 41 cases with 10 deaths during the previous week. There was also a great decrease in the number of smallpox cases reported, 26 as compared with 44. A case of smallpox has also been found in Bryn Mawr and another at Moyamensing prison.

The Associated Health Authorities and Sanitarians of Pennsylvania.—The tenth annual convention was held at Harrisburg, March 19 and 20. The opening address was delivered by Adjutant-General Stewart. Dr. L. F. Flick then read a paper on the Duty of Boards of Health in the Prevention of Tuberculosis. He said that tuberculosis was strictly a contagious disease, not an infectious disease. It should also not be called communicable. For the prevention of tuberculosis 3 kinds of measures are necessary; regulation of contact between sick and well, accomplished by education and laws; control of contact, exercised in sanatoria and hospitals; and corrections of evils of contact, by sterilizing places and things occupied or used by tuberculous subjects. Theoretically, contact between tuberculous subjects and healthy people can be made absolutely harmless by sterilizing sputum. Among the poor and ignorant it has not yet been accomplished practically. The early stages are practically all curable, but an asylum should be granted dying consumptives. Consumptives should not be taken to almshouses, but should be isolated in special hospitals. Dr. J. T. Rothrock spoke on the Highlands of Pennsylvania in Their Relation to Pulmonary Tuberculosis. He believed that patients with tuberculosis should be isolated in mountain regions, which does them good and removes them from bad surroundings. Dr. R. S. Mason read a paper on House Quarantine versus Emergency Hospitals for Stamping Out Smallpox. He said that the smallpox epidemic in Delaware county had decreased 50% per month since December and attributed this result to the hospital methods employed in fighting the disease. The convention approved the bill to utilize the State Forest Reservations for the care of indigent consumptives.

Bequests.—By the will of the late William McClary, $5000 each were left, to endow beds in the Presbyterian, German, St. Joseph's and Samaritan Hospitals, Philadelphia.—By the will of the late J. Alfred Kay, $5000 each were left to the Pennsylvania, Germantown, University, Jefferson, Orthopedic and Polyclinic Hospitals; $1000 each to St. Agnes', St. Joseph's, Jewish, Presbyterian, German, Gynecean, Howard, Medico-Chirurgical and Children's Hospitals. Besides, one sixth of the residuary estate was left to each of the first named hospitals.

Society Meetings Next Week.—The following societies meet next week at the College of Physicians, Philadelphia, at 8.15 P. M.: Wednesday evening, April 1, College of Physicians, and Thursday evening, April 2, Obstetrical Society.

Assistant Laryngologist.—A desirable position as assistant in the laryngological clinic in one of the Philadelphia hospitals is now vacant. Any graduate in medicine, desiring to become a candidate, will be informed of particulars by addressing the News Editor.

Postgraduate Medical Course.—The University of Pennsylvania Medical School will give a postgraduate course, conducted by the members of the teaching staff, from April 27 to June 20. The course is designed especially for practitioners, but is open also, in the laboratory courses, to advanced students in medicine. The laboratory course will begin on April 27 and close on June 6, and the clinical course will begin on May 11 and close June 20.

NEW YORK.

Cornell University Medical School.—The faculty of this institution tries to have students pursue the study of natural science as early as possible, and insists upon mathematics and a thorough knowledge of English for admission. A knowledge of physics and organic chemistry is essential, and has up to this time come in the first year of the medical course. Students, however, who have completed such courses or can pass examinations on them, are excused from physics and chemistry, and are given physiological chemistry, which belongs in the second year. The general outline of the 4 years' course is then divided into 2 periods, the first 2 years covering anatomy, physiology, organic chemistry and bacteriology; the second 2 years, medicine, surgery, therapeutics and the specialties. The more capable and industrious students may anticipate much of the final 2 years, and the time thus gained is devoted to practical dispensary and hospital training.

St. John's Hospital, Yonkers.—The Cochran Surgical Pavilion was opened March 21, an annex to St. John's Riverside Hospital, at Yonkers. It is 70 feet long by 50 feet wide, 3 stories high, and completely equipped for surgical cases. It was the gift of the late W. F. Cochran.

Long Island College Hospital.—As we announced last spring (Philadelphia Medical Journal, May 31, 1902, page 952), J. R. Maxwell, president of the Board of Regents of the Long Island College Hospital, Brooklyn, is soon to build 2 central buildings, new buildings for the hospital and college, in Henry street, in memory of his brother, the late H. M. Maxwell. Beside these new buildings to be erected by Mr. Maxwell, a wing will probably be built in memory of the late Dr. A. J. Skene, by popular subscription. Besides, an operating-amphitheater to accommodate 250 students will be erected by the Messrs. C., R. and F. Peabody. These improvements altogether will cost almost $1,000,000.

Manhattan Eye, Ear and Throat Hospital.—Mrs. A. A. Thomas and her 2 children have given $50,000 to the Manhattan Eye, Ear and Throat Hospital, to endow a ward of 10 beds in the new hospital building, to be known as the Samuel Thomas Memorial Ward.

American Urological Association.—Dr. F. C. Valentine, secretary of the American Urological Association, announces that the regular meetings of this association are held the first Wednesday of each month except July, August and September, in New York. The president is Dr. Ramon Guitéras, the vice-president, Dr. W. K. Otis, and the treasurer, Dr. John van der Poel. The annual meeting will be held at New Orleans, May 8 and 9.

A Death From Glanders in New York City.—A cigar maker, aged 52 years, who had never had anything to do with horses, died from glanders last week, after an illness of one month, the diagnosis having been confirmed by autopsy. Physicians are much puzzled over the manner in which he contracted the disease.

WESTERN STATES.

Jewish Hospital, Milwaukee.—It is believed that the hospital will be ready for occupancy by May 1. A number of business firms in Milwaukee will help to furnish the institution. Several beds will also be endowed as soon as the hospital is opened. The Board of Directors is now preparing a list of physicians who will be asked to serve on the staff.

St. Louis Medical Society.—A banquet will be given by the St. Louis Medical Society, April 14, in honor of 3 physicians who have practised medicine for 63 years or more, at least 55 years of the time having been spent in St. Louis. The physicians thus honored were Drs. Simon Pollak, who has practised 68 years, William Johnston, who has practised 65 years and William McPheeters who has practised 63 years. Dr. Pollak will be 90 years old April 14.

Smallpox Among the Digger Indians.—Reports from Laytonville, California, state that an epidemic of smallpox threatens to exterminate the tribe of Digger Indians in Long Valley. The Indians would not permit vaccination. The disease was spread by dances, held in their sweat-houses, at which sacrifices were offered to the gods. After dancing until almost exhausted, the Indians plunged into Eel River.

MISCELLANY.

Leprosy in Hawaii.—Governor Dole reports that leprosy is decidedly decreasing, because of stricter enforcement of segregation in Molokai. The settlement on Molokai was established in 1866, during which year 141 patients were admitted. During the first 7 years the patients admitted averaged 114 per annum, the largest number admitted in any one year being 183. In 1873 a stricter enforcement of the law was carried out, and 487 patients were sent to the settlement. Until 1887 the average per year was 141, the largest number admitted in one year after 1873 having been 301. Since 1887 the law has been rigorously carried out, the number of admissions in 1888 being 579; in 1889, 308; and in 1890, 202, since which time the number of admissions has constantly decreased. Thus, from 1871 to 1880, an average of 648 patients was admitted, the death-rate 20%; from 1881 to 1890, 823 patients, 17% death-rate; 1891 to 1900, 1098 patients, 12% death-rate. This shows the great decrease in the death-rate in the past 10 years. The large number of patients from 1891 to 1900 was due to more vigorous execution of the law of segregation.

The Plague at Noumea, New Caledonia.—Advices received at Victoria, B. C., by the steamer *Moana* state that plague has broken out on the French steamer *Pérouse* at Noumea, from the New Hebrides. Four patients have died, and the steamer has been quarantined.

An Epidemic in the West Indies.—The disease, which resembles smallpox, epidemic on the Island of Trinidad, exists on the Island of St. Vincent, and has lately appeared at Jamaica. There have been 829 cases in Trinidad since October, with 3 deaths. At present 220 cases are being treated at Port of Spain, Trinidad, where the disease has been diagnosed chicken-pox. The disease, which was for a long time epidemic in Barbados, was there called smallpox. West Indian newspapers now clamor for the appointment of a medical commission, to determine the nature of the disease, whether the several epidemics are due to the same disease, and to make recommendations for the treatment of this disease or these diseases.

Hospitals in Formosa.—Japan has established and maintains 12 hospitals in Formosa. They are distributed among the various provinces and are supported by subsidies from the Japanese government. One hospital has just been completed at Daihoku, and is perhaps the largest and best on the island. Besides a main ward, there are attached a room for disinfecting, a ward for contagious patients, a library, a lecture room, a bacteriological laboratory and a nurses' dormitory. This hospital cost more than 300,000 yen.

Cholera in Damascus.—Under date of February 3, 205 deaths from cholera were reported in Damascus during January. Of this number 17 were soldiers. It is said that the disease was sporadic and not epidemic, and that the number of cases is constantly decreasing.

Diphtheria.—A very accurate description of diphtheria, the record being still preserved by unquestioned authority, was given by Aretæus of Cappadocia, about 50 A. D., and constituted the earliest authentic description of the disease.

Bubonic Plague in Mexico.—Under date of March 18 it was reported that no new cases and no deaths had occurred at Mazatlan since March 12, and that there were but 30 cases under treatment. Villa Union is now free from the plague, while Sequieros still has some cases of the disease. There is no tendency to hide anything; rumors are promptly run down and investigated, and the epidemic is well in hand.

Obituary.—Dr. James J. Larkin, at Chicago, Ill., March 13.—Dr. John H. Brower Browning, at Smithtown, L. I., March 16, aged 46 years.—Dr. Sherburne R. Merrill, at Paterson, N. J., March 15, aged 81 years.—Dr. Benjamin Miller Van Syckel, at Newark, N. Y., March 15.—Dr. H. Hungerford Drake, at New York City, March 16, aged 70 years.—Dr. Jonathan Baker, at Des Moines, Iowa, March 15.—Dr. H. Turner Bass, at Tarboro, N. C., March 17.—Dr. Chauncy M. Skinner, at Oconomowoc, Wis., March 14, aged 65 years.—Dr. Hezekiah Henry Bean, at Baltimore, Md., March 18, aged 83 years.—Dr. Edward W. Jenks, at Chicago, Ill., March 18, aged 70 years.—Dr. J. August Carncross, at Philadelphia, Pa., March 19, aged 58 years.—Dr. G. W. Southworth, at Santa Barbara, Cal., March 17, aged 93 years.—Dr. Harry Woodward Dorsey, at Hyattsville, Md., March 21, aged 71 years.—Dr. Alonzo Sims, at Weatherford, Texas, March 18, aged 56 years.

FOREIGN.

GREAT BRITAIN, ETC.

National Association for the Prevention of Consumption.—At the meeting held last week the gift of $200,000 for the erection of a sanatorium, from the firm of Wehrner, Beit and Company, was announced. At the same time Sir James Crichton Browne emphasized his conviction that the day was soon coming when tuberculosis would be eradicated. He said that there could be no doubt that tuberculosis was one of the main factors of physical incapacity. It killed an army corps of men every year, and its ravages extended to tens of thousands of women and children. It was not, like cancer, a dark, terrible and inscrutable mystery. The causes were well understood, and the methods of propagation were well known. The potential remedy lay in the discovery of the infectivity of tuberculosis. It was absolutely certain that with scrupulous cleanliness and well defined precautions tuberculosis could be effectively dealt with and ultimately eradicated.

University of Glasgow.—Among those to receive honorary degrees at the graduation ceremonies, to be held April 21 next, are Sir William Tennant Gairdner, emeritus professor of medicine in the University of Glasgow, and Dr. Thomas Oliver, professor of physiology in Durham University, each of whom will receive an honorary LL. D.

Diphtheria Antitoxin in London.—The value of antitoxin in the treatment of diphtheria has been clearly demonstrated by the reports of the Metropolitan Asylum Board. In 1894, 3042 patients were treated without antitoxin; 902 died, a mortality of over 29%. In 1895, antitoxin was first used; 3529 cases were treated with 729 deaths, a mortality of over 22%. In the first year, then, the mortality fell 7%. In 1901, 6499 patients were treated with antitoxin; 817 died, a mortality of over 12%. Of these 753 were laryngeal cases, with 159 deaths, a mortality of 21%. In the Brook Hospital alone 723 cases of diphtheria were treated with antitoxin, with 78 deaths, a mortality of 10%. When the antitoxin was given on the first day, in 38 cases, there was no mortality; on the second day, in 170 cases, the mortality was 4%; on the third day, in 192 cases, the mortality was 11%; on the fourth day, in 137 cases, the mortality was 12%, and on the fifth and subsequent days, in 186 cases, the mortality was 16%. For 5 consecutive years there has not been a death in this hospital among the patients coming under treatment on the first day of the disease, and of those coming under treatment on the second day the mortality has not exceeded 5.4%. These statistics show, not only the value of antitoxin in the treatment of diphtheria, but particularly the great advantage of its early administration.

Dorset County Hospital.—The new operating theater was formally opened by Sir Frederick Treves, Februray 23 last. The building cost almost $10,000, which were collected by subscriptions. Sir Frederick Treves presented the operating table.

Owens College, Manchester.—Dr. Judson S. Bury has recently been appointed clinical lecturer on neurology.

University of Wales.—Mr. David Davies, of Barry, is erecting and equipping new scientific laboratories, to cost almost $100,000, in connection with the Aberystwith College of the University of Wales.

Antityphoid Serum.—At the meeting of the Royal Society, London, March 14, Lord Lister communicated a paper by Dr. Allan Macfadyen, director of the Jenner Institute of Preventive Medicine, describing a prophylactic and curative treatment for typhoid fever. Dr. Macfadyen found that by crushing the microscopic cells of the typhoid bacillus in liquid air the cellular juices can be obtained apart from the living organism and that these juices are highly toxic. By injecting them in small, repeated doses into a living animal, its bloodserum is rendered powerfully antitoxic and bactericidal; it becomes an antidote alike to living typhoid bacteria and to the poison that may be extracted therefrom. Dr. Macfadyen explains the application of the serum to animals and details his experiments, which showed that the serum is curative as well as protective against infection. The Jenner Institute is now investigating the juices of other bacteria. If its experiments prove that bacterial juices in general react upon the animal organism in the same way as on living bacteria, the fact will profoundly influence medical speculation and practice. Regarding crushing bacteria the question naturally arises, by what unimaginable accuracy of grinding can these infinitesimal organisms be broken so as to release their intercellular toxins. The crushing of the bacilli is done in liquid air, because, when frozen hard, they become brittle and, notwithstanding their almost inconceivable minuteness, can be completely broken up by trituration and will, under no subsequent conditions, show a sign of bacterial growth.

Dublin Medical School.—Dr. J. M. Finney has recently been elected King's professor of medicine for a second period of 7 years.

A Bequest.—Under the will of the late Mr. Mellin, the originator of Mellin's Food, $250,000 have been left to King Edward's Hospital Fund.

Obstetrical Society, London.—Dr. Edward Malins, of Birmingham, has been elected president of the Obstetrical Society of London for the ensuing year. Dr. Thomas Wilson, who has been assistant obstetric officer at the General Hospital, Birmingham, for the past 10 years, has been unanimously elected honorary obstetric officer, in the place which Dr. Malins has just resigned.

Royal Institute of Public Health, England.—The next annual congress will be held at Liverpool, July 15 to 21, 1903.

CONTINENTAL EUROPE.

Postgraduate Medical Instruction in Germany.—A plan has recently been perfected, the cost being paid by the Government and by small contributions from medical societies, for the teaching of modern developments in medicine and surgery in a number of the smaller towns throughout Germany. This instruction, which is to be for graduated physicians only, will be given by well-known professors free of charge. It is expected that specimens to illustrate different medical conditions, laboratory methods and the latest therapeutics will be moved from town to town, being explained by well-known specialists in each place. Thus for a week or two every year, a physician practising in the vicinity can come to the town and see the latest advances of treatment, watch celebrated surgeons operate, and thus receive an idea of the progress made by the medical profession since he was graduated. This idea has already been carried out to a limited extent by the Bavarian Government. The plan for a traveling university is said to have originated with the late Empress Frederick, who frequently spoke to Dr. Renvers about it. The Emperor has already signed the plans for this work.

New Vienna General Hospital.—Work is soon to be begun upon the new buildings erected upon the property formerly occupied by the insane asylum. Plans of the separate pavilions have already been prepared. The new buildings will contain almost twice as much space as there was in the old hospital. While there were 2000 beds and 600 extra beds in the maternity department of the old hospital, there will be between 1400 and 1500 beds in the new hospital with only 400 maternity beds, since the Government has undertaken to erect an entirely new maternity department. The new hospital will have 3 medical, 2 surgical, 2 ophthalmological, 2 obstetrical, 2 dermatological, 2 psychiatrical clinics and one otological and one laryngological clinic, in 15 separate pavilions. Besides this there will be erected a new anatomopathological institute, a new institute for medical jurisprudence, and a new medicochemical institute. Each pavilion will consist of 2 parts, wards and annexes with dispensary rooms, and lecture rooms with laboratories. There will also be rooms for isolating infectious diseases in each pavilion. There are to be 100 beds in each pavilion, 20 beds in the wards and a number of rooms containing one or 2 beds each.

The Teaching of Pediatrics in Italy.—There is a professor of the diseases of children at the Universities of Naples, Florence, Bologna, Rome and Padua, each of whom is in charge of a special clinical department. It is believed that a professor of pediatrics will soon be added to the faculty of the Genoa Medical School. This will probably be Dr. Iemma, who is already giving instruction in pediatrics there. In Parma, Dr. Cattaneo is teaching at the Children's Hospital, and Dr. Bordonare has a ward in the General Hospital at Catania. In Turin, Dr. Muggia has charge of the department for children at the Policlinico, and Dr. Mesi is giving instruction at the Foundling Asylum; at Palermo Dr. Carini gives a course at the Children's Hospital, and Dr. Gagnoni, of Florence, annually gives a course at Siena. At Florence the professor in charge is Dr. Mya, at Rome Dr. Concetti, who together edit the new journal of pediatrics called *La Revista di Clinica Pediatrica.*

The Oldest Physician Living.—It is said that Dr. Jean David, of Montpellier, France, is the oldest member of the medical profession alive at present, having been born February 3, 1801. He practised his profession for three quarters of a century in a country district near Montpellier, making his daily visits on horse-back. His first serious illness was an attack of typhoid fever at the age of 63 years; his only other attack of illness was pneumonia, when he was 91, from which he promptly recovered. His only infirmity is failing eye-sight, his intellect being in no way affected by his age. He speaks with enthusiasm of the wonderful progress which he has seen in medicine and surgery during his life.

University Notes.—**Berlin:** Dr. Johannes Orth celebrated the completion of 25 years as a professor of pathology, February 28 last. His former pupils and assistants prepared a "Festschrift" in his honor, which was presented to him by Dr. Ludwig Aschoff, his successor as professor of pathology in the University of Göttingen.—Professor Lang, of Vienna, and Professor Pick, of Prague, have been elected honorary members of the Berlin Dermatological Society.—**Greifswald:** A meeting was held February 28, last, in memory of the late Professor Leonhard Landois. Dr. Waldeyer, of Berlin, delivered the address.—Professor Loeffler has been elected rector and Professor Schulz dean of the Medical School.—Dr. Bleibtreu, of Bonn, has been appointed professor of physiology.—**Innsbruck:** Dr. Ludwig Merk, of Graz, has been appointed professor of dermatology and syphilography.—**Leipsic:** Dr. Friedrich A. Hoffmann has been appointed professor of surgery and director of the polyclinic, in the place of Dr. Paul L. Friedrich, who has been director of this institution since 1895, but who has recently left for Greifswald, to take the place vacated by Dr. Bier.—**Munich:** On March 8 the fiftieth anniversary of the *Münchener medicinische Wochenschrift* was celebrated.

Obituary.—The death occurred recently, of Dr. J. Giné y Partagas, professor of pathology in the Barcelona Medical School.

The Latest Literature.

BRITISH MEDICAL JOURNAL.

March 7, 1903.

1. An Address on Some Misconceptions With Regard to Diseases of the Liver. H. HALE WHITE.
2. The Erasmus Wilson Lectures on Adenoma and Adenocarcinoma of the Rectum. (Lecture III.) CHARLES B. BALL.
3. The Lettsomian Lectures on the Conditions Which Modify the Characters of Inflammations of the Skin, and Their Influence on Treatment. (Lecture II.) H. RADCLIFFE CROCKER.
4. A Case of Apparent Secondary Abdominal Pregnancy in a Rabbit After Primary Rupture of the Uterus. KURT KAMANN.
5. A Case of Rheumatic Fever Complicated by Chorea, Iritis and Endocarditis; Recovery. F. C. FORSTER.
6. Bright's Disease; Anuria; Intestinal Hemorrhage; Death. LYSTER COLE-BAKER.
7. Diabetic Coma Treated by Transfusion. D. YOUNG.

1.—Although the studies of cases of **cirrhosis of the liver** show a strikingly high percentage of histories of overindulgence in alcoholic drinks, yet White believes that we should not regard alcohol as the cause of the condition, but that we should look for a second substance, associated with the alcohol, as its true cause, such as, for example, the arsenic which was found contaminating beer in the recent Manchester epidemic of peripheral neuritis. He does not believe alcohol is the cause of the cirrhosis, because no one has yet succeeded in producing cirrhosis of the liver by giving absolute alcohol to animals; because although overindulgence in alcohol is very widespread, cirrhosis of the liver is not very widespread; and because cirrhosis of the liver sometimes occurs in children who have not been given alcohol. At the same time that condition of the liver which we know as alcoholic cirrhosis should not be confounded with cirrhosis due to syphilis nor with that due to malaria, both of which are very rare. **Acquired syphilis** usually results in the production of gummata of the liver, of lardaceous disease of the liver, of great fibrous bands which cut the liver up into areas, or of perihepatitis. **Congenital syphilis,** on the other hand, may affect the liver, making it hard, flint-gray and full of fibrous tissue, but not puckered; it may produce gummata and fibrous bands; rarely it may be the cause of lardaceous disease. The author believes that the gummata and fibrous bands of congenital syphilis tend to get well. He does not believe that syphilis or malaria or any of the other causes commonly given for the production of cirrhosis are active, but only alcoholic drinks associated with a second substance, so far unknown. **Biliary cirrhosis,** he believes, requires some other cause for its development than obstruction to the bile-ducts. It is a mistake to try to draw a sharp distinction between atrophic cirrhosis of the liver and **hypertrophic cirrhosis.** White believes that there is no distinction between the two diseases, but that the two conditions are different stages of the same disease. A man may carry a cirrhotic liver for many years without presenting symptoms of the condition. He does not believe that ascites is due to pressure of the fibrous tissue on the portal vein, but that it is due to the action of some toxin which is circulating in the blood on account of the disease of the liver. This effusion into the peritoneal cavity is more free than into the other serous cavities because of the increased pressure in the portal vein. He suggests that the **jaundice** is probably toxic in origin, and he ascribes the **edema of the feet,** the **anemia** and the **hemorrhages** to a toxic cause. This disease, usually known as alcoholic cirrhosis of the liver, is not, therefore, a local disease. In an uncomplicated case of cirrhosis of the liver, ascites is a dangerous symptom and is indicative of a fatal termination. The average duration of life after the development of ascites is about 2 months. A case of universal **perihepatitis** with a thick white capsule over the liver is a part of a general chronic peritonitis. A rapid course of a case of **malignant disease of the liver** indicates that the disease is primary in the liver, and the absence of jaundice and presence of unusually high temperature also point to primary disease in the liver. Liver disease is sometimes the sequel of gall-stones. [J. M. S.]

2.—Ball publishes his third lecture on **adenocarcinoma of the rectum.** There are 4 routes by which the rectum may be excised; perineal, sacral, vaginal and abdominal. A preliminary colotomy is objectionable and unnecessary in cases in which the bowel can be efficiently evacuated. Perineal excision should only be adopted in cases which involve the anal canal, as incontinence is an inevitable result. In rare cases it may be possible to prolapse the disease through the anus, thus producing an intussusception, and removing the disease. When operating by the sacral route Ball makes a straight incision down the middle of the sacrum and removes the coccyx and fifth sacral vertebra. A sacral anus is necessary in only a small proportion of the cases, namely in those in which the disease is extensive and involves the anal orifice. The method which gives the best results is that of Moulonguet. He dissects out the entire lower portion of the rectum to the upper surface of the pelvic diaphragm, and the entire mucous membrane down to its junction with the skin, but carefully preserves the sphincteric apparatus. He then frees the upper segment sufficiently to bring it out at the anus without tension and sutures it there. In following this procedure in extensive cases it is well to open the peritoneal cavity early, as it facilitates the later steps of the operation. Ball has had no experience with the vaginal route. The advantages of the abdominal route are that, after the peritoneal cavity is opened, it is possible to estimate the exact extent of the disease and, if necessary, to terminate the exploration with an inguinal colostomy; that, as the mesocolon is divided, the superior hemorrhoidal artery is secured, and also the two middle hemorrhoidal arteries at an early stage; that the lymphglands may be removed; and that, as the bowel is tied above and below the disease, wound soiling is reduced to a minimum. After excising the growth above, the operation may be completed after the method of Moulonguet. [F. T. S.]

4.—Kamann states that at a necropsy on a rabbit, which had been used for experimental purposes, a complete fetal sac was found in the abdominal cavity containing a full-time fetus which had only recently died. The sac was attached to a vascular portion of the greater omentum which had been drawn out in the form of a pedicle. The placenta was situated on the wall of the sac opposite its point of attachment to the omentum, which was the only means of connection between the fetal sac and the mother. At first it was considered to be a case of **primary abdominal pregnancy.** Further examination showed, however, that the uterus had been torn in the left cornu. The discovery of the recent cicatrix in the uterine wall proved conclusively that the fetus had not developed primarily in the abdominal cavity but in the uterus, and that the full-time fetal sac together with the placenta had passed out of the uterus through the tear in its wall into the abdominal cavity. [W. A. N. D.]

5.—Foster reports a case of **rheumatic fever** which was **complicated by chorea, iritis and endocarditis.** The patient was a girl, 12½ years old. She recovered. [J. M. S.]

6.—Cole-Baker reports the case of a single woman, aged 43 years, who complained suddenly one night of pain in the abdomen. She vomited two or three times. Physical examination of the abdomen revealed what appeared to be a distended badder, but catheterization failed to draw urine. The patient died 48 hours after the onset of the pain. At the autopsy the structure in the abdomen which gave the physical signs of a distended bladder was found to be a coil of intestine filled with blood. There was complete **suppression of the urine,** and efforts to establish the flow of urine increased the **intestinal hemorrhage.** [J. M. S.]

7.—Young reports the case of a man, 39 years old, who was suffering from **diabetes.** During the course of his disease he developed diabetic coma and was given intravenous injections of normal saline solution combined with liquor sodii. The patient died 11 days after the development of coma. [J. M. S.]

LANCET.

March 7, 1903.

1. Hunterian Lectures on the Nature and Anatomy of Enteroptosis. (Glénard's Disease). (Lectures I and II). ARTHUR KEITH.
2. Lettsomian Lectures on the Conditions which Modify the Characters of Inflammations of the Skin, and their Influence on Treatment. (Lecture II). H. RADCLIFFE CROCKER.

3. The Rise of Bloodpressure in Later Life. T. CLIFFORD ALLBUTT.
4. Report on the Influence of Sanitation in Checking Enteric Fever and Dysentery at Harrismith, Orange River Colony, South Africa, in the Years 1901 and 1902 R. M. LE HUNTE COOPER.
5. A Case of Acute Tetanus with Certain Points of Interest. L. DIMOCK SAUNDERS.

1.—In these 2 lectures Keith discusses the **nature and anatomy of enteroptosis.** Their aim is to show: (1) That a knowledge of the respiratory movements of the viscera gives the key to the manner in which they are fixed and placed within the body; and (2) that with any marked deviation in the action of the muscles of respiration there is a disturbance in the visceral movements, resulting in displacement and disorganization of function. Keith says that when the respiratory balance is upset the viscera of the chest as well as the abdomen are displaced downward, resulting in the condition of enteroptosis. In many of these cases the displacement of but one organ is noticed, yet, if a careful examination is made, it will be shown that all organs are displaced, but to a less degree. This paper is a lengthy one and deals largely with the anatomy and function of the various muscles and their development, as well as the location and fixation of the various viscera. It is numerously illustrated, which illustrations do much toward making the author's text comprehensive. [J. H. G.]

3.—Allbutt in a clinical lecture discusses **the rise of bloodpressure in later life.** In this very interesting lecture he points out that the bloodpressure in temperate young men, as measured with the sphygmometer, varies from 95 to 105 millimeters Hg. He contends that between disease of the arterial tree and bloodpressure there is no direct relation, being sometimes high, normal or relatively low. The following classification is suggested for the so-called arteriosclerosis: (1) The involutionary—common in old people, often hereditary, not necessarily or usually associated with rise of arterial pressure; the nature of which, intrinsic or extrinsic, is unknown, but does not lie in high living. This kind may be vaguely referred the "faltering rheums of age." (2) The mechanical—the result of long-persisting high bloodpressure of whatsoever origin. (3) The toxic—resulting from such causes as lead, alcohol, or syphilis; usually met with in younger persons, in some of whom the pressure rises, in others not. He points out that often in his experience has he witnessed cases in which the first deviation from health is not arterial disease but rise of bloodpressure, the arterial disease being secondary and due to strain and that, although this malady has, in common with Bright's disease, the feature of a rise of bloodpressure and consequent cardio-arterial strain, it is essentially distinct from the latter and has no tendency to drift into it. He holds that the first appearance of this arterial plethora is remediable even on its second or third appearance. In a somewhat advanced stage, the tendency may not be eradicated; however, it may be held in check under due regulation of life and medicine. He believes that one of the main causes of high arterial pressure in middle life is excessive feeding, and that alcohol apart from excessive feeding, will not produce the condition, while, on the other hand, alcohol is a potent ally. [F. J. K.]

4.—Cooper gives a report on the **influence of sanitation in checking enteric fever and dysentery** at Harrismith, Orange River Colony, South Africa, in the years of 1901 and 1902. He states that the chief object of his report is to demonstrate the remarkable results obtained by sanitation more especially directed toward preventing the spread of infection by flies and in controlling both the extent and virulence of enteric fever and dysentery. [F. J. K.]

5.—Saunders reports a case of **tetanus** which occurred in a man, 38 years of age, who was thrown from a dog-cart on a rough bank, on February 2, 1903, and sustained a lacerated wound above the left knee cap. His wound was immediately dressed and treated antiseptically. He seemed to do quite well until February 13, when he complained of difficulty in speaking. At this time the masseters and the sternomastoid muscles were somewhat tense, there was aching pain in the jaws and shoulder; temperature normal; pulse-rate, 60, and the teeth could only be separated about three-quarters of an inch. On the evening of February 13, antitoxin and chloral were administered. The antitoxin was again repeated, and on the following day his condition grew worse, opisthotonos spasms accompanied with pain showed themselves just before death, and the end came quietly and painlessly on February 15. [F. J. K.]

MEDICAL RECORD.

March 21, 1903.

1. The Present Status of the X-Ray Treatment of Malignant Tumors. WILLIAM B. COLEY.
2. Sigmoidoproctectomy for Cancer of the Rectum. GEORGE W. ROBERTS.
3. A Case of Adenoids with Malaria. WALTER F. CHAPPELL.

1.—Coley discusses the **present status of the X-ray treatment of malignant tumors.** From February, 1902, to January, 1903, he has had under his care 75 cases of these neoplasms. Of these he presents brief clinical notes. We present his conclusions in full. He says: We find abundant evidence that the X-rays have an inhibitory action on all forms of malignant tumors. Yet, the number of cases is insufficient to enable us to state what particular varieties are more susceptible to this influence. So far it would seem that sarcomata primary in the lymphglands yield most readily to the treatment. Superficial epitheliomata might be placed in the same category. Several cases of recurrent carcinoma of the breast have been observed in which the growths have entirely disappeared after prolonged exposure of the X-rays. Yet all these cases have been too recent to be classed as cured. In fact, **sufficient time has not yet elapsed in a single case of cancer treated with the X-rays to justify us in regarding it as cured.** While this should, on the one hand, prevent us from reporting patients as cured in whom the tumors have merely disappeared under treatment, it should not, on the other hand, lead us to minimize the importance of these immediate results, even be they no more than a prolongation of life or an alleviation of suffering. One cannot witness the marvelous melting away or disappearance of an undoubtedly malignant tumor under a few weeks' or months' treatment with the X-rays, without feeling that we have a new and powerful addition to our hitherto scanty means of attacking this disease. The knowledge of this new agent is so slight that there is added hope in our very ignorance. For by deeper insight into its nature, gained by further experience, we may hope better to utilize its power, and thus accomplish greater results. In the meantime, while the X-rays have a legitimate place in the treatment of **inoperable** cancer, present data do not warrant us in advising the method in **primary operable cases.** [T. L. C.]

2.—Roberts advocates **sigmoidoproctectomy for cancer of the rectum.** His operation, for which no claim of priority is made, is described in full. It is based upon the general principle of Volkmann, followed also by Edebohls and Schwartz. The argument of his paper is summed up as follows: (1) The accepted methods of operating for cancer of the rectum correspond in lack of thoroughness to the old-fashioned amputation of the breast, supplemented by removal of a few enlarged lymphnodes from the axillary space. This operation has been supplanted by the superior technique of Halstead, and a more radical method of dealing with cancer of the rectum, which includes removal of the sacral lymphatics, is indicated with equal clearness. (2) In very few cases of rectal cancer indeed is it possible to remove completely even the primary growth from below, for it appears that many inches above the ending of the macroscopical growth cancerous issue is still found in the mucous membrane. He cannot conceive of the complete removal of the infected glands from the sacral hollow by any of the vaginal, perineal or sacral operations. (3) While no one should underestimate the misfortune of an artificial anus, it should be remembered that sphincteric control is frequently lost after severe rectal operations, even though the anus is preserved, that in this case the opening is very disadvantageously located for mechanical control, and that an artificial anus constructed as above described is practically perfect. (4) He believes that in the vast majority of rectal cancers the above—or some equally radical—procedure should be executed if the patient is to receive the benefit of modern, instead of obsolete, surgical principles. (5) This procedure presupposes a perfect surgical technique and rapid but painstaking work, and especially would he emphasize the great importance of completing the abdominal work before attacking the perineal portion of the operation. [T. L. C.]

3.—Chappell reports the case of a girl-infant from whom he removed 10 small pieces of lymphoid tissue from the nasopharynx without anesthesia. At this time the child was 5 months and 8 days old. A little over 2 weeks after the operation the child became fretful and feverish. These symptoms ushered in a distinct malarial attack. Plasmodia were found in the blood, and a clear history of infection from 2 mosquito-bites was obtained. The first malarial symptoms appeared 10 days after the bite. The blood examination made the fifth day after the initial symptoms showed anemia, leukocytosis and tertian parasites. In the 27 days during which treatment was continued the child took 241 grains of quinine with no ill effects. [T. L. C.]

MEDICAL NEWS.

March 21, 1903. (Vol. 82, No. 12).

1. Some Types of Retinitis and Chorioretinitis. ALEXANDER DUANE.
2. The Indications for Operative Interference in Intracranial Tension. FREDERICK S. DENNIS.
3. A Preliminary Report on the Venous Hum in Relation to the State of the Blood. C. N. B. CAMAC.
4. Some Physiological Observations on a Crustacean Heart. GORGE V. N. DEARBORN.
5. Pneumonia: An Infectious Disease. J. O. COBB.
6. Observations on American Climates and Localities in the Treatment of Pulmonary Tuberculosis. JAMES K. COOK.

2.—Dennis divides **intracranial tension** into 2 classes: (1) Those cases in which intracranial tension is sufficient to produce profound coma; (2) those cases in which intracranial tension is not sufficient to produce profound coma. Operation will save patients of the first class who will die under the expectant plan of treatment. Operation will save patients of the second class when the symptoms are gradually increasing in severity. The indications for operation in the second class make a difficult problem when coma is not present. The author is guided by the condition of the patient after a study of the symptoms from hour to hour and day to day. When the actual pressure rises to a point and remains stationary and the vasomotor system does not fail, even with a well-pronounced vagus disturbance, no operative procedure is advised to be practised. In addition to the above symptoms, the bloodcount must be made, the eyegrounds examined, the urine tested, the reflexes studied, the disturbances of the cranial nerves noted and all other phenomena investigated. [T. M. T.]

3.—Camac divided the cases of this condition into 4 groups: (1) Cervical bruit present, hemoglobin 90%; (2) cervical bruit present, hemoglobin between 75% and 90%; (3) cervical bruit present, hemoglobin below 75%; (4) no cervical bruit present, hemoglobin below 75%. The author considers the cervical murmurs under 2 heads: (1) The true venous hum which is quite characteristic; (2) a soft systolic. There are also (3) the rough systolic due to sclerotic changes in the arteries and (4) the diastolic murmurs of aortic insufficiency. He also states that the last two must not be confounded with the bruit under consideration. [T. M. T.]

4.—To be abstracted when concluded.

5.—Cobb believes that **pneumonia** is a disease incident to overcrowding, and that cold and dampness have nothing to do with its spread, though dryness is a great factor. He is convinced that the cold theory is untenable and thinks that the more rational explanation is that in the severe winter the atmosphere, inside and outside, is much drier than at other times, and, the weather being severe, people tend to huddle more in theaters and places of amusement or in their homes. There is little or no ventilation for several weeks, and in the meantime the air of these places becomes more and more infected. The severity of the disease in winter, it would seem, is enhanced for the very simple reason that the numerical invasion is so great that the lung is overwhelmed. [T. M. T.]

6.—Crook mentions the following useful facts: (1) Patients in the early stages will usually show improvement with almost any change of climate, such as Liberty, the Adirondacks, Florida, Southern California or Colorado. (2) In catarrhal cases attended with profuse secretion, El Paso, Texas, Thomasville, Summerville, Aikens, South Carolina, also Colorado and New Mexico. (3) Patients of nervous, irritable and erethistic temperament do better in a marine climate and should not be sent to high elevations; in winter Florida or Southern California; for spring old Point Comfort or Atlantic City; for summer South Shore and easterly end of Long Island. (4) Never send patients with ulcerative tuberculous laryngitis to a high altitude. The elevation should be about 2,300, and good results have been reported from Florida and Southern California. (5) Slowly progressing patients, especially with fibroid phthisis, do best in a marine climate, such as Florida, coming North by easy stages as the spring advances. (6) Cases of phthisis complicated by heart disease should be kept at comparatively low levels. (7) Cases involving much loss of lung substance, or the withdrawal of any considerable portion of the respiratory area from the exercise of its functions, usually fare badly at high elevation. Florida and Southern California are advised. (8) Puny youths not actual but potential or probable cases of tuberculosis, are generally benefited by a prolonged residence in a high mountain region. (9) The tendency to hemorrhage does not itself furnish an indication either for or against any particular variety of climate. (10) Patients with phthisis accompanied with albuminuria, or marked diabetics should be kept near home and not sent to high altitudes. [T. M. T.]

NEW YORK MEDICAL JOURNAL.

March 21, 1903.

1. The Development and Ultimate Result of Medical Science. ANDREW F. CURRIER.
2. A Study of Tuberculous Infection. Special Susceptibility of Childhood—Causes and Methods of Infection—Factors of Development of the Disease. F. M. POTTENGER.
3. The Treatment of Felon. EDWARD WALLACE LEE.
4. Report of a Case of Epidemic Parotiditis, with Fatal Termination. W. J. S. STEWART.
5. The Intravenous Injection of Formaldehyde. WILLIAM L. BANER.
6. The Hemorrhagic Diathesis as a Factor in the Production of Hemorrhage Following Removal of Tonsils and Adenoids. FRANK H. WASHBURN.

1.—Currier reviews the **development of medical science** from its beginning with Hippocrates (460-370 B. C.) to the present time. The author says there are certain natural or inherent ideas concerning sickness and injury, with which men started in the struggle that resulted in the existing fund of medical knowledge, which we may call collectively natural medicine. He says, upon this basis the existing structure of medical science has been built. The separation of medicine from priestcraft has not occurred as a chronological sequence, but as a logical and evolutionary one. The advancement made in medicine from its beginning during each century is set forth. With all the glorious work that has been executed during the nineteenth century, there yet remain some difficult problems to solve. Foremost among these are the dread diseases cancer and tuberculosis, but these conditions the author believes will be successfully combated in the near future. The department of medicine which is doing more than all others to extinguish disease is that known as preventive medicine, and this is probably the most important branch of human knowledge. [P. B. B.]

2.—Pottenger, in discussing **tubercular infection,** says that, in our endeavors to find methods to prevent tuberculosis, we must give the period of childhood much more attention than it has been wont to receive, for many cases of tuberculosis manifested in later life are evidences of a latent infection, the infection remaining quiescent until stirred into renewed activity. From a **study** of the condition Pottenger has reached the following conclusions: (1) Tuberculous infection is common in childhood; the infection usually being in the lymphglands; (2) a large proportion of these patients, although infected, do not show symptoms during childhood, but develop active tuberculosis later; (3) in seeking the cause of this frequent infection, aside from the habits of the child, and its frequent exposure, all factors which lower its vitality should also be considered; (4) more attention should be given to the care and feeding of children in order to render their systems more resistant to infection. [P. B. B.]

3.—**Felon** is defined by Lee as any phlegmonous tumor of the fingers or toes, especially of the last phalanges. Four varieties of felon are commonly observed: (1) That between the epidermis and skin; (2) that seated in the subcutaneous areolar tissue; (3) that occupying the sheath of a tendon, and (4) that occupying a position between the periosteum and bone. The author then discusses the pathology of this condition at some length. The mode of treatment depends, of course, upon the extent of the pathological process. In the first form an aseptic incision and drainage are all that is required. The more severe form the author treats in the following manner: The patient is anesthetized; the operative field made surgically clean; the diseased area freely incised and all necrosed tissues removed. The part is then cleansed with hydrogen peroxide, followed by mercury bichloride, and then carbolic acid and alcohol. It is again cleansed and the wound closed. By this manner the author gets rid of all diseased tissue and, in most instances, secures primary union of the wound. [P. B. B.]

4.—Stewart reports a case of **epidemic parotiditis** occurring in a man, 27 years of age. The infection appeared to be a most virulent one. The principal symptoms were pain, swelling, embarrassed respiration and high temperature. These symptoms continued for 5 days when the patient died suddenly. The fatal termination, the author believes, was due to heart failure, this being induced by the increased work resulting from the congested pulmonary structures. [P. B. B.]

5.—Baner presents a paper on intravenous **injection of formaldehyde.** The author reviews at some length the subject of intravascular antisepsis in general, speaking of the work of Sir Christopher Wren and of Baccelli. The recent work performed by McGuire is also spoken of. From the available facts thus far obtainable the author concludes that it seems improbable that formaldehyde used intravenously has any specific value in septicemia. The instances reported in which it has done good were probably those in which the agent acted as a diluent, and not as a germicide. Therefore, the normal saline solution would seem to answer equally well, and with less probability of injuring the delicate structures of the blood. [P. B. B.]

6.—Washburn reports a case of hemorrhage occurring in a boy, 8 years of age who was operated upon for enlarged tonsils and adenoids. Bleeding continued 5 days subsequent to operation, and to such an extent that the life of the patient was almost despaired of. The author believes this to be an instance of hemorrhagic diathesis, and the prime etiological factor of the postoperative hemorrhage that developed in this patient. [P. B. B.]

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

March 19, 1903. (Vol. CXLVIII, No. 12.)

1. An Account of Dr. Thaddeus Maccarty. A New England Country Doctor of Pre-Revolutionary Days. BURNSIDE FOSTER.
2. Lipoma Arborescens. CHARLES F. PAINTER and WILLIAM G. ERVING.
3. Suppuration of the Frontal, Ethmoid and Sphenoid Sinuses. With Brief Report of the Treatment of Two Hundred and Thirty-seven Cases. EDGAR M. HOLMES.

2.—Painter and Erving quote Steida's conclusions as follows: (1) **Lipoma arborescens** occurs in a number of chronic joint affections: (2) it is not a lipoma in the sense of being a "new growth" but is merely an hypertrophy of normal pre-existing tissue; (3) its etiology is a chronic inflammatory condition of the joint, arising usually from tuberculosis or arthritis deformans and possibly a condition of the negative pressure in the joint; (4) pathologically it is hyperplasia and fatty degeneration of pre-existing synovial tabs, to an extreme degree; (5) histologically the appearance is that of a typical chronic inflammatory condition, with, in addition, a specific appearance in case of tuberculosis; (6) in an unopened joint diagnosis is not certain, the swelling, tenderness, limitation of motion and ability to palpate not being absolutely diagnostic; (7) prognosis of spontaneous healing and recovery of joint function unfavorable; (8) treatment; arthrectomy (erasion) or, when tuberculosis is present, resection of the joint. The authors state that their observations agree in the main with these conclusions. They differ from Steida in giving tuberculosis relatively a less important place in the etiology, and should urge the importance of the absence of the clincal evidence of joint disease as leading to the diagnosis of a nontuberculous condition, and encourage exploration of the joint when any doubt exists as to the nature of the pathological process. [T. M. T.]

3.—To be abstracted when concluded.

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

March 21, 1903.

1. Observations on the Mechanics of Digestion. WALTER BRADFORD CANNON.
2. The Clinical Manifestations of Hydrophobia D. J. McCARTHY and M. P. RAVENEL.
3. The Plantar Reflex in Epilepsy, with Special Reference to the Babinski Phenomenon. J. M. KENISTON.
4. Remarks Concerning the Management of Rhinopharyngeal Tonsils by the General Practitioner. ROBERT C. MYLES.
5. The Degenerate Tonsil. EDWIN PYNCHON.
6. Otitic Brain Abscess. Report of Two Cases: Aphasia in One, Recovery. GEORGE F. KEIPER.
7. The Choice of a General Anesthetic in Nose, Throat and Ear Operations. THOMAS J. GALLAGHER.
8. The Giant Magnet in Ophthalmic Surgery. Report of Two Cases—Remarks. LEARTUS CONNOR.
9. Some New and Unusual Therapeutic Applications of Ergot. ALFRED T. LIVINGSTON.
10. The Typhoid Epidemic at Ithaca. (By Our Special Commissioner.)

1.—Cannon reports **observations on the mechanics of digestion.** The method upon which his results are based has been that of mixing silver nitrate with the food, and then with the X-rays and the fluorescent screen observing the changes in the shadows of the alimentary contents. According to the method mentioned he has observed that the stomach consists of two physiologically distinct parts so that the cardiac portion lies to the left and the pyloric portion to the right. A marked difference in muscular activity is the chief distinction between these 2 portions. Over the food in the pyloric portion waves of constriction are repeatedly passing, which start at the beginning of this division. He has noted, in the cat, 6 of these waves per minute, in the white rat also about 6 waves, in the dog between 4 and 5, and in the guinea-pig 7. The fundus is characterized by a total absence of peristalsis; this portion of the stomach simply by slow contraction squeezes the contents into the more active division. He has also noticed that the pylorus does not open after every constriction wave but only at intervals. By administering little paste pellets of bismuth subnitrate and starch he was able to study the circulation of the food in the stomach, and from the motion of these food particles. as revealed by the X-rays, he holds that, as constriction occurs, the secreting surface enclosed by the narrow muscular ring is brought close around the food lying within the ring. As the constriction passes on, fresh areas of glandular tissue are continually pressed in and about the narrow orifice. A stream of food is forced back through the orifice as the wave moves toward the pylorus, and thus passes the mouths of the glands. The pellets of silver nitrate retain their relative positions in the fundus of the stomach for an hour or more after ingestion. The fundus serves as a reservoir for the pyloric portion, pressing out its contents a little at a time, as the pyloric mechanism is ready to receive material. Constriction waves start in the transverse colon and pass backward toward the cecum, and in this way a thorough mixing of the contents with digestive secretion is brought about. When food passes from the ileum into the large bowel, a strong tonic contraction of the cecum and the ascending colon is generaly observed, which is followed by antiperistaltic waves; he thinks that a thorough mixing of the food takes place in the large intestine and the material is exposed to the absorbing wall by the antiperistalsis. His experiments also demonstrate that food injected per rectum may be carried into the small intestine, and that sometimes the large bowel will almost completely empty itself into the small intestine. Finally, he points out that anxiety, rage or distress may stop peristalsis of the stomach. [F. J. K.]

2.—McCarthy and Ravenel present **the clinical manifestations of hydrophobia** and report 2 cases. In these cases the period of incubation was about six weeks. The first reported case is of special interest on account of its fulminating character, and also as no paralytic symptoms were noted. They contend that, from the clinical and microscopical evidences so far presented in connection with hydrophobia, it should be regarded as a distinct clinical entity with a distinctive pathology. [F. J. K.]

3.—See **Philadelphia Medical Journal**, June 21, 1902, page 1118.

4.—Myles discusses **the management and treatment of rhinopharyngeal tonsils by the general practitioner.** He holds that the general practitioner with little or no skill can be readily and easily taught to operate safely with the Gottstein curette or some of its modifications. Complete removal of the tonsils may be followed by recurrence of a new growth, but this occurs less frequently when the forceps are used and when the patient is subjected to general anesthesia, than by other methods. Harmful hemorrhage most often follows when the curette is employed. He then describes the management of cases by the general practitioner. [F. J. K.]

5.—Pynchon discusses **the degenerate tonsil.** He employs this term to designate all of the ordinary or commonly-met chronic conditions of tonsillar disease, which classification is warranted by the fact that the same treatment, total tonsillectomy, is equally applicable to all and offers the only absolute and permanent cure obtainable. For the past 12 years he has used the electrocautery as the dissecting instrument instead of the bistoury, which he maintains has the following advantages: (1) A practically bloodless field so all of the diseased tonsillar tissue can be cleanly removed. (2) Owing to lack of hemorrhage no loss of local anesthetic. (3) By the cauterization a destruction thereof, should any portion of the follicular element escape the line of dissection. [F. J. K.]

6.—Keiper reports 2 cases of **brain abscess resulting from middle ear disease,** in one of which recovery took place. The author discusses the symptom of aphasia particularly, and the etiology and prognosis of brain abscess, and rehearses the treatment of this condition.

7.—Gallagher discusses briefly the **relative value of chloroform, ether, nitrous oxide and ethyl bromide in operations upon the nose, throat and ear.** Ethyl bromide is said to be the most convenient anesthetic and apparently as safe a one as can be had. Its simplicity, the rapidity with which narcosis is produced, the absence of irritation to the respiratory mucous membrane, the ability to keep the patient in an upright position, and the rapid regaining of consciousness, make it a particularly desirable anesthetic for the operations under discussion. [J. H. G.]

8.—Connor reports 2 cases in which he employed the **giant magnet for the purpose of removing foreign bodies from the eye.** The author is convinced that without the giant magnet enucleation would have been imperative in these cases. In each case the eye was retained, with some vision in one instance, and with the possibility of some vision in the other. The technique is far from simple. "The most experienced are still learning, and beginners do well to heed their suggestions." The great power of the magnet renders it capable of great harm if improperly used. The small magnet is suited only to cases in which it can be brought in contact with the splinter; the remaining cases are clearly within the domain of the giant magnet. It therefore follows that all splinters in the vitreous should be removed with the giant magnet and many in the aqueous chamber. [J. H. G.]

9.—Livingston points out **some new and unusual therapeutic aplications of ergot.** He has had excellent results with preparations of ergot in a number of conditions in which the pathological state was due to dilated blood-vessels. He has employed this drug with favorable results in insomnia, headache, ear and eye disorders, in asthma, puerperal eclampsia and many other conditions. He has never seen a suggestion of ergotism or any ill effects follow its administration. [F. J. K.]

AMERICAN MEDICINE.

March 21, 1903.

1. Excision of the Superior Maxilla Under Medullary Narcosis. A. W. MORTON.
2. On the Transportation of Cellular Emboli Through the Thoracic Duct Into the Lungs. W. G. MacCALLUM.
3. The Albumoses: Their Clinical Significance Viewed from a Modern Standpoint; Their Detection and Distinction from the Other Proteids Found in the Urine as a Means of Lowering the Death-rate in Obscure Suppurative and Other Diseases. THOS. J. YARROW, JR.
4. Influence of Marriage and Pregnancy on Diseases of the Heart. M. J. BACKENSTOE.
5. The Report of a Case of Malignant Edema. ISAAC RIDGEWAY TRIMBLE.
6. Briefs on Physical Training. G. FRANK LYDSTON.

1.—Morton reports a case of **excision of the superior maxilla under medullary narcosis.** Among the advantages which this method offers, especially in operations in the region of the buccal cavities are: (1) The anesthetizer is not in the way of the operator. (2) The danger of blood and secretions entering the lungs and producing suffocation, or later pulmonary complications, is absent. (3) It can be used in acute diseases of the heart, lungs or in kidney complications, when an anesthetic is contra-indicated. (4) The shock of the operation is diminished, and there are not the severe disturbances which often follow an anesthetic. [T. L. C.].

2.—MacCallum reports a case of a young man who died in coma on the nineteenth day of an attack of enteric fever. At the autopsy it was observed that the lungs were extremely hyperemic throughout, and there was a patchy fibrous exudate over the surface which could easily be stripped off, leaving a dull pleural surface with minute ecchymoses. Firm areas could be felt through the pleura in the underlying lung substance, on section these were found to correspond with areas of consolidation, rather pyramidal in form, which stretched down into the tissue. Microscopical section showed that these areas possessed the characteristics of an infarction. Examination of the vessels leading to these infarcted areas showed them to contain abundant nucleated cells. In this case we have to deal, evidently, with multiple hemorrhagic infarctions produced by the plugging of the branches of the pulmonary artery with masses of cells of the type of the lymphoid cells and larger mononuclear phagocytic cells. In other places we have this embolism without any resulting infarction. What then is the origin of these cells? MacCallum states that they must gain access to the veins and thus reach the heart to be propelled into the lungs. They may then be poured directly into some systemic vein, or they may pass by way of the portal vein through the liver, or, lastly, they may enter through the thoracic duct and be thus carried into the subclavian vein. Of these the last seems to offer by far the most plausible explanation, especially since examination of the liver failed to reveal any especial abundance of these cells in its vessels. [T. L. C.]

6.—Lydston concludes his briefs on physical training. From his conclusions we quote: The general trend of the profession is toward drug, rather than therapeutic, nihilism. Physical training along physiological lines is an important department of both preventive and curative therapeutics, and should be taught in medical schools. The profession at large is woefully ignorant of the objects and principles of physical training. The end and aim should be to utilize the inherent physical capital of the individual and develop it to its normal physiological standard. The individual equation is the keynote of physical training. One should strive to develop and make ready to his command such muscular fiber as normally belongs to the individual subject. Specialism in muscle building is justifiable only in so far that it tends to bring up any given portion of the body to the relative proportions normal to the particular individual, i. e., to the normal symmetry. Athletic overstrain is frequent and occurs in two forms, acute and chronic. Its evils are manifested, first, in individuals who are out of condition; second, in individuals who, while in condition, undertake inordinate feats. The ideal system of muscle building is that which involves the least expenditure of time and the use of the least apparatus. Abdominal muscle development is the keynote of success in physical training. The element of play should enter largely into all forms of athletics, diversion of mind and cheerful companionship being a *sine qua non* in obtaining the best results. [T. L. C.]

DEUTSCHE MEDICINISCHE WOCHENSCHRIFT.

February 5, 1903.

1. Experience With Percussion of the Apices of the Lungs by Krönig's Method. A. WOLFF.
2. On Late Disease of the Brain Following Injuries to the Skull. E. STADELMANN.
3. On the Etiology of Dysentery. Preliminary Communication. L. ROSENTHAL.
4. Concerning the Reaction to Mercury Observed in Syphilitics. RILLE.
5. Diabetes Mellitus in Gynecological Operations. (Conclusion). H. FUETH.
6. The Influence of Hypertrophy of the Tonsils Upon the Physical and Mental Development of Children. Statistical Contribution. WILBERT.

1.—Wolff refers to the previous articles of Krönig and Oestreich concerning percussion of the apices, and recommends the method as being of value in the early diagnosis of tuberculosis. The difficulties in marking out the apices by this method, however, are at times considerable: consequently, the author especially recommends the method used by himself and Michaelis, which consists in determining the width of the so-called "isthmus of the apex." This is the breadth in centimeters of the lung apex, as projected upon the skin, at a point 1 cm. below the edge of the sternomastoid muscle and 3 cm. above the clavicle. This is the narrowest point. It can be exactly measured in centimeters and gives a good idea of the condition of the apex. It should be 4 cm. or more in width, while in some pathological apices it becomes narrower on one or both sides. In outlining any portion of the apex by percussion, one should percuss lightly and should place the finger or the pleximeter directly parallel with the line that the border of the lung is expected to follow or that it is actually found to follow. In this way the border can be accurately marked off. Percussion of the apex will determine whether the apex is retracted or infiltrated. Retraction is very easy to determine; infiltration is much more difficult to demonstrate. While the method itself is not sufficient to supersede all other methods, it is considered to be one of the most valuable in the early diagnosis of phthisis. [D. L. E.]

2.—To be concluded.

3.—Rosenthal's bacteriological investigations of dysentery were carried out in Moscow on 85 typical cases. In all cases he was able to secure cultures of bacilli identical with those described by Shiga. The blood and urine were found sterile in every case. Staphylococci were found in the pus in one case of postdiphtheritic suppuration of the knee joint. Agglutination reactions were positive and specific. The author was unable to produce dysentery in animals with these bacilli. He reports one case in which there was a dysentery-bacillus septicemia—the only instance in which this was found. [D. L. E.]

4.—Rille states that he has observed the reaction of syphilitics to mercury recently described by Herxheimer and Krause (abstracted from this journal). He attributed it to improper methods of carrying out inunctions, and states that such reactive eruptions are observed chiefly in ambulatory cases. [D. L. E.]

5.—Füth concludes his article with a statement of the indications for operation in diabetes, and the methods for getting the patients into condition for operation. It must be recognized, if operation is considered, that diabetes constitutes a decided danger. If this is decided upon, one should seek to get the patient free from glycosuria by means of proper diet. This is easy in mild cases: but in the more severe it is difficult and sometimes impossible. It also carries with it the danger of bringing on coma. One can, however, often overcome the danger of coma by administering, for prophylactic purposes, large doses of sodium bicarbonate (150 to 450 grains per day). Antisepsis and asepsis should be absolutely rigid in diabetics. It is also advisable to have the patients carry out their diabetes cure in the clinic, so that they may grow accustomed to their surroundings and thus avoid nervous shock as far as possible. Füth considers it best not to subject diabetics to the usual preparation for laparotomy, viz., to require them to hunger and thirst for many hours before its performance. He thinks the conditions in diabetes similar to those in operations like Cesarean section, in which one must go ahead in spite of the lack of preparation. On the evening before the operation he gives diabetics an enema and a bismuth-opium powder, and usually repeats the enema shortly before the operation. In a series of cases of various kinds, other than diabetes, he has seen no bad results from a lack of the usual preparation of the bowel. Operation should, if possible, be done without general narcosis. The author believes that in cases of diabetes it is probably allowable to carry out spinal anesthesia in operating for carcinoma, for instance. Food should be given soon after any operation, and nausea should be controlled as completely as possible. One should see that the patients rapidly get as much food and drink as possible. Massage should also be used soon after the operation. [D. L. E.]

6.—Wilbert has made a study of the tonsils in a series of school boys. Three hundred and seventy-five boys were investigated; and it was found that the tonsils were enlarged in 62%, that they had caused symptoms in 33%, and that they had produced gross disturbance of hearing in 27%. The enlargement and the symptoms produced thereby were most marked between the sixth and ninth years. The percentages were much lower after the end of the ninth year. The author also shows that the children that progressed poorly in school were, in over three-fourths of the instances, those with enlargement of the tonsils. [D. L. E.]

MUENCHENER MEDICINISCHE WOCHENSCHRIFT.

February 3, 1903. (No. 5.)

1. The Medicolegal Examination of Abdominal Herniæ. G. SULTAN.
2. The Treatment of Certain Diseases of the Lungs. G. TREUPEL.
3. Acute Cerebral Ataxia. A. BICKEL.
4. New Facts and New Prospects in the Doctrine of Nutriment. M. ASCOLI.
5. Two Rare Cases of Measles. J. GROBER.
6. A Case of Thrombophlebitis. J. CNOPF.
7. A Case of Gangrenous Pharyngitis Associated With Gangrenous Appendicitis. W. MAYER.
8. Mercurol. H. DREESMANN.
9. Auscultation of the Buccal Cavity. U. BACCARANI.
10. A Plastic Aid for Obstetrical and Gynecological Instruction. E. WINTERNITZ.
11. Screw Mouth Gags. E. BRAATZ.
12. The Immunization of the Typhus Bacillus to Specific Agglutinins. P. MUELLER.
13. Max Schede. GRAFF.

1.—Sultan, after discussing the diagnosis of **hernia due to accident**, gives the following résumé of the points to be considered: (1) There must have been actual injury, or muscular effort beyond that usual to the subject; (2) it must be certain that the hernia has not previously existed in this position; (3) there must have been sudden severe pain in the region of the hernia compelling the patient to stop work, and the physician who was called to attend the patient must have determined the presence of exquisite tenderness in this region; (4) these herniæ due to accident are usually small, often still within the femoral canal, and only occasionally reach the size of a lemon. Rarely is there hemorrhage or swelling in the neighborhood of the hernia. The fact that the hernia can be replaced is of no particular significance, nor that there may be a tendency to hernia in other parts of the body. [J. S.]

2.—Treupel continues his article upon the **surgical treatment of various diseases of the lungs**, and mentions the case of a boy, 4½ years of age, who lost his appetite and frequently vomited. Later he had cough, elevation of temperature in the evening, and still later a mucoid expectoration. Some adenoids were removed, and at this time consolidation of the left lower lobe of the right lung, posteriorly, was noted. This gradually extended forward, and later the patient developed pleural effusion. An exploratory puncture showed the presence of pus and gas in the pleural cavity; a rib was resected, and the patient then gradually recovered. The case was evidently one of pulmonary abscess followed by gangrene of the lung and pyopneumothorax. [J. S.]

3.—Bickel reports a case of lateral hemiataxia with disturbance of sensation, but without paresis. The patient, a man of 64 years, was suddenly attacked by dizziness while walking. On the left side of the body there was disturbance of sensation of the skin, the mucous membranes and the deep parts. This consisted in loss of touch-sense, impairment of pain-sense, but a normal, and often enhanced temperature-sense. There was complete loss of the muscular sense and astereognosis of the left hand. The muscles possessed their normal power and showed normal electrical reactions. The tendon reflexes were increased on the left side, and the skin reflexes were diminished. Later there was distinct hypertonia in the muscles of the left side, some return of sensation and marked improvement in the ataxia, as a result of exercise therapeutics. The lesion must have been located in the right side of the brain at the entrance of the trigeminal nerve. The ataxia was evidently due to the improvement of the fibers passing to the cortex which control movement. [J. S.]

4.—Ascoli has discovered a number of **precipitins in normal bloodserum.** He further discovered that if animals were fed with meat or albumin, whether raw or cooked, certain portions enter the lymphcells and might well serve to produce specific albuminous reactions. These substances necessarily produce some variation in the quality of precipitins that are present in the blood. In addition, however, autoprecipitins may also be found. Evidently these facts must have considerable bearing upon metabolism. [J. S.]

5.—Grober reports the following **cases of measles:** A boy, 8 years of age, had been sick for 12 days. Two days before admission he had an eruption of red spots upon the body. When admitted it was noted that the spots were rather larger than measle spots, and each had in its center a dark-red elevation. When pressure was made upon them the peripheral part disappeared, but the central part became only slightly lighter. There was an acute angina, and the differential diagnosis between measles and sepsis with skin eruption was difficult. The temperature remained high; the child became cyanosed; on the fifteenth day there was emphysema of the skin of the neck, and diphtheria bacilli were found in the throat. The child finally died. There was miliary tuberculosis of all the organs, including the tonsils, and an ulcer in the anterior wall of the rectum was also found. The case was evidently one of acute miliary tuberculosis with secondary infection with diphtheria. Grober believes that the exanthem was due to a very severe form of measles. The second patient, a boy, sixteen years of age, had an eruption that was rendered atypical by the presence of small white blisters. Later a typical measles exanthem appeared from which the patient rapidly recovered. These 2 cases appear to have been the first of a rather severe epidemic of measles. [J. S.]

6.—Cnopf reports the case of a girl, 21 months old, who had fever and some cough. There was slight evidence of rachitis, rapid respirations and diarrhea. On the seventh day of the disease the patient apparently went into a state of collapse, the respirations became very rapid; there were clonic spasms in the left side of the face and left upper extremity, subnormal temperature and finally paresis of the left side. The child finally died and at the autopsy a **thrombophlebitis of the longitudinal sinus** was found, which had given rise to excessive hemorrhage between the dura and arachnoid. Numerous small abscesses were also found in the meninges and the substance of the brain. Multiple miliary abscesses were also found in the right kidney. Cnopf discusses the theories regarding the origin of thrombosis, particularly its relation to measles, in which disease it appears to be exceedingly rare. [J. S.]

7.—Mayer reports the case of a girl, 7 years of age, who had been sick for a week. The glands in the neck were enlarged; there was a disagreeable odor from the mouth, and the patient was pale and prostrated. Examination of the throat showed a discolored membrane covering the pharynx and tonsils, with some destruction of tissue beneath it. The following day the patient had severe pain in the abdomen, diarrhea and some tenderness and resistance in the right iliac region. A diagnosis of perityphlitis was made, but operation was delayed. The following day the symptoms were still more pronounced, operation was performed, and gangrenous appendicitis and peritonitis were discovered. The patient rapidly recovered. Examination of the exudate in the throat showed the presence chiefly of the streptococcus and some other micro-organisms, but no diphtheria bacilli. From the abdominal cavity only the colon bacillus was obtained. [J. S.]

8.—Dreesmann discusses the value of **mercurol.** It has been used in a variety of conditions as a powder for ulcers, especially when a caustic action is required. Also in gonorrhea, in buboes, in syphilis, in acute and chronic otitis, in tuberculous abscess, acute and chronic conjunctivitis and in trachoma. It may be used in powder or in solution. [J. S.]

9.—Baccarani calls attention to the value of auscultation with the ear opposite the open mouth for the purpose of determining the presence of cavities in the lung. Two things may be heard: the fine moist rales, or the interrupted systolic expiration. The latter is found frequently in cases of pulmonary tuberculosis. [J. S.]

10.—Winternitz recommends **plastic models** for the purpose of demonstration in so-called theoretical cases. He describes particularly some plastic models of the fetal heart which he has made in order to demonstrate the peculiarities of the fetal circulation. [J. S.]

11.—Braatz's **mouth gag** consists of 2 straight plates placed very close together, the lower one extending backward in the form of a handle. The lower plate is moved upward and downward by means of a screw that passes through the central portion of the upper plate. The prolongation of this screw is provided with a handle. The gag is inserted between the teeth, closed, and then, by turning the handle, the plates are separated and the mouth opened. [J. S.]

12.—Müller calls attention to the fact that in his article upon the immunization against the typhus bacillus he neglected to state that the receptors disappeared. [J. S.]

13.—**Max Schede** was born on January 7, 1844. He commenced his medical studies in Holland and received his doctor's degree in 1866. He accompanied the German army in the Austrian war and subsequently became assistant to Volkmann. He then participated in the war of 1870, and upon his return became an enthusiastic supporter of the antiseptic method of treating wounds. He went to Hamburg, where he remained 20 years, refusing invitations from various universities. Finally, in 1895, he accepted a professorship of surgery in Bonn, where he devoted himself particularly to clinical teaching. His capacity for work was enormous. He was a brilliant writer, always working on some scientific enterprise, an extraordinarily skilful operator and, personally, a most charming man. [J. S.]

BERLINER KLINISCHE WOCHENSCHRIFT.

February 16, 1903. (40. Jahrgang, No. 7.)

1. Tuberculosis from Food. D. von HANSEMANN.
2. The Question of Hardening Children. WALTER KREBS.
3. Acute Inflammation of the Sigmoid Flexure from Coprostasis. A. BITTORF.
4. Further Contributions to the Study of Intestinal Putrefaction. A. ALBU.

1.—Will be abstracted when concluded.

2.—Krebs believes that a **systematic scheme for hardening children** by warm, then cold, bathing is of great value, contrary to the opinion expressed by Hecker in a recent article. Yet he admits that there are children who do not harden well. Those who have been hardened are much better off afterward than the others. [M. O.]

3.—Bittorf reports the case-histories of 2 middle-aged men with **inflammation of the sigmoid flexure (sigmoiditis)**, with coprostasis as the cause of the condition. A review of the symptomatology and treatment is given. There is fever, with tympanites, pain and signs of intestinal intoxication. The prognosis is uncertain. Recurrence commonly occurs. The treatment consists in rest in bed, liquid diet and purgatives. [M. O.]

4.—From recent experiments with vegetarian foods, Albu found that upon plant foods alone, i. e., vegetable albumin only, the kind and amount of **intestinal putrefaction** both varied considerably. It would seem, therefore, that vegetable albumin does not decrease intestinal putrefaction. [M. O.]

WIENER KLINISCHE WOCHENSCHRIFT.

February 12, 1903. (XVI. Jahrgang, No. 7.)

1. Heredity in Syphilis. RUDOLF MATZENAUER.
2. The Significance of Vesicovaginal Fistula in Obstetrics. EMIL KRAUS.
3. A Case of Fibrinuria with Nephritis. RICHARD LOSTORFER.
4. Injuries from Lightning. S. JELLINEK.

1.—In a long and interesting article Matzenauer reviews the subject of **the heredity of syphilis.** Immunity to syphilis is not hereditary. While no doubt exists that a mother can and does transmit syphilis to her child, the transmission of the disease from the father through the spermatozoa has never been proved. To understand this, that a mother, apparently healthy, should have a child with hereditary syphilis, the mother herself must be syphilitic, though the disease seems latent in her. Thus, syphilis, to be hereditary, must come from a syphilitic mother. Therefore, the mother of a syphilitic child should undergo mercurial treatment, even though she has no symptoms. She can nurse her own child without danger. Besides, syphilitic parents can, possibly, infect their healthy children. A man with syphilis, in order not to infect his wife, should not marry for several years after infection and not without having undergone repeated mercurial treatments. The literature is fully cited. [M. O.]

2.—Kraus reports 2 cases of **vesicovaginal fistula occurring with parturition.** The case-histories are given in full, showing the occurrence of the condition and the effect of the resulting scar upon parturition later. Kraus concludes that, whenever the presence of a scar from a previous vesicovaginal fistula may complicate delivery, the patient should be carefully watched, especially for hindrance to delivery. If the uterus is greatly stretched, the child should be removed by Cesarean section. Forcible dilatation and deep incisions of the cicatricial tissue are contra-indicated because of the dangers from laceration and hemorrhage, and the formation of another fistula. [M. O.]

3.—Lostorfer reports a case of **chronic parenchymatous and interstitial nephritis** with sclerosis of the kidneys, arteriosclerosis, pericarditis, etc., in a woman of 49, in whose urine, which contained too much albumin to permit of measuring it by the Esbach method, **clots of fibrin** were found, a very rare occurrence. Histologically the kidneys showed the tubules filled by fibrin casts. The condition is very rare without any other affection of the genito-urinary tract. The urine was clear, light yellow and without a trace of blood, yet the fibrin was noted in great quantities when the nephritis was still acute. [M. O.]

4.—In a most comprehensive article Jellinek discusses **the effects of lightning** in their clinical and social relations. He has collected a large amount of literature upon the injuries produced by lightning and electricity. Many cases of peculiar bruises due to lightning are described, with full details and diagrams, showing the irregularity of such accidents. Several case-histories are given in full. The microscopical changes due to electricity and lightning injuries are given. It is noticeable that injuries from lightning occur at once; while injuries from electricity are only visible after an interval of varying length. [M. O.]

MEDICINSKOIE OBOZRENIE.

Vol. LVIII, No. 18, 1902.

1. On Benign Intestinal Tumors in Children. B. A. EGIZ.
2. A Case of Resection of the Brachial Plexus. N. B. SINIUSCHIN.
3. A Case of So-Called Enameled Liver and Obliterative Inflammation of the Pericardium and Pleura. V. S. DJELITZKY.

1.—Egiz discusses the **frequency and nature of benign growths** in the intestines of children. These growths may be adenomata, fibromata, lipomata, papillomata, myomata or angiomata. Intestinal polypi are not very common in children, as seen from the statistics of the Children's Hospital of St. Olga. In this institution 300,260 patients were treated during the past 14 years, and polypi were found only in 30, or 0.01%. In discussing the symptomatology of the various tumors the author states that many of them may fail to give rise to any symptoms and be accidentally discovered on the autopsy table. Frequently the symptoms are indefinite and give no direct indications of the nature of the trouble. Intestinal hemorrhage is the most characteristic symptom, and, if present in a person previously in perfect health, the presence of a tumor should be suspected. The other symptoms depend on the degree of obstruction produced by the tumor. The author reports the case of a girl, 11 years old, who had been suffering for several months from abdominal pain, vomiting and audible gurgling. On palpation nothing could be discovered, nor was there any abnormality found on exploratory laparotomy. After the operation the patient was getting progressively worse, and a small tumor was finally discovered on the left side. A secondary operation brought to view a tumor on one of the intestinal loops. The growth was firmly attached to the mucous membrane, and when removed left a considerable space which was obliterated by bringing the gaping edges of the wound together. On microscopical examination it was found to be a **fibroleiomyoma.** Owing to a recent invagination which escaped detection, the incision into the intestine injured the invaginated portion. The cut was not detected until after the operation was almost complete, and in the meantime the exuded feces entered the peritoneal cavity, causing the death of the patient. [A. R.]

2.—Siniuschin describes a **resection of the brachial plexus** performed on a man who received an injury in that region by a falling tree. The symptoms and progress of the affection in this case are minutely described. [A. R.]

3.—Djelitzky describes specimens of lungs, heart, liver and diaphragm removed from a woman, 74 years old, who, as far as the history could be obtained, had been suffering from extreme ascites. The liver, heart and lungs were entirely **covered by an extremely thickened pleura,** reaching in some places as high as one cm. in thickness. A detailed description of the microscopical appearance of the tissues is given and the views of several authorities on this rare conditon are discussed. [A. R.]

Vol. LVIII, No. 19, 1902.

1. On the Teachings Concerning Mania. P. B. GANNUSCHKIN and S. A. SUCHANOFF.
2. On the Casuistics of the Complications of Aneurysm of the Aorta. P. S. USOFF.
3. A Note on a Case of Cardiopulmonary Sound. VI. POLIAKOFF.
4. On the Application of Artificial Nutrient Substances to Surgical Practice. S. B. VERMEL.

1.—Gannuschkin and Suchanoff made a statistical study of all causes of **mania** treated in the Moscow Clinics for Psychiatry during the past 15 years. During that period 4434 patients with this condition were registered, 2840 men and 1594 women. Of this number, mania occurred only in 40, 16 men and 24 women. This shows that **mania is a very rare mental disease,** being somewhat more frequent in women. These figures coincide with those obtained for the entire government of Moscow, in which the proportion of mania to other mental disease is 1.5%. On the other hand, melancholia occurred, in the author's statistics, almost 7 times more frequently, especially in women. It is also seen that mania occurs mostly between the ages of 16 and 25, being exceptionally rare after 50. Heredity as an etiological factor was observed in 87.55% of the cases. [A. R.]

2.—Usoff reports in detail a case of **aortic aneurysm** complicated with atelectasis of the left lung as a result of occlusion of the corresponding bronchus by a severe hemorrhage. The case presented interesting diagnostic features, the account of which cannot be propertly condensed. [A. R.]

3.—Poliakoff describes a **cardiopulmonary murmur** in a man who had recovered from an attack of neurasthenia and, aside from a slight emphysema, was in good physical condition. The murmur was audible on deep inspiration, the patient holding his breath. The sound was so loud that it was audible to the patient and could be heard at a distance. It involved the cardiac area as far down as the xiphoid appendix, it closely resembled the murmur present in atheromatous degeneration of the aorta. On placing the palm of the hand on the lower portion of the chest, distinct fremitus could be perceived, resembling the friction of inflamed pleural surfaces. The peculiar feature of this sound was that its production was more or less subject to the will, inasmuch as it could be produced only when the patient suspended respiration. It also proves the theory of Potain: That cardiopulmonary sounds are produced by the ingress of air from the bronchi into the alveoli, the air being forced by the contractions of the cardiac muscle. [A. R.]

4.—Vermel discusses the **importance of a carefully regulated diet for patients after such operations as gastrojejunostomy, resection of the pylorus, gastro-enterostomy,** etc. He analyses the relative value of artificial foods and comes to the conclusion that none of them is sufficient to satisfy the wants of the organism and that, therefore, none should be relied upon as an exclusive diet. The following examples of dietary régimes carried out by the author are given: First régime. 8 A. M., 100 cc. of coffee, 25 cc. of cream and 20 gm. sugar. 9 A. M., 50 cc. of meat juice and 30 cc. of port wine. 9.30 A. M., 200 cc. of milk and 5 gm. of nutrose. 11 A. M., one egg and 20 cc, of port wine. 1 P. M., 200 cc. of milk and 25 cc. of cream. 3 P. M., 100 cc. of coffee, 25 cc. of cream and 20 gm. of sugar. 5 P. M., 50 cc. of meat juice and 30 cc. of port wine. 6 P. M., 100 cc. of milk, 25 cc. of cream and 10 gm. of sugar. 8 P. M., one egg and 20 cc. of port wine. 9 P. M., 100 cc. of milk and 5 gm. of nutrose. This diet contains 50 gm. of albumen, 56 gm. of fat, 80 gm. of carbohydrates and about 17 cc. of alcohol, or altogether 1170 calories. If the patient does well on this diet he may be placed on the following: 8 A. M., 100 cc. of coffee, 20 gm. of sugar, 50 cc. of cream and 20 gm. of English biscuit. 9 A. M., 50 cc. of meat juice and 30 cc. of port wine. 9.30 A. M., 200 cc. of milk and 10 gm. of nutrose. 11 A. M., 200 cc. of milk soup with rice (25 gm. of rice) and 20 cc. of port wine. 1 P. M., one egg and 20 gm. of biscuit. 2 P. M., 50 cc. of meat juice and 30 cc. of port wine. 3 P. M., 100 cc. of coffee, 50 cc of cream. 30 gm. of sugar and 10 gm. of biscuit. 4 P. M., 50 cc. of meat juice and 30 cc. of port wine. 6 P. M., 200 cc. of milk soup with rice, one egg and 10 gm. of butter. 8 P. M., 200 cc. of milk, 50 cc. of cream, 10 gm. of nutrose and 20 cc. of port wine. 9 P. M., 200 cc. of milk, 50 cc. of cream and 5 gm. of nutrose. 9.30 P. M., 20 cc, of port wine. This table represents 79 gm. of albumen, 110 gm. of fat, 189 gm. of carbohydrates. or 2274 calories. [A. R.]

BOLNITCHNAJA GAZETA BOTKINA.

December 18, 1902. (Vol. XIII, No. 51.)

1. An Improved Apparatus for Disinfection With Formalin. M. A. ZAUSAJLOFF.
2. On the Question of the Passage of Agglutinins Into Transudates (Under Normal Conditions and in Experimental Uremia.) N. K. ROSENBERG.

1.—Zausajloff points out the well-known fact that any **home-made apparatus may be used for the vaporization of formaldehyde,** an oil-can, a flask, a bottle, etc. However, certain precautions should be observed to prevent polymerization of the formalin. This will occur when the formalin is overheated, when the distillation takes place in a vessel with a large evaporating surface, such as a pot, or when a sufficient amount of moisture is absent. To prevent polymerization the author recommends the use of a water-bath or a sand-bath in which the apparatus is placed. In place of water for the water-bath he advises the use of a saturated solution of common salt, which raises the boiling point to 110° C. He has also found that by connecting 2 cans, one containing water and the other the formalin, better results are obtained, as the steam passing through the formalin solution carries with it the formalin gas more readily. The connection should be made in the same manner as in the case of wash-bottles. He found by experiments that these simple improvised devices give results as good as those obtained with the costly generators. [A. R.]

2.—Will be abstracted when concluded.

DEUTSCHES ARCHIV FUER KLINISCHE MEDICIN.

(Continued from Page 511.)

15. A Case of Neuritis of the Splanchnic Nerves. H. STILLING.
16. The Embryology of the Uterus. H. BAYER.
17. A Rare Complication of Puerperal Fever. E. DIETZ.
18. A Contribution to the Treatment of Puerperal Fever With Credé's Ointment. HUEFFELL.
19. Contribution to the Discussion and Diagnosis of Interstitial Pregnancy. M. MURET.
20. The Relation of Cheesy Pneumonia to Miliary Tuberculosis of the Lungs. P. BAUMGARTEN.
21. Fibrous Obliterative Bronchiolitis, With Remarks upon Hyperemia of the Lung and Indurative Pneumonia. A. FRAENKEL.
22. The Significance of Intravenous Pressure in Dietetics and the Physical Treatment of the Circulation. A. FREY.

23. The Treatment of Osteomalacia with Phosphorus. HIS.
24. Results of the Treatment of Diphtheria in the Mülhauser Civic Hospital Before and After the Employment of Behring's Antitoxic Serum. JAEGER.
25. Lymphagogue Substances in the Blood and Serum of Patients Suffering from Kidney Disease. A. KAST.
26. Communications from the Boundaries of Otology. O. KOERNER.

15.—Stilling reports the following interesting case. A woman, 40 years of age, had, for a little more than 6 months, cough, expectoration, dyspnea and palpitation. She grew thin, later had swelling of the lower portion of the body and, finally, of the limbs also. The abdomen finally became so tense that it was necessary to evacuate the fluid, when it was found that the liver was very large, but there were no signs of tumor. The patient improved, but the fluid soon recurred, and she gradually died in collapse. At the autopsy it was noted that the right splanchnic nerve was thick and grayish-red in color. The microscopical examination of the nerve showed the presence of degenerated fibers and considerable congestion of the bloodvessels. Stilling believes that the fibers which showed signs of degeneration can be separated as cerebrospinal elements, and those which were intact belong to the second order, or sympatetic motor fibers, possibly arising from groups of ganglion cells found in the nerve itself. The liver was enlarged and hyperemic, and both this and the excessive ascites were apparently due to the disease of the splanchnic nerve. [J. S.]

16.—Bayer has collected a large amount of material in order to determine the changes that the uterus undergoes at various periods of existence. There were 36 specimens obtained from fetuses from the age of 4 months to the termination of pregnancy. The uterus is so variable at this age that it is almost impossible to give any definite figures regarding its size. The general tendency is, however, as the fetus grows older, for it to become more sharply differentiated from the vagina. During fetal existence the uterus is always anteflexed and situated closely to the bladder, the shape is flat, and the body of the organ is usually a little thicker than the cervix. From the seventh to the ninth month the length of the uterus averages 3 cm.; the degree of anteflexion varies considerably, and in one of the author's cases the lumen was slightly dilated, but in all other cases it was merely a narrow slit. At the period of birth the cervix is usually thicker than the body of the organ. In one specimen there was beginning formation of cervical glands. This was a rather small specimen. The average length was 3.7 cm. The thickness of the body was between 8 and 11 mm., while the cervix was between 8 and 15 mm. The characteristic changes were the step-like progress in its size, the increase in the size of the cervix from the seventh to the ninth month, and the increase in the size of the ovaries, which did not appear to develop as rapidly as did the uterus. He had 161 specimens of the uterus removed from children. In the first 5 years of life the cervix is very much larger than the body, although there was one specimen in which this was not the case. Usually there was anteflexion, but in a few instances there was retroflexion. The great variation in size is illustrated by the fact that in one the uterus obtained from a girl of 12 years was smaller than that obtained from a child of one and a half years. It appears that the growth of the uterus from the first year of life until puberty is almost nothing. The uterus retains its fetal form, and the anterior surface of the body retains its concavity. After birth the uterus develops about as rapidly as the ovaries. The cause of this arrest in development is difficult to understand. It apparently bears some relation to the growth of the ovaries. Bayer calls attention to a condition, the existence of which he considers more definitely proved by testing the fibers which he names "post fetal involution." [J. S.]

17.—Dietz mentions a case in which the placenta was not born until 3 hours after the child. He removed it, gave an intra-uterine injection of 1 to 2,000 bichloride, and on the second day the patient developed fever. There were, however, no local symptoms. On the tenth day there was swelling of the left leg resembling phlegmasia alba dolens. This involved only the thigh and the lower portion of the extremity. Later the right forearm also swelled. An exploratory puncture yielded a thick yellow pus, and an incision evacuated a large quantity of this pus. Pus was also obtained from the thigh, and found to surround the thighbone which had been denuded of its periosteum. Later the left forearm also swelled, then the right upper arm, and finally the right leg. That is to say, altogether there were 5 large abscesses on the limbs discharging pus. The patient made a good recoery and a year later had a second child without complications. [J. S.]

18.—Hüffell reports the following case. A woman of 39 was delivered of her fifth child without any apparent complications. The second day she had headache and some prostration, and the temperature was 39°. She was treated with external applications of cold and lavage of the vagina with a 10% solution of lysol and insufflation of the vagina with iodoform. The patient was given liquid diet and alcohol, later a tumor gradually appeared to the left, just above the fundus of the uterus. At the end of 14 days the fever disappeared, but reappeared on the twenty-first day. On this occasion there was considerable pain in the rectum, and examination showed a hard tumor 2 or 3 cm. above the anus, surrounding the entire structure. The patient finally recovered entirely. In addition, she received Credé's ointment from the sixth to the tenth day of the fever, 3 gr. being rubbed in twice daily. There did not appear to be a definite effect upon the course of the affection, either in diminution of temperature or in promoting the absorption of the parametritic exudate. [J. S.]

19.—Muret reports a case of mural pregnancy occurring in a patient, 34 years of age. After the second month the mother fell upon the lower portion of the abdomen, after which there was weakness and slight loss of blood. In the fourth month it was possible to recognize the existence of a cystic tumor united with the uterus, and not connected with the round ligament. At the same time there was evidence of hemorrhage into the abdominal cavity. An operation was performed, the sac found in the wall of the uterus. Total hysterectomy was, therefore, performed, and the patient made a good recovery. Muret believes that the pains were possibly produced by the hemorrhage into the tubo-uterine walls which had led to considerable changes in the uterine walls, and had given rise to a hematocele. The cases of mural pregnancy show great variety in the symptoms, and also in the position of the embryonal sac. The most difficult differential diagnosis is from pregnancy in one half of a uterus bicornis. Treatment is usually hysterectomy by one or another method, but in a few cases conservative methods have been employed with success. [J. S.]

20.—Baumgarten discusses the nature and origin of cheesy pneumonia. He believes miliary tubercles to be essentially the product of proliferation, although formation of bloodvessels does not occur; he then discusses the interstitial tubercle which can be recognized by the fact that it contains elastic fibers. He then takes up the subject of cheesy pneumonia and calls attention to the fact that the alveolar cells rarely take part in the necrotic process. He believes that in many cases the so-called tuberculous pneumonia is really a mixed process due to the tubercle bacillus and other micro-organisms. The commonest cause of infection is, of course, the inspiration of material from a cavity. [J. S.]

21.—Fraenkel calls attention to the article of Lange in which **bronchiolitis fibrosa** was first described as a clinical entity. He reports the case of a man, 25 years of age, who had inspired the fumes of nitric acid, which was used in a foundry in which he was employed. He immediately had a severe attack of coughing and pain and pressure in the chest—with rapidly increasing dyspnea. Upon his admission to the hospital the respirations were 72 per minute. The temperature remained normal, and gradually the cyanosis and dyspnea diminished. The sputum was very scanty, slightly reddish and on one occasion contained a few diplococci. Later he had some fever, the cyanosis and dyspnea reappeared and the patient died. At the autopsy there were found numerous minute areas of hepatization and numerous small white nodules that resembled miliary tubercles. The earliest symptoms were evidently those of acute hyperemia of the lung, and careful microscopical examination of the lung showed that the diagnosis of bronchiolitis obliterans was correct, and that, as a matter of fact, the bronchioles were obliterated by fibrous masses. [J. S.]

22.—Frey, premising that the aspiratory force of the left ventricle is equivalent to 50 mm. of mercury, believes that its influence must be transmitted from the auricles along the veins. It is, therefore, important to measure, if possible, the **venous pressure.** He then calls attention to the different factors influencing the circulation of the blood, and to the importance in disturbances of compensation, of measuring this pressure. He describes an **instrument** that he has had constructed for the purpose of measuring the venous pressure, which consists essentially of a delicate lever, pressure being regulated by varying weights, the pelotte of which is placed over the artery or vein to be measured, and weighted until the pulse disappears, when pressure can be readily measured by multiplying the weight by the distance on the scale and dividing by 2. This apparatus can also be used for testing the arterial pulse. He mentions the various conditions that may give rise to error, and speaks of the vessels most susceptible to investigation, particularly the veins of the dorsal surface of the hand. His investigations upon large numbers of patients have shown that in the radial artery the pressure lies between 300 and 450 gm.; in the veins of the back of the hand it lies between 10 and 20 gm. The pressure in the veins shows more rapid variations in morbid conditions than the pressure in the arteries, and, therefore, it is a more delicate test of the efficiency of treatment. In cases of compensated valvular disease it may be that the only objective sign in the circulation will be this disturbance in the venous pressure. The treatment of heart disease includes hydrotherapy and respiratory gymnastics, all of which can be more or less controlled by careful studies of the bloodpressure. [J. S.]

23.—His calls attention to artificial cod-liver oil suggested by Trouseau for the treatment of conditions in which cod-liver oil would be required. He also mentions several cases in the literature of **the treatment of osteomalacia with phosphorus,** and then gives a history of a patient suffering from this disease, who, at the age of 27 months, had the first fracture of the bones and subsequently so many that they could not be counted. The treatment with phosphorus and chalk greatly improved the patient, but the tendency to fracture was not diminished. During the patient's stay in the hospital careful analysis was made of the ingestion and the secretion, and it was found that the calicium was sometimes retained, sometimes lost, but the phosphorus was retained in moderate quantities. The phosphorus was given dissolved in oil. [J. S.]

24.—Jaeger gives the **mortality statistics of diphtheria** in the wards of the Mülhauser Hospital. For the years 1892-3-4, the average was above 50%; for 1895 it was 38%, and for 1896 it was 28%. During these 2 years the serum was used in small quantities and not in all cases. In 1897-8-9 and 1900, when the serum was used freely, the mortality ranged between 15% and 20%. The effect of the injection of the serum seemed to be beneficial. When the patients had fever it usually decreased rapidly. All the patients that required tracheotomy required it upon admission, excepting two in whom it was done the day after admission. In one case of albuminuria the serum injection caused it to disappear at once. The causes of death were various; paralysis of the heart, pneumonia, etc. One patient died shortly after admission to the hospital, and one of diphtheria of the bronchioles. The dose of serum varied from 600 to 1,500 units, repeated at intervals as appeared necessary. In addition, the children received gargles containing potassium chlorate, and when there was much pain they were allowed to swallow small pieces of ice. In the severe cases the throat was painted with a solution of ferric chloride. The nourishment was of the most concentrated character. In no case was any spread of the diphtheritic process observed after the injection of the serum. [J. S.]

25.—Kast, in order to throw some light upon the **edema** that occurs **in nephritis,** has investigated the blood of patients suffering from that disease in order to determine the presence of lymphagogic substances. He, therefore, bled a number of nephritics, injected the blood into dogs and estimated the quantity of lymph that was discharged. It was found that after the injection of the serum this was about 3 times as great as before. Blood was, therefore, taken from some healthy men and injected, and it was found that the quantity of lymph was not increased. There seems, therefore, to be some substance in the blood of patients suffering from nephritis that irritates the lymph-secreting tissues. [J. S.]

26.—Körner tabulates 34 cases of **suppurative ear disease associated with complications.** In a certain proportion of these patients there were changes in the eyegrounds, and he endeavors to determine whether or not these are significant. It does not appear that we are justified in drawing any prognostic conclusions from these changes. In some cases they grow worse after operation, but, nevertheless, the patients recovered without a second operation. In other cases they only appeared after the operation, and, therefore, they seemed to bear no relation to the severity of the case. They rarely occurred in extradural abscess or in purulent leptomeningitis unless complications were present. In complicated cases they are more common. In uncomplicated cases of thrombosis of the lateral sinus there were no changes in the eyegrounds. In a case of extradural suppuration complicated by abscess of the cerebellum there were no changes in the optic nerves, but in another case, complicated by abscess in the temporosphenoidal lobes, iritis occurred very early. Körner, further discussing the cases, calls attention to the fact that 6 of them had diabetes, and he draws the conclusions that suppurative processes in the tympanic cavity are much more common in diabetes than in other conditions. The effect of operation upon diabetes did not appear to be favorable. One patient died shortly afterward; 4 recovered from the operation and in one an operation was not performed. [J. S.]

(To be Concluded.)

ARCHIV FUER KINDERHEILKUNDE.

1902. (Vol. 35, Nos. 3 and 4.)

5. Ulcerative Exudative Angina, Vincent's Angina. C. BARON.
6. The Gastric Juice of Infants. ADOLPH H. MEYER.
7. Situs Inversus and Transposition of the Large Blood-vessels. PAUL GEIPEL.
8. Sudden Death in Childhood. P. KRAUTWIG.
9. The Respiratory Movements in Children. KONRAD GREGOR.

5.—**Ulcerative exudative angina,** also called **Vincent's angina** or **angina diphtheroides,** is much more frequent than is commonly supposed. The diagnosis from diphtheritic and syphilitic angina can only be made by bacteriological examination. In 3 years 38 such cases were found in the Dresden Foundling Asylum. The symptoms are only local, the disease running a slow course. The condition may recur easily a number of times. Treatment does not seem to have any appreciable effect. Membrane formation is followed by ulceration. The condition is most contagious. Microscopical findings are described and the literature is reviewed. There is generally some stomatitis, with pharyngitis and tonsillitis. The possibility of Vincent's angina occurring in a syphilitic patient must not be forgotten. [M. O.]

6.—Meyer reports in detail a large number of **experiments on the gastric secretions of infants.** He tested the length of time food remained in the stomach, the HCl and total acidity, phosphates, lab ferment, pepsin, etc., in well and dyspeptic infants. The conditions found were too inconstant to permit any general conclusions. He found the quantity of gastric juice the same an hour after ingestion of food, no matter what infant-food had been given. The amounts of acid and pepsin present were decidedly below those in older children and adults. There was subacidity or anacidity in some cases of enteritis; hyperacidity in some cases of chronic gastro-intestinal catarrh. He believes the examination of the gastric contents of infants to be of no clinical importance. The tables of his experiments and 38 case-histories are given. [M. O.]

7.—In an extensive article Geipel reports in detail 4 new cases of **situs inversus,** which, added to his 5 cases previously reported, make 9 cases, in 2 of which there was total transposition. A full description of the positions occupied by the different portions of the heart and each of the large bloodvessels in the various forms of situs inversus is given. There may be true transposition, with or without situs transversus; true transposition of the large bloodvessels with transposition of the ventricles, with or without situs transversus; corrected transposition of the large bloodvessels with transposition of the ventricles with or without situs transversus; or corrected transposition of a large bloodvessels, without transposition of the ventricles, with or without situs transversus. Many diagrams accompany this article. [M. O.]

8.—**Sudden death**, though rare, does occur **in children,** in some cases without any known explanation. It may be due to syncope or to asphyxia. The numerous causes which can produce either condition are discussed in full. A number of unexplained cases are reported from the literature. Clinically death by syncope resembles death under chloroform; that by asphyxia resembles laryngeal stenosis or spasm of the glottis. Autopsy rarely shows the cause of death in these cases. Krautwig believes bronchitis or convulsions in a rachitic child may be the cause of death. [M. O.]

9.—Gregor reports many investigations undertaken upon **children** to show their **respiratory movements.** In the first 6 months of life there is frequent respiration with great freedom of action, because the infant lies on the back mainly; in the second 6 months and second year of life frequent respiration, with much less freedom of action. From the third to the seventh year great freedom of action develops with very slow, deep breathing. From the eighth to the fourteenth year there is less freedom of action, with a decrease in the ability to work, and outspoken abdominal breathing. The respiratory movements in boys and girls, with the changes with age and development, are described, with tables and photographs. Girls show a tendency to continue abdominal breathing longer than boys. Gymnastics influence the respiration in boys, keeping the breathing thoracic. The development of the chest and shoulders depends mainly upon the kind of respiration practised. [M. O.]

1903. (Volume 35, Nos. 5 and 6.)

10. The Diagnosis and Treatment of Stenoses of the Upper Respiratory Passages. J. K. FRIEDJUNG.
11. Two Cases of Glicma Cerebri. J. K. FRIEDJUNG.
12. Chronic Diffuse Myocarditis in Children. ZUPPINGER.
13. Serum Exanthems. MONTI.
14. Tuberculosis of the Umbilical Region. ERICH VON SCHROETTER.
15. The Anatomical Peculiarities of the Infantile Ear. GUSTAV BRUEHL.

10.—Friedjung relates 16 case-histories showing the mode of onset, symptoms, diagnosis and treatment of **laryngeal and tracheal stenosis,** due, in most cases, to diphtheria. The other causes given were spasmodic laryngitis, retropharyngeal abscess, enlarged mediastinal glands, enlarged bronchial lymphglands, foreign bodies, tumors, uremia, epilepsy, measles and pneumothorax. Many details of the treatment are given. [M. O.]

11.—Friedjung gives the histories of 2 children, aged 2½ and 9 years, with **glioma cerebri,** confirmed by autopsy, the notes of which follow. [M. O.]

12.—Chronic myocarditis is very rare **in childhood.** Two cases are reported, one subacute, following diphtheria, the other chronic and diffuse, following some time after pneumonia. The autopsy reports are fully described. The amount of venous stasis occasioned in one case was striking. The children were 10 and 12 years of age. The prognosis is always unfavorable, some intercurrent disease generally causing death. Oxygen inhalations seemed to ease the patients. [M. O.]

13.—In discussing **serum exanthems** Monti says that diphtheria antitoxin should only be employed if it is perfectly clear. When the serum is cloudy, it must be heated to 35° C., at which temperature all cloudiness disappears if the serum is good. Otherwise it should not be used. A small quantity of serum of high specificity is to be preferred to larger amounts of less active antitoxin. [M. O.]

14.—The case-histories of 4 children with **tubercular peritonitis,** in whom the umbilical region was mainly affected, with **umbilical abscess,** are described by von Schrötter. Two of these died, and 2 recovered completely after operation. The condition generally follows intestinal tubercular ulceration. Surgical treatment is indicated. A review of the entire literature is given. [M. O.]

15.—Brühl describes the conditions often found in the **ears of infants and young children,** showing the anatomical variations between the external, middle and internal ears of infants and adults. There is in childhood an anatomical predisposition to the occurrence and spread of suppurative processes in the ear. Illness affecting a child's ear always deserves most careful attention. [M. O.]

ARCHIVES OF PEDIATRICS.

January, 1903. (20th. Year, No. 1.)

1. Peribronchitis and Interstitial Pneumonia. A. JACOBI.
2. A Case of Achondroplasia (Micromelia). CHARLES HERRMAN.
3. A Case of Rheumatic Purpura. GEORGE MONTAGUE SWIFT.

1.—The majority of cases of **interstitial pneumonia and peribronchitis** are such as get well, if not anatomically, still practically, and their owners, when they finally die, succumb to some incidental process. Cases of hypertrophy of the connective tissue of the lungs which terminate in shrinking are most frequently observed during infancy and childhood. The patients suffering from this condition have asymmetrical chests; there is flattening on one side; diminished respiration over the corresponding part of the lung; slight or marked broncophony; slight bronchial expiration, but no rales. There is usually a history of an attack of pneumonia, bronchitis, lung fever, or a long, ill-defined feverish disease during childhood. Such symptoms as have just been described are not invariably due to either tuberculosis or pleuritis. Interstitial pneumonia or, as it might better be called, pulmonary hyperplasia with secondary sclerosis, is a frequent and frequently an independent disease. There is full recovery from it, at least so far as life is concerned, and it is not, as a rule, an obstacle to comfort and activity. The diagnosis of this condition from pleuritis is often difficult, and Jacobi has frequently had a suspicion that observations of apex tuberculosis which were not confirmed by the finding of bacilli in the sputum, were mistaken, and that, in truth, the disease was interstitial pneumonia which finally recovered with induration and retraction. In a general way, capillary bronchitis and lobar pneumonia have their symptoms behind and below; tuberculosis and interstitial pneumonia above and mostly in front; pleuritis with effusion below and usually behind, and tuberculous pleuritis both above and below.

Patients suffering from this condition do not cough. In acute cases of this disease, the temperature may be high and remain so for weeks; but, as a rule, high temperatures do not persist long. The treatment is chiefly prophylactic and should concern itself with the protection of the patient against infections and against colds. The diet of weak and anemic children should not consist of unmixed cows' milk too long; animal food and cereals are indispensable. Arsenous acid and phosphorus are of advantage as tissue builders. Children, 5 or 7 years of age, who do not thrive on that treatment and on food that contains enough iron should be suspected of parasyphilis. In such cases mercury, with or without iodides or iron, will often do good. When the heart muscle is feeble, a grain of digitalis daily, in divided doses, for a long period of time will improve the circulation and thus nourish the heart and the rest of the body. Recent cell proliferation and recently formed connective tissue are absorbable, and should be treated with iodine either in the form of potassium iodide, sodium iodide, iodipin or hydriodic acid. Iron iodide is often useful when there is anemia but no fever. In some young and in many adults the further development of peribronchitis and interstitial pneumonia may be into emphysema, bronchiectasis, caseous degeneration, abscess, gangrene, cavity and death. [J. M. S.]

2.—Herrman reports a case of **achondroplasia**. [J. M. S.]

3.—Swift reports a case of **rheumatic purpura**. [J. M. S.]

REVUE DE MEDECINE.

January 10, 1903. (23 me. Année, No. 1.)

1. Congenital Multilocular Cysts of the Kidneys. EDOUARD BOINET nd A. RAYBAUD.
2. The Pancreas in Venous Cirrhosis of the Liver. M. KLIPPEL and E. LEFAS.
3. The Diagnosis and Pathogenesis of the Acute Myelites. ED. MOURATOFF.
4. Associated Diseases. Typhoid Fever and Tuberculous Meningitis. M. CHAVIGNY.
5. A Case of Primary Carcinoma (Juxtahepatic) of the Biliary Canals. PLANTEAU and A. COCHEZ.

1.—Boinet and Raybaud report a case of **congenital multilocular cysts of the kidneys** in a male child, aged 42 days. The child died after a generalized convulsion. The right kidney was completely cystic, while in the left kidney the cystic change was noted at the lower pole of the organ only. After an extensive review of the literature the authors conclude that all cases of congenital multilocular cysts of the kidneys cannot be referred to a single type of which the pathogenic explanation can be found in any one theory. [J. M. S.]

2.—Klippel and Lefas report 8 cases that illustrate the bonds that unite the pathology of the liver to that of pancreas. The study of these cases shows that the **pancreas is often injured in cases of hepatic cirrhosis of venous origin, the injury showing itself as a sclerosis with participation of the glandular parenchyma.** So that the same kind of a process affects the 2 organs in a similar manner. The most frequent lesion of the pancreas is an intralobular sclerosis which gives the appearance of fibrous plates developed in the midst of the lobule and radiating toward the interlobular connective tissue trabeculæ, breaking the lobule up into groups of 10 to 20 acini. This form of sclerotic lesion is usually combined with a periacinous or monoacinous sclerosis in which each acinus is clearly isolated from the neighboring acini by a connective tissue interval. In other cases there is an interlobular or perilobular sclerosis which is an increase in size of the connective tissue trabeculæ that separate adjacent lobules in the normal state. The islands of Langerhans appear to resist this process better than do the glandular acini. The lesion of the pancreas is not the consequence of that of the liver. On the other hand, the liver is a participant in the lesions of a disease, which in reality attacks primarily and synchronously with the liver, the gastro-intestinal glands, the spleen and the pancreas. [J. M. S.]

3.—Mouratoff reports 2 cases of **acute myelitis.** The first patient was a woman, aged 44 years, who first complained of difficulty in walking, weakness in the right arm and retention of urine. Subsequently she had complete paralysis of both lower extremities and pain on passive motion and on pressure over the nerve trunks. The tendinous and the cutaneous reflexes in the lower extremities were absent, and sensation was deficient up to the level of the fourth ribs. Later there was complete paralysis of both upper extremities, albuminuria, edema of both legs, anesthesia as high as the second rib, dyspnea and dysphagia. The patient died from painful dyspnea and progressive weakness of the heart's action. This case belongs to the group of acute ascending paralyses. The clinical picture might be explained by considering the disease to be exclusively central in the form of isolated foci of myelitis; by ascribing it to a polyneuritis; or by admitting a mixed condition, partially central and partially peripheral. At the autopsy an acute parenchymatous nephritis and a double lobar pneumonia were discovered. The only alteration in the nervous system visible to the naked eye was a little edema of the spinal cord and of the brain. The peripheral nervous system, on the other hand, showed an acute parenchymatous neuritis, without the presence of micro-organisms. Microscopical study as well as the examination of the organs only indicated limited, diffuse changes, without lesions in foci. The disease, therefore, affected both the peripheral and the central nervous systems and was thought to be the result of a general intoxication of influenzal origin, without the presence of bacteria in the organism. He then reports the case of a girl, aged 10 years, who was taken suddenly ill with high fever and loss of consciousness. When she was admitted to the hospital, both her legs were paralyzed. After a study of the case, a diagnosis of tuberculous pneumonia and acute polyencephalomyelitis was made. At autopsy the diagnosis of tuberculosis was confirmed. An area of myelitis was found in the neighborhood of the tenth and eleventh thoracic segments of the cord; microscopic lesions were also found in the cord. The cerebral symptoms of which the patient complained were due to a recent tuberculosis of the lateral ventricles. The author thinks that the toxin of the streptococcus may have served as the exciting cause of the myelitis. Both cases are considered as primary, in one of which the vessels and the neuroglia were principally affected, and in the other the fibers and the cells; but both were caused by toxin circulating in the blood. Mouratoff proposes the following classification, both for spinal cord and brain: (1) Acute hemorrhagic focal myelitis; (2) acute interstitial focal myelitis; (3) acute, ascending and descending parenchymatous myelitis. [J. M. S.]

4.—Chavigny reports a case of **typhoid fever associated with tuberculous meningitis**, and refers to 4 others in the literature. He concludes that this association is not rare. The clinical diagnosis is difficult and is to be assured only by serum diagnosis. At autopsy a careful search is necessary because the lesions of typhoid fever may be poorly developed. In the course of the disease, the symptoms of meningitis predominate. [J. M. S.]

5.—Planteau and Cochez report the case of a woman, aged 50 years, who complained of hepatic colic. She had progressive jaundice with loss of appetite, emaciation, hemorrhages and terminal ascites, and she died 6 months after the beginning of the disease. The diagnosis made was carcinomatous obstruction of the bile-ducts. Carcinoma of the head of the pancreas was excluded because of the absence of the reaction of Sahli (salicylic acid was found in the urine after the administration of salol) and the growth was considered to be juxtahepatic because distension of the gall-bladder was not demonstrable. On autopsy, however, although the carcinoma was found at the junction of the cystic and the hepatic ducts, the gall-bladder was slightly larger than normal. The pancreas, the stomach, the intestines, the rectum and the genital organs showed no carcinomatous nodules. Microscopically, the growth was a cylindrical epithelioma with a strong tendency to become transformed into carcinoma. The case seems to indicate that the law of Courvoisier-Terrier, that in juxtahepatic carcinoma the gall-bladder is always retracted, is too absolute. [J. M. S.]

Society Report.

NEW YORK OBSTETRICAL SOCIETY.

Meeting held February 9, 1903, Dr. E. H. Grandin, President in the chair.

Dr. G. H. Mallett presented a specimen of **unruptured tubal pregnancy** which he had diagnosed before operation. Dr. A. Brothers reported a case of **hydatidiform mole** in a woman, aged 40, and another of **eclampsia** in a young primipara. In the former case the cervix was dilated by Brothers' 4-branched dilator; in the second case, by means of the Bossi dilator. Dr. Leroy Broun showed a **myoma which he had removed through the cervix by morcellation,** for sepsis following normal labor. The tumor was sessile near the fundus and weighed 3 pounds. Symptoms, which appeared 2 days after labor, disappeared immediately on removal of the tumor. Dr. H. Vineberg reported a case of **dystocia from adhesions following laparotomy for ectopic pregnancy,** operated upon a year previously. The conditions found resembled dystocia following ventrosuspension of the uterus. The membrane at the lower angle of the abdominal wound ruptured while the patient was being prepared for laparotomy, and the omentum protruded. A finger was introduced through this opening, adhesions between the uterus and abdominal wall separated, after which the cervix was dilated manually, a living child being delivered by version. He also reported the history of a patient with partial inversion of the uterus from sepsis following labor. Vaginal hysterectomy was successfully performed.

Dr. S. Marx read a paper upon **version or forceps,** in which he stated that, in those cases in which the head was above the brim of the pelvis, version only should be performed, the application of forceps in such cases never being countenanced. He described the 3 forceps operations: High application, medium application and low application, giving the clinical indications and the anatomical classification to be followed. The high operation was dangerous on account of injuries to the tissues and should only be done when rupture of the uterus threatened. The anomalies causing failure of the presenting head to engage were then discussed. Version was chosen in almost all cases in which the head was above the pelvic brim. Details of its performance followed. If version is impossible, the high forceps operation should be attempted, should the child be alive; if the child is dead, the perforator should be used. Suddenly throwing the patient into the Walcher position seemed to bring about delivery in a number of cases. Dr. G. L. Brodhead prefers forceps to version when the head is relatively too large for the pelvis. In the flat pelvis, however, he uses version. Dr. R. A. Murray agreed with Dr. Brodhead. Dr. Malcolm McLean does not believe forceps should ever be used above the brim, if version is possible. Dr. G. T. Harrison objected to the title of the paper because, if version is applicable, forceps are contra-indicated, and if forceps are indicated, the time for version has passed. Dr. F. A. Dorman favors the tentative application of forceps, excepting in flat pelves, because so many children are lost, in version, from prolapse or entanglement of the cord about the extremities.

A discussion upon the **intravenous infusion of formalin in solution for puerperal sepsis** followed. Dr. Stone, of Washington, spoke of the importance of this new therapeutic discovery, provided further experiments proved its value. Dr. Killiani referred to the impossibility of finding bacteria in the blood at all times. The chemistry of the toxins was of such uncertain nature that it seemed to him undesirable to attempt their destruction by a 1-5000 formalin solution. Dr. A. P. Dudley reported 7 cases of septicemia in which he found formalin of value. Dr. Marx had not used it. Dr. Vineberg reported the history of a case with mixed tubercular and streptococcus infection, in which temporary improvement followed infusion of formalin and of normal salt solution. Dr. W. R. Pryor said that no case should be called puerperal sepsis unless cultures had been made from inside the uterus besides finding bacteria in the blood. He was opposed to antiseptics in this manner. Dr. Ralph Waldo reported a case with temporary benefit following formalin infusion, followed, however, by fatal termination. Dr. Brodhead reported a similar case. Dr. C. C. Barrows gave a brief résumé of his experience with formalin. His clinical success had far exceeded his expectations. He preferred waiting until he has treated a larger number of cases before drawing definite conclusions and before reporting experiments made to determine the influence of various antiseptic solutions of different strength on bacteria in different media outside of the body.

JOURNAL DES PRATICIENS.

January 24, 1903. (17me. Année, No. 4.)

1. Indurated Erythema and Tuberculosis. THOMAS.
2. Exploratory Puncture of the Pleura. C. FIESSINGER.
3. The Treatment of Appendicitis. DARQUIER.
4. The Diagnosis Between Splenic and Renal Tumors. CHAUFFARD.
5. Gangrenous Bronchopneumonia Successfully Treated with Collargol. E. DABOUT.

1.—Thomas reports the case of a girl of 24, with **indurated erythema,** followed rapidly by symptoms of phthisis and tubercular spondylitis. He considers these cutaneous lesions **tuberculides,** signs that the patient already has tuberculosis. They are important in that treatment should be begun at once upon their appearance. [M. O.]

2.—In **pleurisy,** even when only suspected, **exploratory puncture of the pleura** settles the diagnosis. It is a simple, easy proceeding and is often of great value. Fiessinger gives the technique. [M. O.]

3.—Darquier reports 12 cases of **appendicitis,** all treated with ice locally, rest in bed, no food and opium internally. In 4 cases operation became necessary, and all patients recovered. Of the 8 treated medically only, one died, a boy of 12, to whom a relative had given an ounce of castor oil on the third day of his illness. He died of subacute peritonitis. In the other 7 patients there was no recurrence. [M. O.]

4.—Chauffard reports a case of **tubercular splenic tumor** in a man of 47, in whom the diagnosis of the tissue affected by the tumor was very difficult. By exclusion it was found to be splenic, and the injection of tuberculin gave the typical reaction. The prognosis was most unfavorable. [M. O.]

5.—Dabout reports a case of **bronchopneumonia, gangrenous in form,** following influenza, **with recovery upon Labarraque's solution** (45*m.* t. i. d.) internally and **collargol** ointment (15%), 30 grains being rubbed in daily. Amelioration was noted immediately, and recovery gradually followed. [M. O.]

January 31, 1903. (17me. Année, No. 5.)

1. A Practical Study of the Dosage of Mercury in Syphilis. LEREDDE.
2. Potassium Permanganate Internally in Dysmenorrhea. ALFRED KHOURY.
3. Gonorrheal and Tubercular Cystitis. GUYON.
4. Arrhythmic Hyposystole in Mitral Insufficiency. MERKLEN.

1.—Will be abstracted when concluded.

2.—Khoury has given **potassium permanganate** in doses of from 1 to 5 grains, in a number of cases of dysmenorrhea, with successful results. It is well borne by the stomach and acts by oxidation. Four case-histories follow. [M. O.]

3.—Guyon reports several cases of **chronic cystitis,** treated with **argentic nitrate,** in irrigations, which are of value in gonorrheal cystitis only. He uses it in a 1 to 250 solution. Three cases are reported, one gonorrheal, one tubercular and one of undetermined etiology. [M. O.]

4.—To prevent **arrhythmic hyposystole in patients with mitral insufficiency,** Merklen advises rest, diet, hygiene and a sea voyage. The curative treatment of the condition consists in venesection, diuretics, laxatives, digitalis, baths, massage and slight exercise. These indications are all described. [M. O .]

Original Articles.

THE INCREASE OF THE USE OF COCAINE AMONG THE LAITY IN PITTSBURG,*

By THOMAS G. SIMONTON, M. D.,
of Pittsburg, Pa.

My attention was first drawn to this subject by a patient of mine, aged twenty, who became addicted to cocaine upon the advice of a friend, purely for its pleasant effects. The method of using it was in the form of a powder, which was used like snuff. The first time he experienced little effect from the drug, but the second application of the powder to the nose was more marked. He felt, to use his own language, "as if I was Andrew Carnegie, my mind was active and clear, and there was a feeling as if I could perform some muscular feat. This feeling lasted for an hour or so, and was replaced by sleeplessness when lying down; marked pulsation in the epigastrium, and rumbling in the bowels." The use of the drug continued until his employer discharged him, as he was unable properly to do his work. His parents then, for the first time, began to realize there was something wrong with their boy, and the father set out to learn, if possible, from his companions the cause. He was informed that the boy was using cocaine, and he investigated the source from which it was obtained. He was getting it from one of the down-town drug stores, buying it fifteen cents worth at a time, which was placed in a little round wooden or pasteboard box convenient for carrying in the vest pocket. He interviewed the druggist and found that his son was getting it there, and he advised him not to sell it to him again, showing him his photograph at the same time. Several days afterward he saw the clerk selling it to him, and, upon threat of bringing suit if found selling to his boy, the druggist went to their home. He admitted that he sold 40 to 50 oz. a month, that engineers on one of the roads entering the city were getting to use it, because it kept them awake when working overtime. When asked why he permitted it to be sold, his only excuse was: "That his clerk said if we do not sell it, the trade will go somewhere else." Imagine the sorrow that was brought to that home from taking cocaine in a social way. The method of snuffing was new to me, and I determined to investigate the subject.

It may not be amiss here to relate the effects produced by cocaine upon the human system, and then tell the facts that were obtained after a personal investigation in regard to the sale and use of cocaine as it actually exists at the present day in our city. Cocainomania, or cocaine habit, as defined by Dr. Norman Kerr, of London, is an irresistible craze, craving, or impulse to intoxication by cocaine, or any of its salts or combinations. Unless a cure of the "habit," or, more accurately, the disease, of cocainomania be effected, the cocaine habitué cannot refrain from resorting to the drug, if a supply can possibly be procured, whenever the craze, craving or impulse seizes upon him. The two types of the cocaine habit are (1) occasional and (2) continuous, and the indulgence may be social or solitary. In the former the user after an outbreak of intoxication may go along for a definite period without its use, "until a condition of unrest, arising apparently from within, ushers in a period of complete abandonment to the drug." Sometimes an acute pain, associated with an illness, an attack of asthma or hay-fever, to alleviate which the drug was first taken, may lead to a return to cocaine. "In the continuous type, seen often in patients suffering great pain, the victim keeps on steadily using the drug daily, in increasing doses, until rendered incapable of exertion, sometimes of connected thought, by advancing paralysis or by insanity." The indulgence may be social, as mentioned above, for the pleasant effects produced, or it may be solitary. The latter was considered the rule, the patient concealing that fact from his relatives, friends and employers; but from what I have seen and heard from people who have had an opportunity to observe the "cocaine fiends," the social indulgence is becoming more common. Some variation is observable when the cocaine addiction is associated with alcohol; alcohol and morphine; or alcohol, morphine and chloral. It is quite common to find the habitué using other drugs to produce sleep when his constitution is undermined by the drug and he feels the need of stimulation. "On taking a fresh dose in chronic cocainomania there is a feeling of exuberance of spirits, general acceleration of the circulation, quickened pulse, talkativeness, a spirit of restlessness, hallucinations with rapid and somewhat spasmodic breathing, intense joyous activity and a remarkable overconfidence in one's capacities and strength. The cocainist, even when weaker, feels stronger and more agile. There may be vertigo with some confusion of the intellectual faculties. The pupils are dilated, the throat is dry, headache, which may not be extremely painful, and a great cerebral excitement are present. The temperature is elevated, and a loss of sense of time is manifest, though memory is usually intact. Depression and prostration soon follow if the dose has been a moderate one and not larger than the user has been accustomed to take. The period of cerebral excitement lasts about two hours. When the dose has been relatively increased, the depression and nervous debility may last for days, or until the next dose."[1] Some habitual takers of the drug do not show any symptoms of impaired health or vigor, while others appear emaciated, with pinched features, pale, yellowish skin and clammy extremities and cold perspiration. The pupils are dilated, eyes glistening and sunken, with dark subocular rings. The tongue is coated, and anorexia, marked palpitation and dyspnea are present; also tremors, tinnitus aurium and uncertainty of step. Hallucinations, especially of sight and hearing, delusions of persecution, ending with general paralysis, bring the patient to an asylum, or death ends the scene. The colored race is at the present day by far the greatest consumer of cocaine, and they do not exhibit to the same extent the characteristic symptoms just mentioned that are more common and noticeable in their white brethren. "Occasionally you find brightness, brilliancy and mental activity" exhibited. Dr. O. J. Bennett, of Allegheny, said that the inmates of the penitentiary with whom he had talked and who were addicted to the drug, all gave the same testimony as to its effects, *i. e.*, "it makes us feel like millionaires," also that they are unaccountable when under its influence, often doing things of which they have no remembrance. One fellow tells of going into a drinking resort filled with people and ordering drinks for the house. When the bill was presented for $85.50, he pulled out 45 cents—all he had. Obersteiner[2] says: "The effects of cocaine intoxication are as follows: Physically there is the rapidly developing marasmus so characteristic of chronic cocaine intoxication. Psychically, vivid feeling of apprehension; delusions, chiefly of persecution, and hallucinations, visual and sensory. Frightful forms appear everywhere, and small living things creep upon the skin. Insomnia, loss of appetite and impotence complete the picture of cocainism. Mangan & Saury[3] "relate several cases in which the prominent symptoms were those relating to general sensibility, consisting chiefly in hallucinations producing a sensation as if foreign bodies were under the skin. (1) A merchant, aged 48, was continually scraping his tongue and imagining that it was filled with small, black worms, and picking the skin to find choleraic microbes. (2) A pharmacist attempted to extract microbes from his skin with his nails and with a needle. (3) A physician sought for crystals of cocaine under the skin. Epileptiform attacks occurred in two of the patients, and cramps in a third." Ribakoff[4] "describes Magnan's sign as an hallucination of cutaneous sensibility characterized by a sensation of foreign bodies under the skin, which are described as inert and spherical, varying in size from that of a grain to that of a nut, or as living organisms, worms, bugs, etc." Springthorpe[5] says: "The first feeling a cocainist has is an indescribable excitement to do something great, to leave a mark. But this disappears as rapidly as it came. The second sensation—at first, at least, no hallucination—is that his hearing is enormously increased. Very soon every sound begins to be a remark about himself, mostly of an offensive kind, and he begins to carry on a solitary life, his only companion being his syringe. After a relatively short time he begins the 'hunting of the cocaine bug,' and imagines that in his skin worms or similar things are moving along." His personal opinion is "that there is a question of disturbance in the frontal cortex, originating perhaps in skin dysesthesia, and not a simple visual hallucination or retinal projection." In acute poisoning there may or may not be the stage of exhilaration, the patient quickly going into collapse and insensibility, often transient symptoms of paleness, faintness, fulness of the head and dizziness, skin creepings, precordial distress, rapid, hard or weak pulse, loquacity, restlessness and hysterical excitement are manifest. The pupils are dilated and dull, the respirations, at first quickened, become spasmodic and labored, unconsciousness sets in, convulsive seizures appear after muscular cramps, sometimes with tetanic spasms, followed possibly by deepening cyanosis, violent delirium, enuresis and paralysis of the sphincters. There may be localized areas of anesthesia. Should the patient recover, malaise and lassitude may remain several days."

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* Read before the Pittsburg Academy of Medicine, February 16, 1903.

Differential Diagnosis.—It is often difficult to diagnose cocainomania, and often this is impossible, especially when associated with other narcotics. Some of the aids are the discovery of the brown stains over the seat of the hypodermic injection. The present-day method is to "snuff it," so this requires us to be more alert for its detection. In alcoholic poisoning we find organic changes taking place in the body, while in cocaine there may be no symptoms of bodily or mental disturbance except that of satisfaction and increased capacity to perform mental and muscular work. Often the personal observation of wife, relatives or business associates must be secured in order to detect the falling off in the character of the work and judgment. The work at times may be actually increased. Two of the prominent symptoms of cocaine poisoning are self-consciousness and elation, and when present they are a great aid in making a diagnosis. Alcohol poisoning is usually social, and cocaine considered solitary, but the snuffing habit is spreading so rapidly and assuming the form of social indulgence, that this point is less valuable than formerly. Cocaine delusions are those usually of persecution, while in morphine and alcohol poisoning this delusion is not so common, except in delirium tremens, and more rare in morphinomania.

Treatment.—The treatment of these cases, to obtain the best results, should be in an institution or asylum in which the patient can be constantly under the care of a physician and the observation of the attendants. The patients will obtain the drug by hook or by crook, if possible, whenever the craze or desire for cocaine seizes them, hence the necessity of guarding against procuring the drug. Two to three months are too short a time to obtain results. Six months to a year is usually required to build these sufferers up and improve their general health so that they may be better prepared to resist the temptation to return to their old habits when set free; and then, how many really stay cured? It may be several years before they take the drug, but if some ailment associated with pain or some business failure overpowers them, the old desire or craze to be freed from their mental or physical torture returns, and they soon relapse into their former habits. Of all drugs, cocaine addiction is the hardest to break off. Relapses are more common on account of the exhilarating mental effects. With a view to ascertain reliable facts in regard to the use of cocaine among the people admitted to the Workhouse, to the Western Penitentiary of Pennsylvania and to the Western Pennsylvania Hospital for the Insane, a letter was addressed to the physicians in charge of these institutions asking their views on the matter in regard to its use as observed in the inmates that come under their observation, and its bearing in relation to crime.

(1) Has the use of cocaine been increasing or decreasing in the last two years among the people admitted to your institution, and, if so, about what per cent.?

Western Penitentiary, Dr. O. J. Bennett, Physician.	Am unable to answer question No. 1, as I have only given attention to the matter for a short while.
Workhouse, Dr. Geo. Al. Kelley, Physician.	Do not have many users of cocaine, or else they do not apply to me for treatment. Cannot say it has increased or decreased in last 2 years.

Western Pennsylvania Hospital for Insane. Dr. W.K.Walker, Physician.	No patient admitted to our institution since January 1, 1900, has presented a history of addiction to cocaine.

Question 2. Do the patients addicted to cocaine acknowledge the use of it or try to conceal that fact?

Western Penitentiary.	I do not think they try to conceal it as those who use morphine do.
Workhouse.	Conceal fact unless very bad and absolutely need treatment.
Western Pennsylvania Hospital for Insane.	Of 3 addicted to its use—all physicians—admitted between 1896 and 1900, none hesitated in acknowledging its use, however much they may have attempted to conceal it previous to admission.

Question 3. What are some of the reasons given that first led them to begin the use of the drug?

Western Penitentiary.	The only reason given is that some one else gave them the drug and told them to use it.
Workhouse.	Began use for relief of pain.
Western Pennsylvania Hospital for Insane.	CASE 1.—Cocaine secured to make it easier for me to cut down the quantity of morphine, so when I gave up one I resorted to the use of the other. CASE 2.—Otherwise uncontrollable sexual desire was allayed by hypodermic injections of cocaine, but after the first few injections its use was continued because of cerebral stimulating effect. CASE 3.—I can no more give a definite reason why I use it than I can for my indulgence in alcohol or morphine. I grow tired and depressed. I crave a stimulant and one that pleasantly influences me.

All these cases were alike addicted to alcohol, morphine and cocaine—accident, it would seem, led to their use of it, *i. e.*, the accident of their professional knowledge of its use as a stimulant.

Question 4. What is the most common crime or crimes among people addicted to cocaine?

Western Penitentiary.	Unanswered.
Workhouse.	Females—prostitution. Males—degenerates.
Western Pennsylvania Hospital for Insane.	None of these patients when admitted presented mental symptoms characteristic of cocaine. They were all types of mild paranoiacs, depressed, suspicious with idea of persecution, but no systematized delusion. They differed in no essential from the usual type resulting from addiction to alcohol and morphine.

Question 5. What method do they employ in using it?

Western Penitentiary.	Snuffing powder up nose.
Workhouse.	Hypodermic, almost always.
Western Pennsylvania Hospital for Insane.	All by hypodermic injection.

Question 6. Remarks.

Dr. O. J. Bennett, under the head of remarks, said: "I have had sole charge at the Penitentiary for the last two years. I made out an examination blank in which one of the questions was concerning drug habit. Out of 682 men examined in that time, only seven admitted the use of cocaine, and these were all colored people. My candid opinion of the matter is that the use of the drug is increasing rapidly, especially among the black population." Dr. Walker remarked that in his patients he did not have an opportunity to observe the characteristic cocaine symptoms. They were mixed cases—drug habitués.

Predisposing Causes.—Association with those who are addicted to the drug, best illustrated by the power the prostitutes have over their companions. The man at the Penitentiary, who was told to take it by one who was himself a user. The neurotic and passionate temperaments in whom the drug has an especial excitant power. The gouty diathesis, on account of the irritable and susceptible brains and nervous systems in these subjects. Syphilis associated with cerebral complications and the epileptic neuroses.

Inciting Causes.—Relief from pain. In the majority of cases this is the starting point. How easy a matter to relieve a paroxysm of asthma or hay-fever by the spray; the itching in pruritus by applying an ointment containing cocaine when affecting the vulva or rectum; the tenesmus of cystitis with a suppository—and who but the physician was the means to the end in the great majority of cases? At the door of our profession is, and justly so in many cases, laid the blame. But three weeks ago I saw a prescription written by one of our fraternity:

Cocain. hydrochlorat.	gr. xx
Iodoform	gr. xl
Ext. belladonnæ	gr. iv
Ol. theobromæ	q. s.

M. ft. rectal suppos. No. xii.
S.: One every six hours.

By the time it is refilled several times, that patient will, except by the grace of God, either go to some institution for a cure or end up at Dixmont. The nose and throat specialists of our large cities often employ sprays containing cocaine as a routine measure to clear the nose. Often these patients frequent their offices for the temporary relief and exhilarating effect of the drug, and let us trust it is not done to hold these patients. When operating on the nose it is not uncommon to use a solution of cocaine, 10, 12, 14, 16, 20% strength. While some do not readily receive the toxic effects of the drug, there are others who go into collapse. The attending symptoms preceding this state and the subsequent unpleasant after-effects are a determining factor never to use the drug again.

Morphinomaniacs, after long and continued use of the drug, are not satisfied with the morphine narcotism alone, so cocaine is taken to heighten the pleasurable sensations of intoxication. In England there appeared a large number of cocainomaniacs following the announcement in a medical journal of the cure of the alcohol and morphine habits by the use of cocaine. The mania for cocaine appears less in children below seventeen or eighteen than in adults. Males appear more susceptible than females, possibly on account of their occupations, of the demands that are sometimes made to perform extra work and the nervous strain brought on by their business cares. Inheritance has possibly not had time to develop or to have been studied by medical men as yet to have any definite bearing. The proprietary preparations on the market—the "catarrh cures"—have played an important part in the advance that cocaine has made in Pittsburg. These remedies, some at least, contain a large percentage of cocaine, and a little glass tube with a rubber hose goes with them for insufflation of the nose. If you will remember in the method of use Dr. Bennett said the men of the Penitentiary all snuffed it, and the persons addicted to the drug with whom I have talked, all acknowledge the same method of use. It is sold in crystals or powdered, mixed with sugar of milk, powdered boracic acid, acetanilid or magnesium sulphate, and dispensed in a small round wooden or pasteboard box, thus making it convenient for carrying in the vest pocket, for 15 cents, 25 cents, 35 cents, 50 cents, 75 cents and one dollar. The boxes costing 15 cents contain about five grains of cocaine mixed with some powder. The cost per grain of cocaine is about three-quarters of a cent, wholesale rate, making the cost of the drug per box about 3¾ cents. Allowing for the cost of the mixing powder and the box, about 1 1-3 cents a box, the druggist realizes ten cents profit. In the boxes that are sold for 25 cents there are about eight grains of cocaine. Making allowance for the box and powder two cents, the profit is seventeen cents. One druggist acknowledged he sold forty to fifty ounces per month, equal to 24,000 grains. If he puts five grains in a box that sells for 15 cents, he can fill forty-eight hundred boxes that realize ten cents a box, and have a profit of $480 per month, and for the year $5,760. By putting eight grains in a box, making a profit of seventeen cents, he can fill 3,000 boxes—profit per month $510; for year, $6,120. The *Pittsburg Dispatch* recently published an article in which Mr. Louis Emanuel, member of the State Pharmaceutical Board, is reported to have said that there were 300 ounces of cocaine sold in Pittsburg. a month. If this be so, and I have no reason to believe otherwise, the profit for the year would be $34,560, or $36,720, if sold five or eight grains to the box. Sometimes the fine crystals are sold in a box or envelop without the mixture. It is customary for the user to powder the crystals himself by rubbing them between a piece of paper, similar to the method employed in rolling a cigarette, and then snuff it. What is called "scrap" cocaine can be bought for $1.70 an ounce, and consists of powdered cocaine, mixed often with magnesium sulphate, and then finely powdered, or some other drug. When this is used, the profit is enormously increased, as the pure crystals of cocaine cost about $4.85 per ounce at the wholesale rate.

The nickname for the drug is "coke" or "dope." A person long addicted and accustomed to use the needle may ask for a "shoot" when presenting himself at the drug counter. Tunnel street is called "Cocaine street" by the colored people, and you may frequently hear the remark: "I live at such a number on Cocaine street." The prostitutes, the colored people and a large percentage of white persons are the ones that consume the present yearly sales that are used by snuffing, while the better class, living in the resident parts of the city, resort to the syringe, the spray or suppository. One druggist recently sold his store for the reason that he did very little business outside of selling cocaine, and he wished to get rid of this feature of his trade by moving to another locality. The lower Avenues, the Diamond and Wylie avenue districts, furnish the largest number of customers for cocaine. The waiters in the cheaper class of restaurants and also in some of the better ones have, in some instances, taken to using it. One proprietor of a large restaurant said: "I had to replace some colored waiters by white ones for this reason." In January, 1903, a drug clerk and I procured a colored man and visited twelve drug stores in the lower part of the city, giving him the money to buy the drug, with instructions to ask for fifteen cents' worth of cocaine, and to bear in mind whether any questions were asked in regard to the use of it or what it was for, and also whether they required him to register or enter his name and address in a book. We remained outside the store and watched him. Without the least hesitation in six of the stores the drug was sold to him, no questions being asked, nor his name and address entered in the poison book kept for that purpose and required by law. The result of the afternoon's work was as follows: At six stores he procured the drug in a little wooden or pasteboard box. Five of the boxes contained no label, some had the figures "15" on them; one had stamped on one side "Poison, Cocaine, Pittsburg, Pa." Not one contained the name of the drug store. Some of the boxes contained crystals, others were mixed with some finely powdered substance. At one place they refused to sell less than a quarter's worth, so he paid twenty-five cents for that box. Five of the other stores said they would have to have a physician's prescription, and one said they were out of it. The above facts can all be verified by competent witnesses. It is the honest belief of the writer that three thousand ounces, or 1,440,000 grains, is not an unusual amount to pass over a single counter in a year, but actual figures are hard to obtain. In the case of the druggist who admitted he sold 40 to 50 ounces a month, this statement was made in the presence of witnesses. Think of one store selling 288,000 grains a year. How much do some of the others sell? In fairness to the profession it can truthfully be said there are druggists who refuse to sell it except by prescription, and some also who refuse to handle the "catarrh cures" that contain cocaine.

Poison Law.

Sec. 10—Poisons. A poison in the meaning of this Act shall be any drug, chemical or preparation which, according to standard works on medicine or materia medica, is liable to be destructive to adult human life in quantities of sixty grains or less.

No person shall sell at retail any poisons except as herein provided, without affixing to the bottle, box, vessel or package containing the same a label, printed or plainly written, containing the name of the article, the word "poison" and the name and place of business of the seller; nor shall he deliver poison to any person without satisfying himself that such poison is to be used for legitimate purposes.

It shall be the further duty of any one selling or dispensing poisons, which are known to be destructive to adult human life in quantities of five grains or less, before delivering them, to enter in a book kept for this purpose the name of the seller, the name and residence of the buyer, the name of the article, quantity sold or disposed of and the purpose for which it is said to be intended, which book of registry shall be preserved for at least two years, and shall at all times be open to the inspection of the coroner or courts of the county in which the same may be kept.

Sec. 12. It shall be the duty of the State Pharmaceutical Examining Board to investigate all complaints and charges of noncompliance or violation of the provisions of this Act, and prosecute all persons so offending whenever there shall appear to the Board reasonable grounds for such action."

To make the law effectual against the sale of cocaine, an act should be drawn by the Legislature at Harrisburg, prohibiting the sale of all proprietary remedies containing cocaine; prohibiting the wholesale druggists from selling to any persons except retail druggists; prohibiitng the retailers from buying from salesmen representing firms in other States; requiring the manufacturers to report to the State Pharmaceutical Board the sale of the drug to the wholesalers; and the wholesalers to keep a record of the quantity sold to the retailers; prohibiting any person, either a druggist or drug clerk, or a citizen of Pennsylvania, from receiving or offering for sale the drug, all offenders to be punished upon conviction with a heavy fine or imprisonment or both. Prohibiting a druggist from selling cocaine except upon a reliable physician's prescription, and known so to be personally by the druggist; prohibiting physicians from engaging in writing prescriptions for the laity who are known or supposed to be addicted to the drug. It would cost the State very little expense to carry out the provisions of such an act, compared with the amount of money that will be required to equip and maintain institutions for the care of these unfortunates that will in a few years be thrown upon the State by reason of the insanity that will result, especially if the present increase and sale of cocaine is not checked.

I end with the hope that the pharmaceutical and medical professions will lend every aid to have their representatives at Harrisburg at this session enact a law along the lines suggested, and by so doing we can be the means of preventing sorrow entering many homes and save many lives from a wasted, degenerate state.

REFERENCES.

(1) Sajous Ann. & Analytic Cyclopedia of Pract. Med., Vol. 2, page 318
(2) Corr. Ed. Annual 889
(3) Mangan & Saury La Tribune Med. Feb. 3. Mar. 28, '89.
(4) Gaz. Delgi Ospedali e delle Clin. Aug. 4, '96.
(5) Quarterly Journal of Inebriety, Jan., '97.

THE USE OF THE ELECTROTHERMIC ANGIOTRIBE IN LIEU OF THE EMPLOYMENT OF LIGATURES IN THE OPEN OPERATION FOR THE RELIEF OF VARICOCELE.

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Many individuals who are affected with varicocele, often of large dimensions, go through life with little or no discomfort, treatment not being necessary. Others, in whom the feeling of weight and tension causes annoyance, are relieved by the employment of a properly adjusted suspensory bandage. Operation becomes necessary when a varicose condition of the pampiniform plexus of veins exists, when it is obvious that the condition is causing atrophy of the testicle, or when neuralgia of the cord is present, as is frequently the case in young men of a nervous, impressionable type, who labor under the belief that the varicose state terminates in sexual weakness. When this condition pertains, the operation is performed simply to relieve the mental depression that the affection produces.

Some authorities advise the performance of the operation in aggravated cases of spermatorrhea. The writer has never seen amelioration of the symptoms of any case, however mild, by this method of treatment and has ceased to advise a resort to it.

For the cure of varicocele there is a choice of two methods, the subcutaneous and the open operation. The introduction of aseptic surgery has so minimized the danger of the operation that the last-named method appears to have been almost universally adopted. The advantages are manifest. The operator can readily see what he is doing; he can with safety remove exactly the veins desired; the cord can be shortened, and the veins located behind the epididymis, lying posterior to the cord, can be resected, if necessary.

The experienced operator finds that, in spite of every precaution, the ligatures applied to the veins occasionally become infected, probably owing to the difficulty in completely sterilizing the scrotum, as well as to the fact that in some instances the catgut ligature is not thoroughly sterilized. The writer has seen several cases in which the wound had healed, and the patient ten days after operation had been sent home as cured, to return some two days later, with the cord swollen, tender to the touch, with final suppuration, requiring the re-opening of the wound and the removal of infected parts.

If not molested, weeks will elapse before the ligature will become detached; if then a method can be devised by which the veins can be resected without the employment of a ligature, the only objection that can possibly be urged against this mode of treatment will be removed. In the March issue for 1900, Dr. Leonard Freeman published in the *Western Medical Gazette* an article entitled "The Angiotribe in Operation for Varicocele." In it he states that since 1899 he has operated by this method in a number of cases, the results being uniformly successful.

It appeared to the writer that to depend on the crushing of large veins as a method of hemostasis is crude and not altogether free from danger of secondary hemorrhage, especially if the parts become infected, and consequently he has not resorted to this method of operating. When, however, Dr. Andrew J. Downes published an article in the *Journal of the American Medical Association* for August 17, 1901, describing his electrothermic angiotribe, it appealed to the writer as a safe and desirable mode of relieving the condition, preventing the danger of infection, removing the possibility of secondary hemorrhage or thrombus that might follow the employment of the ordinary angiotribe suggested by Freeman.

A case of unusually large varix, with a long, pendulous scrotum, associated with an intractable neuralgic condition of the organ, was selected as a suitable subject for operation. The dilated plexus of veins was exposed, separated from the vas deferens and folded into a loop so as to shorten the cord to the desired extent. The electrothermic angiotribe was applied by Dr. Downes. The base of the loop was grasped by the angiotribe, the part compressed, and the current was allowed to pass for forty seconds; the battery was then disconnected and the loop above the jaws of the instrument cut off.

On releasing the angiotribe, the stumps resulting from the resection were found to be ribbon-shaped and firmly adherent, doing away with the necessity for the employment of sutures, which hitherto had always been necessary in order to unite the proximal and distal extremities. The incision was closed by means of two silkworm-gut sutures. The patient had an uneventful recovery, leaving the hospital on the eighth day after the operation.

After the patient had recovered from the effect of the anesthetic, no medical treatment was needed. There was no tenderness or pain about the seat of the wound, a condition which is usually present for a day or two after a ligature has been employed. Orchitis, which so frequently pertains, was absent.

The use of the electrothermic angiotribe in the open operation for varicocele would appear to be an ideal method of dealing with conditions of the kind, removing, as it does, the only objection that can be urged against the open operation, that is, the occasional infecting of the ligature.

The advantages of the Downes instrument over the simple angiotribe, suggested by Freeman, would appear to be:

(1) The substitution of a more scientific, less crude and less dangerous method than that depending on violent traumatism so as to produce hemostasis.

(2) There is less danger of secondary hemorrhage.

(3) There is less danger from thrombus.

(4) Operation is not followed by pain.

(5) The use of the electrothermic instrument is not conducive to the production of orchitis, a condition commonly attending operations in the vicinity of the cord.[1]

The electrothermic angiotribe has been employed successfully in place of ligating the cord after castration, as well as for resection of thickened and vascular sacs of large hydroceles.

Dr. Downes has employed the instrument in a large number of different operations; in no instance has either secondary hemorrhage or infection followed its use.

ADDITIONAL NOTES ON ORGANACIDIA GASTRICA

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This treatise will refer back to the following of my articles: (1) Some New Facts in the Chemistry of the Stomach, with Special Reference to the Qualitative and Quantitative Analysis of Organic Acids (*American Medicine*, March 22, 1902); (2) Insufficientia Pylori as a Sequela of Chronic Gastritis (**Philadelphia Medical Journal**, May 24, 1902); (3) Organacidia Gastrica (*New York Medical Record*, September 6, 1902); (4) Further Remarks on Insufficientia Pylori (*New York Medical Journal*, October 4, 1902); (5) Gastrosia Fungosa (*American Medicine*, January 10, 1903). I shall refer to these subsequently only by their numbers.

Life, whatever its origin, is recognized as a process of chemical changes. The *modus operandi* of chemical changes is only conjectural, although their resultants are definitely understood. As yet we have no means to watch with our eyes the changes that go on in chemical processes. The future may or may not reveal those secrets. Coming back to the fact that life is only a series of chemical changes; that the anatomical entity, the cell, is a definite chemical compound; that this cell lives, grows or dies—disintegrates according to the quality and quantity of material it gets as nourishment; that this, its nourishment—the absorption and assimilation—going on in the growing and multiplying cell, is again purely a chemical process; that, consequently, without the chemical processes, growth and development, cell multiplication could not occur; we will readily see that the chemical processes, without which life cannot be thought of for a single minute, of necessity antedate the ocular evidence of the existence of anatomical entity. We must then conclude that before anatomical changes, say for the worse, do occur, chemical changes, also for the worse, must necessarily precede. Such chemical changes need not necessarily be detectable by the microscope. Anatomical changes will only then occur when the nutrition of the organ or part of the organ has been thoroughly interfered with. Surely, because pathologico-anatomical changes cannot be detected, the existence of certain pathologicochemical changes cannot be denied. How wrong should we be were we to expect gross pathologico-anatomical changes to happen spontaneously; that, for instance, up to a second before a patient was in absolute health and in the very next second already a malignant growth, fully developed, has appeared. Observation teaches that long before the full development of a pathological condition the patients invariably have given symptoms of some sort or other which may or may not have been properly appreciated or interpreted. The microscope under such conditions might even have been consulted, but without success. During the last decades we have been taught to recognize pathological conditions only when anatomical evidence was present. Our present generations have been instilled with the idea that pathological changes must needs have an anatomical basis, although most violent and fatal cases fail to reveal anything to even the most experienced pathologist. But when ocular anatomical proofs are present, the pathological condition has already advanced too far. We have then already missed the initial, primary, formative, pre-anatomical stage. Great as are the teachings of pathological anatomy, there, nevertheless, seems to be a grain of truth in the old humoral theory which it succeeded and superseded. Without chemical changes, no life; without chemical changes anatomical changes are an impossibility. Chemical changes have begun long before anatomical changes are seen. This pre-anatomical condition cannot be tested for with the microscope; it can only be looked for with appropriate chemical manipulations, some of which only are known. We are, therefore, forced to the conclusion that every pathologico-anatomical change, traumatism excepted, *must* be preceded by pathologicochemical conditions. Such a pathologicochemical condition is organacidia gastrica.

Organacidia gastrica is a disease *sui generis*, not a symptom, having for its cause pathologicochemical conditions which consist in the abnormal presence within the stomach of organic, volatile, acrid acids. The persistence of this condition in the course of time causes the pathological condition to advance to the degree of anatomical evidence, microscopical at first, macroscopical at the end. That organacidia gastrica is a disease by itself is apparent from the facts that it has its distinct cause, its distinct symptoms and its successful treatment. The cause of organacidia gastrica is not abstract, is not hypothetical, but can, and must, be proven. Organacidia gastrica always means either absolute or only relative hypochlorhydria. It may be due either to the ingestion of a large quantity of organic acids, as contained in sauces, fruits, pickles, salads, etc.—organacidia gastrica simplex,—or the organic acids may have formed in the stomach. In this latter case the organic acids owe their presence either to mold growth—gastrosia fungosa,—or to budding, sporulating, multiplying yeast, yeast growth, zymosia gastrica, as the growth of both, molds and yeast, is accompanied with the development of organic acids.

The most prominent symptoms of organacidia gastrica are: Pain or cramps in the stomach, a gnawing sensation in the stomach, heartburn, fulness, mostly sour eructation or vomiting, dryness in the throat, thirst, frontal or supra-orbital headache, pain or rawness behind and along the sternum and pain or rawness between the shoulder blades. For an explanation of all these symptoms I refer to articles 3 and 5. Another important symptom in cases with high acidities is the increased, ravenous appetite; to use the patients' expressions, they are "good and hungry." This hunger is of a painful sort, that is, the patients feel pain unless they instantly take some food. One patient, a physician, who has since been cured and whose case was misunderstood by almost all the prominent men in our city, told me that he could not go out visiting his patients unless he had some crackers in his pockets. This brings up the question: "What is hunger?" Hunger seems to be a mild degree of pain elicited by contraction of either some part of or the entire stomach. The greater the contraction, the greater the sensation interpreted as hunger. Hunger is a painful sensation which, as from our very beginning of extra-uterine life we have learned, ceases after the introduction of food into the stomach. This, of course, is only a theory, but seems well to explain why those who have been experimenting with fasting for some days in succession, experienced no hunger after the first few hours. The explanation would be this: The contraction of the stomach, the cause of the hunger, soon gave way to relaxation, and with the relaxation the pain caused by the contraction—the hunger—ceased. This increased, ravenous appetite, of which the patients very often are very proud, must be recognized by the physician in its true light. It is a false, a pathological appetite, that the physician must learn to suppress. How often do we hear this from our patients, if, indeed, it is not the experience on our own selves: "Doctor, if I don't eat right then, when I get hungry, my appetite soon passes away." All these symptoms I have explained to be due to the presence in the stomach of the irritating, contraction producing organic acids in an undue amount. By this I mean that the organic acids are present in a relatively larger amount than is the physiological HCl. The test-breakfast examinations may or may not show hyperacidity. Therefore, organacidia gastrica must not be construed as being the synonym of hyperacidity. Nay, organacidia gastrica may as well show *hypo*-acidity, and that is the fact in very many cases. It is the natural course for organacidia gastrica to begin with hyperacidity and advance to hypo-acidity. In article 5 the table given shows hyperacidity in case 7 and a rather medium acidity in case 9; I have cases on record which show a much lower general acidity than case 9. Of course, the amount of organic acids varies with the case; in one case the organic acids may show an acidity of 60, 70 and above, and in another the acidity may be very low. But in either case the organic acids preponderate.

Organic acids are counteracted by the inorganic acids; the mineral acids decompose and dissociate the organic acids. This is no hypothesis, but a fact amply proved by experiment and the successful treatment, by myself as well as by some colleagues in New York and out of this city.

The presence of organic acids is absolutely proved by my floating method, which is fully described in articles 3 and 5. It consists essentially in floating the ether extract of chyme on a weak solution of iron. At the plane at which the two liquids come in contact a colored ring appears, the color varying with the acid. Neither the mineral acids nor the phosphates give such a ring. For the quantitative analysis of a chyme that contains free HCl as well as organic acids I use the following reagents as indicators: A supersaturated alcoholic solution of tropeolin OO for the free HCl; a $\frac{1}{2}\%$ alcoholic solution of dimethylamidoazobenzol, Töpfer's solution, for the organic acids, and a 1% alcoholic solution of phenolphthalein for the general acidity. But let us be sure that, when I say a supersaturated alcoholic solution of tropeolin, I mean just what I say; another solution of tropeolin will not do. That I so emphasize the necessity of using a supersaturated alcoholic solution of the tropeolin might appear strange; but it is a fact that a colleague, of quite some prominence in this special field of medicine, naively suggested that a tropeolin solution is a tropeolin solution and insisted that the weak, watery solution he had should act as well; of course, it did not.

As already stated, gastrosia fungosa means the presence of mold vegetation in the stomach. This mold enters the stomach through the medium of food and drink and undoubtedly also through the respiration. The presence of mold in the stomach can be proved in the stomach contents which we can obtain either by expression, aspiration or the hypodermic use of apomorphine. Mold patches of variable size can be seen floating on top of the beaker into which the chyme has been allowed to enter. The color of the mold varies with its variety. The varieties I have most often seen were of the green and dark-red types. However, mold of other colors is likewise described. In the many experiments made by me I have seen develop in the filtered chyme, in the course of time, mold varieties of many colors. The bottle containing the filtered chyme was usually an Erlenmeyer flask the neck of which was loosely packed with absorbent cotton. The flask was permitted to stand for several months. In the course of a few days the chyme in the bottle would become cloudy and, on shaking, would present the fleecy appearance of a piece of absorbent cotton, floating in fluid. Soon a fine grass-green cuticle would form on the surface which subsequently developed into a comparatively thick, tough, solid membrane. This pellicle can be lifted off the surface, entire. The under-surface is of a light color, velvety and glistening. The green color subsequently gets darker, rather powderlike, and small liquid globules are seen on the surface. Circular, white isles of another mold variety (oidium albicans?) now appear, which get larger and soon coalesce to form one solid white layer. This again is subsequently followed by a crop of a dark-gray and black variety. In the meanwhile there develops an orange-colored mold in parts of the circumference, and upon this beautiful orange appears a bright scarlet mold. In the course of a few months the entire mold pellicle would be transformed into a dark-brown powder floating on top of a liquid which is likewise of a brownish color. This brown powder, to all physical appearances, looks like ordinary soil. I state these experiments for two reasons: (1) To show that mold penetrates through filter-paper and (2) that the chyme must have contained the primary elements for the development of these many-colored mold varieties. I might also state that I have seen the green, white, orange and red mold varieties develop in the order mentioned on ordinary paste, such as is used by paperhangers.

The presence of a large quantity of mold will influence the color of the chyme. A green-colored chyme is usually due to the green mold, a chocolate-red chyme usually to the dark-red mold variety. These two colors are of especial significance and should be noted by every physician. We have been used to look upon a green-colored chyme as one containing bile, and upon a chocolate-colored chyme as one containing blood. Neither bile nor blood must ever be assumed to be present in the chyme, unless their presence is absolutely proved by proper methods. Recent articles by European investigators confirm what I have just said. How mold looks under the microscope is described in article 3. To recognize mold under the microscope one must study the pure cultures in all their phases. Take mold wherever it is found and study it under the microscope. It must be remembered that mold is a plant and has mycelium, gonidia, asci, spores, etc., and that under the microscope we may see all these parts together or only single parts. We must familiarize ourselves with the different parts of mold so that we may recognize them in any medium—chyme, blood, serum, urine, etc. I have seen mold in the urine that was interpreted as a granular cast. This raises the question: How many have written down "granular casts" for mold? Another phase of mold that should be remembered is that single sections of young mold filaments contain no granules, seem to represent only a hollow tube. Now, such single sections, seen detached, to all appearances look like crystals, for which undoubtedly they have been taken, as the occasional presence of crystals in the chyme has been mentioned by some authors. I have seen them before I had studied mold, and then also interpreted them as what they appeared to be, crystals.

In zymosia gastrica we deal with budding, growing, sporulating, multiplying yeast. The microscope shows yeast as mother- and daughter-cells, yeast forming the figure-of-eight and yeast chains. Whenever yeast is thus met with, the condition is pathological. Yeast chains or mother- and daughter-cells are not seen in the normal test-breakfast. This I have had occasion to observe more than once, when I had given to two patients of the same roll and the same water; in one patient there were yeast chains, in the other there were none.

The prognosis of uncomplicated organacidia gastrica is very favorable. But in complicated cases, a very frequent occurrence, the complications must be taken into consideration. A very frequent complication is organacidia enterica with or without insufficientia pylori.

MOUTH INFECTION, DUE TO NATURAL TEETH.*

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There are in the human mouth to-day, as has been the condition through all the centuries, malignant factors of general infection and causes of disease wholly unperceived and neglected, and thus the oral cavity has ever been and still remains a prolific source of contagion.

Medical science and its allies, ancient and modern, virtually limiting the study of the mouth, as an index to general systemic conditions, to the tongue, and naturally looking for ultimate causes of disease to inimical foods and drinks, or methods of ingestion, to so-called "malaria," to mental and physical overwork, to adverse locality, microbic atmosphere, morbid conditions of stomach, kidneys and lungs, have failed to apprehend or recognize agencies of infection, obvious, prolific and virulent in the very vestibule of human life.

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*Read, by invitation, before the Philadelphia County Medical Society, January 28, 1903.

Dentistry engrossed with its mechanics and mechanism, devoting its energies largely to repair of the teeth, has discovered nothing of the serious consequences of mouth infection upon general conditions; with magnifying glass and explorer searching for cavities of decay as its ultimate end, it has failed to discover the most important connections of the teeth in their relations to the general system.

Hypothetical as these enunciations may at first appear, they will be found, in the light of full scientific investigation, completely verified.

The statement that all erupted or exposed tooth-surface, in its natural state, is bacterially infected surface, is incontrovertible. And when it is considered that in the normal mouth, from eight to twenty years of age and later, there are twenty to thirty square inches of such surface, the momentous import of these conditions becomes at once apparent.

To conceive of the oral cavity as the "vestibule of human life" is a simile not inappropriate, for it is at this entrance that all systemic stores, commissary supplies, fuels, etc., for nutrition, are received and tested on their way to the stomach, the chief chemical laboratory and distributing center of the general system. And not only this.—it is here that the various foods, solids and liquids incorporate with the oral secretions, piped into the mouth from special glands, and the mass subjected to a process of maceration in preparation for deglutition. Engaged with these and other indispensable offices, the oral cavity is never wholly out of service, and literally, it may be said, it is never really cleansed. It is here that solid particles from the breath, saliva, food remains and other débris constantly deposit and accumulate; becoming cemented to the teeth, chiefly through inspissation of the viscid mucus perpetually oozing from many irregular glands concealed beneath the mucous membrane of the mouth. Greatly augmenting the infection from this cavity, the air commonly diverted through it, especially in mouth breathers and in sleep, becomes a purveyor of toxic emanations to the lungs, where it inevitably deposits its contagion in lung tissue or in the blood. Necessarily the subject of such conditions, this vestibular cavity with its twenty to thirty square inches of dentate surface, becomes quickly infested and infected with all manner of bacterial formations, decomposing food particles, stagnant, inspissated, septic matter from saliva, mucus and sputum; not infrequently with pus-exudation from irritated and inflamed gum margins; gaseous emanations from decaying teeth and putrescent pulp tissue; salivary calculi (tartar), nicotine and the chemical toxins which result from decomposition due to mingling of mouth secretions, excretions and food-remains, in a temperature constantly maintained at the high normal of 98° F. In this is presented a true picture of the innumerable sources of infection, inseparably connected with untreated teeth. Incredible as it may appear, these conditions obtain, not in the lower classes alone, but in general mouth conditions in high and low-born, fastidious and boor, king and peasant.

Respecting the state of the breath in ordinary expiration, Hermann Köninger, in the *Journal of Hygiene and Infectious Diseases*, summarizes some original experiments as follows:

"The author has been able to assure himself that, in an apartment where there is no appreciable current of air, a person coughing or sneezing could scatter germs to a distance of more than 7 meters (22 feet). Germs are scattered through the air by means of salivary droplets. These droplets are really microscopical balloons, having a bubble of air in the center, and remain in suspension but a short time. The dissemination or droplets with their germ-originating capabilities and tendencies is most marked during coughing and sneezing. The more pathogenic microbes the mouth contains, the greater the danger of infection. Washing the mouth has the effect of decreasing the diphtheritic and other bacilli susceptible of being detached. Placing the hand or a handkerchief over the mouth prevents the emission of droplets charged with bacilli. During a surgical operation no one present should speak. Measures may be multiplied indefinitely for prevention in connection with this important idea of scattering infected droplets in the breath."

Thus it is manifest that, with past and present conditions of mouth and teeth, infection in the oral cavity is a common heritage, and that none under existing régime can wholly escape its evil consequences. A gleam of recognition of this fact is found in the *London Lancet* of November 15, 1902. The editor says:

"The alarming increase of dental disease is beginning to attract the attention of the general public, while there are also signs that the medical profession is becoming more alive to the possibilities of dental disorders being important factors in the production of certain general diseases. Dental caries is the most prevalent disease of the human race. There is little doubt that a large number of children suffer from impoverished nutrition solely from neglected conditions of the mouth."

Experience has shown that it is not only possible but entirely practicable, through intelligent "prophylaxis treatment," successfully to combat caries in children, and at the same time keep the mouth in a good state of asepsis. An important auxiliary benefit from this treatment is found in its educating the child to intelligent self-care of the mouth, and in the relief it affords from the terrible dread and fear of the operations of dentistry, a present serious obstacle to proper professional care in all cases.

Recognition of this by physicians, to whose care children are naturally committed, and corresponding advice from them to parents or guardians would result in incalculable benefit to the teeth and not less to the general health of childhood. The suggestion frequently seen, that the dental profession can or should assume to control the diet of infants and children for the production of good teeth, is an absurdity. If the dental or medical pediatrist had the power, he would do well to give to every mother and every child a plentiful supply of healthful foods—cereals, vegetables, fruits, nuts and meats—and thus, and thus only, through dietetic means lay the foundations for good teeth. No special foods or special methods of feeding will accomplish this end. Foods that make good bone, muscle, nerve and other tissue, will likewise make good teeth.

If by "dental disorders" the *Lancet* means dental caries, which it styles "the most prevalent disease of the human race," it may be confidently questioned whether dental caries alone should be regarded "an important factor in the production of certain general diseases." Pyorrhea alveolaris, formerly styled Riggs's disease, an inflammatory condition of gum margins, pericementum, cementum and alveolar process, resulting in pus formation, and *wholly dependent on the presence of natural teeth in the mouth,* is unquestionably productive of some general diseases.

My observations lead to the confident belief that the kidneys are the organs affected by the products of this particular pyemic condition. An error quite generally accepted for fact, is the belief that pyorrhea alveolaris results from uremic poisoning. While uremia and pyorrhea may be, and often are, associated, the presence of urea in the blood is not a cause of alveolar pyorrhea; but the converse of this proposition is a true pathological condition. Uremia is a usual result of alveolar pyorrhea, due to the perpetual ingestion of mouth toxins—pus and other effete products—which are constantly and inevitably taken into the stomach because of this inflammatory condition *in the mouth.* Alveolar pyorrhea is never of systemic origin, but is wholly local and caused by the stagnant, septic accumulations *on the teeth.* These accumulations induce inflammation of the tissues at the gum margins about the affected teeth, and as the inflammatory products increase, the gums, pericementum and alveolar tissue become involved and withdraw more and more from sections of the roots, forming pockets in the alveolar process beside the roots which increase the infection and hasten loosening of the teeth. Pyorrhea is readily amenable to intelligent treatment when such treatment is instituted before destruction of the tissues has progressed to hopeless loosening of the teeth. An edentulous (toothless) mouth is never the subject of pyorrhea; and whenever the disease has developed, extraction of such affected teeth always results in speedy and complete cure. In this is clearly manifest the verity of the local origin of this disease. "The increasing prevalence of dental caries" surely cannot justly be held alone responsible as the cause of systemic disease; it is a factor, but only so far as it contributes to general mouth infection.

If my interpretation of the *Lancet* article is correct, it would imply that "children suffer from impoverished nutrition" because of caries and inability to masticate food; this presentation should be received with caution. The facts are that, with modern culinary methods, neither perfect tooth mastication nor mouth insalivation are indispensable parts of the digestive process. True it is, that free and comfortable mastication contributes greatly to the pleasures of taste and ingestion, and to that extent favors stomach digestion, but mouth mastication is an office which can be delegated, as is often done, not only without injury, but with decided benefit. For the maceration of foods in the mouth, water and other customary drinks may be substituted for saliva, without appreciable detriment; in many mouth conditions with advantage for the stomach. That saliva in the initial stages of digestion converts starch into sugar might have been a matter of more consideration before sugar entered so largely into foods and drinks as at present. Now, with a constant oversupply of saccharines, saliva, frequently vitiated and infected as it is poured into the mouth, a direct secretion by the salivary glands might, in many mouth conditions, give place to water in some form with advantage. We may regard water not simply as a food adjuvant and a diluent to the circulation, but as an integral part of nutrition, as necessary to digestion as to tissue replacement and to the maintenance of life. In this connection it seems reasonable to predict that the student of dietetics must soon broaden his field from the consideration of foods in their analytical ultimates, to embrace other and perhaps more important matters in connection with their structural compounds. The demands of tissue building are such that we seem compelled to accept that the real value of typical foods is dependent, not so much on their ultimate chemical elements, as on the value of the substance in its entirety, before the breaking up of the aqueous, vitalized compound-cells. Whilst fully aware that this may seem to conflict with the accepted physiology of digestion, it is nevertheless a theory which is found to be in accord with every-day clinical experience and with conditions yet to be considered. The indifference of the stomach to mouth mastication and insalivation is clearly expressed in numberless cases of edentulous mouths; in these the processes of digestion and assimilation go forward regardless of tooth mastication and with no apparent obstruction or derangement; and the remaining oral tissues in all cases will be found in perfect condition of health. It will yet be demonstrated that the real cause of general disease emanating from mouth and teeth is due neither to dental caries nor disability of mastication, but to the constant and perpetual infection through septic matter in foods and drinks and the inhalation of toxic emanations from the persistent and abiding infection in mouths containing natural teeth.

"When does mouth infection due to the teeth begin?" It begins with the eruption of the deciduous set and continues with increasing gravity through the period of shedding the temporary and erupting of the permanent ones, and thence on so long as the natural teeth are retained in the mouth; the most critical time being that of childhood and early youth, a period in which the mouth, under present régime, is wholly without intelligent care. Children's mouths are frequently veritable crucibles in which are generated chemical agents and compounds highly detrimental to the teeth themselves and not less to the general health of the child. Vitiated salivary and mucous secretions, bacterial placques upon the teeth, decay, retained food particles and saccharines; breaths loaded with emanations from stagnant septic matter, all at a maintained temperature of 98° F., insinuate into the circulation a constantly increasing infection, to find expression later in life in diverse pathological conditions, and often in chronic and fatal disorders. It may appear, as it commonly does, in stomach or kidneys; in lungs or nervous system; in heart, brain or skin; in any organ or tissue to which mouth toxins are directly or indirectly conveyed.

In an endeavor to limit contagion, medical interposition very properly condemns expectorating in public conveyances, on floors, sidewalks and in all frequented places. Beards, kissing and even the shaking of hands are under condemnation of the scientist.

Dr. J. H. Hirsch, of Chicago, in finely spun theory, says: "The most delicate perfume upon the hand is neither a sign of freedom from germs nor a protection, and the most refined are not free from diseases of the lungs or throat which are rapidly spread by touching the hand that has handled the handkerchief of one afflicted with a cold, catarrh or consumption. These diseases claim more than one-seventh of all the deaths. Our street-cars carry signs which forbid expectorating in them, yet passengers in these same cars may hold the hand before the mouth when they cough and cover it with germs enough to infect a thousand people."

In *American Medicine*, October 25, 1902, under "Sanitary Telephones," we read: "It is claimed that in speaking into a telephone receiver held within an inch or two of the mouth, irregular sprays of saliva (droplets) may be ejected into the mouthpiece and the drying up and subsequent blowing about of particles so ejected might cause infection."

Under the heading "Microbes in Letters" this appears: "In nine cases out of ten the envelope containing the letter is licked by the sender, as is also the stamp. Infection, therefore, may easily lurk here." If bacteriologists are correct, the beard and moustache are filled with microbes, and hence the command has gone forth in Germany that surgeons must shave. (Would it not have been better if this order had compelled the wearing of mouth masks?) Volumes might be compiled from articles relating to poisoning of atmosphere in street-cars, in school-rooms, churches, public halls, theaters, bed-chambers and homes (to which might well be added an emphatic protest against the common communion cup); but nowhere is found a sentence in regard to the malignant mouth conditions, encountered everywhere; and so the oral cavity, neglected, often wholly without care, is left perpetually to infect its individual source and to pour forth a comet-like train of contagion in every expectoration, every cough and every exhalation. Although little considered, the danger attending droplet infection, due to the ordinary septic mouth conditions, especially in close apartments, in the sick-room and even in common conversation, may well be shunned and evaded.

Where, then, shall we look for the true origin of the dreaded infection lurking in sputum, in letters, telephone receivers, on lips, in beards and in many other concealments? It is largely due to septic conditions of the natural teeth and to the stagnant toxins ever present in the oral cavity. Scientific laboratory experiments in proof of this are wholly unnecessary. Every one can apply the demonstration. Passing the finger over the labial or buccal surfaces of the teeth on rising in the morning, drawing unwaxed floss silk between the teeth, or even breathing upon the hand and applying to the nostrils, will quickly convince the most sceptical of the presence of the abounding infection in the mouth. Further evidence may be obtained by securing but the smallest particle of decomposing matter from a decayed tooth; through opening into a nerve cavity containing putrescent pulp tissue, or in gathering a minute quantity of the septic matter, often mixed with pus exudation, from about and between the larger teeth, as the molars; or, most convincingly, through examination of a freshly extracted tooth.

(To be continued.)

PSYCHOPATHIC EPIDEMICS.

By JOHN B. HUBER, A. M., M. D.,
of New York.
Assistant to the Chair of Practice in the New York University, Bellevue Medical College.

(Continued from Page 530).

Like an oasis in the desert does the name of Schlatter appear in this collection. I think Carlyle would have found in Schlatter some characteristics of the hero, particularly in that he was, so it seems to me, altogether sincere. There was in him "a great rude sincerity." I sketch his personality with sympathetic interest.

Francis Schlatter was born about 1855 in the then French province of Lorraine. He was a shoemaker. Of his early history more than this is not known. He came to this country, drifted out West and led a roving life. At one time he was confined in jail at Hot Springs, Arkansas, for vagrancy; here he behaved so well and was so much liked that when his time was up the authorities were loath to let him go. Early in 1895 he appeared in Albuquerque, New Mexico, and declared himself to be the Messiah. He had been twice called of God, he said, and had resisted. At the third call he obeyed, left his shoemaker's bench and went out into the mountains, bareheaded and barefooted, and fasted many days before returning to begin healing. He is said to have effected a number of cures that were considered remarkable before leaving Albuquerque for Denver, to which city he came in August, 1895. Here he received great crowds of people (about two hundred thousand in less than three months), who had been attracted by reports of his marvelous power to heal the sick. He claimed that his gift of healing came direct from God. The laying on of his hands, the pressure of his hand, his touch were the only means he employed. It seems that he possessed remarkable psychical powers over those with whom he came in contact. His fame spread rapidly until pilgrims came from all parts of the West to be treated by him. Many believed that he marked the second coming. Soon the numbers were so great that he could not personally meet them all. So he gave out that, if the handkerchiefs of those who could not reach him or come to him were taken to him, he would bless these handkerchiefs; and this would be as effectual as his personally touching the patients.

He is described as having been in physique a most powerful man. He was not large, but wonderfully broad across the shoulders. Nevertheless, his chest was not fleshy, but quite lean. Shaggy-haired, blue-eyed, he stood dressed in a leather wamus, such as one often sees butchers wear while at work. He wore coarse brown corduroy pantaloons, a gray flannel shirt and a pair of very heavy brogan shoes. The emotional compared him in features to Jesus Christ. He invariably refused compensation for his services. He would take no money whatever. "The Father will care for me," he stated, with genuine simplicity. An enterprising Chicagoan offered him five thousand dollars to come to Chicago and was amazed to be refused. "Had you offered five millions," said a devoted friend of Schlatter, "it would have been the same." His mail in one day consisted of more than two thousand letters; those containing money were all returned to the writers.

A man evidently drunk appeared one day in a long line of people which had formed to be treated. Schlatter, usually meekness itself, repulsed him and pushed him violently from the line, saying "nein" to him. A moment after he said: "The man hath a devil." A little girl asked him in an artless treble: "Mister, couldn't you do anything for the poor man?" "No, my child," said he, gently, "in these latter days devils are cast out by the power of Beelzebub. I have only the power of my Father." Evidently there was something "in the great, rude heart of the man" to which this drunkard was repugnant.

On the night of November 14, 1895, Schlatter disappeared mysteriously, whence no one could or would tell. He is said to have left a note in his room in the cottage of Mr. Fox, with whom he had stayed while in Denver, stating simply: "My mission is finished. The Father takes me away." He took no money with him. He was to have appeared before the United States Commissioner as witness against certain "blessed" handkerchief fakirs, and the fear of becoming entangled in the court proceedings was considered the real reason for his disappearance. He seems to have grown restless under the increasing excitement and the swelling crowds which had grown beyond his control. No doubt he feared an untoward denouement. A subpœna was issued for his immediate appearance as a defaulting witness. But he could not be found. He had hosts of sympathizers, some of whom, no doubt, concealed him. General belief in his honesty, his power and his sincerity was very great, and, had his imprisonment been attempted, the authorities would certainly have been interfered with.

Thousands flocked about Mr. Fox's deserted cottage. The condition of the disappointed sick who came from a distance was pitiful. Human nature does not seem to have changed much since the divinest of men appeared among us twenty centuries ago. Within an hour, at one fell blow, faith in Schlatter seems to have been destroyed. Many among those who had most fervently believed in him almost in a trice became angry and vindictive toward him. The idea of his divinity was scouted contemptuously. He was called "the fraud." "It was high time the United States officers should take him to jail." "He was nothing but a miserable cobbler, after all."

He was thought to be wandering over the hills about Denver. Although the entire country was searched, nothing more was seen of him until December 30, 1895, when he was discovered in an obscure little Mexican settlement about eighty miles from Albuquerque. He immediately disappeared again, saying that he was called to Central America. After that time nothing was heard of him up to June 7, 1897, when it was declared that his white and glistening bones had been found in the foothills of the Sierra Madre, in Mexico. It was said that he had been fasting and had starved to death; that his inscribed Bible, his marked saddle, his copper rod and a package of his letters were about these bones. This may have been the manner of his death. On the other hand, the account may have been altogether fictitious. At any rate, he has not been seen since then, although many pretenders to his name and his personality have appeared.

I do not think that Schlatter was consciously a charlatan. I think he believed thoroughly that he had a God-appointed mission. He was undoubtedly insane. But he was so in the way that Peter the Hermit, or Joan of Arc, were insane. Among those whose illnesses were of a fundamentally psychical nature he did, no doubt, heal many, at least temporarily. Of course, his power was exaggerated. Stories of cures were sure to be amplified and to multiply as they went abroad. That there was nothing miraculous in the power he exhibited is evident to every medical man. But he was no doubt as much a victim of the delusion that such power was miraculous as were those who believed in him. That his influence was, on the whole, overwhelmingly pernicious there can be no doubt. The account of his death here set forth is not improbable. Suicide by starvation in a wilderness would not seem unlikely from a consideration of his character and his many hallucinations before and after "voices" impelled him to leave his shoemaker's bench to go to Denver.

On March 11, 1900, the half-page advertisement appeared in many newspapers setting forth the wonderful power of Francis Truth. Truth was not the man's real name, but was assumed as indicating the chief trait of his mellow character. There is a portrait of Truth gazing calmly upward, as one in the confidence of the Infinite. Above is Truth's Temple of Divine Healing in Boston. To the right are the lame, the halt and the blind, who, in great numbers, are coming to the Temple. To the left are those who have come from seeing Truth. There is no sickness, no lameness among them now. They are happy, and they are felicitating one another. Below the portrait are represented the scores of stenographers who are busy attending to Truth's heavy mail, which has been sent him by the suffering and the afflicted. Truth states: "I have cured every disease known to man. Through me He has thought wise to rejuvenate the power of divine healing after it has lain dormant for nearly two thousand years. Perhaps I merited it. I have always led a good Christian life," etc. An enthusiast states in this advertisement: "What a busy man Francis Truth is. The sacred power of divine healing which has been entrusted to him—to one man among the many billions of men—is a mission for the public weal that gives him little time for the society of his wife and baby, whom he loves devotedly," etc.

Early in 1900 "Truth" was at work on a salary of some twenty dollars a week. He looked about to see how he could better his condition. No doubt reports of the large profits that were being made by medical charlatans stimulated his imagination. He set up an establishment of his own. Within a few weeks his enterprise assumed the proportions indicated in the advertisement I have reviewed. (Half-page advertisements, by the way, are expensive.) Very shortly afterward he was arrested on the charge of using the mails for fraudulent purposes. He pleaded not guilty and was released on bail. His case came up for trial on July 10, 1900. He retracted his former plea and pleaded guilty. On five charges he was fined the maximum penalty, $500 each. He paid the fines, $2500 in all. He could afford it. Between the times of his arrest and of his pleading guilty 32,600 letters directed to him, about all of which contained money, accumulated in the post-office. They were each one returned to their senders.

There is a system called osteopathy which just now is rather rife. It has been originated by one so-called "Dr." Still, of Missouri. According to Still, all diseases are due to some deformity or displacement of one or more bones of the body. "Man is like other machines," states a descriptive pamphlet, "in that every part of the mechanism must be in its proper place, performing its own peculiar work in order to bring about health. If any portion be out of place, disease will result. As the osteopath views disease as due to a mechanical defect, he goes to work as a skilful engineer, carefully examining his machine to find out the cause of the difficulty, locates the trouble by his thorough understanding of its mechanical workings and by skilful manipulating, peculiar to his system, removes the cause." The following statement is by long odds the truest in the pamphlet: "Take the average man of to-day; go through the whole category of subjects with which he is brought into daily contact, and you will find nothing with which he is so deplorably ignorant as with his own body." "Not so with the osteopath," goes on the pamphlet, "he must know his anatomy and physiology perfectly and must understand thoroughly the chemistry of the human body." Why, then, should these people dread examinations as a tramp dreads water? Probably not a single one among all these people could pass a decent examination in these subjects. They have bitterly contended in various legislatures, as they have lately been contending in Albany, against the passing of laws which would compel them to take State examinations in them, although they pretend to know them with knowledge transcendent. Cure by osteopathy, then, of cancer, typhoid, diphtheria, no matter what disease, consists in correcting the condition or the position of an offending bone. It is generally one of the vertebræ which is the culprit. This requires a long course of treatment "by massage." Most absurd, all this—and infinitely worse than absurd. Nevertheless, we find these ignorant tricksters importuning our legislatures, and in some instances actually receiving special legislative license. They lately bade fair to achieve such a result in this Empire State of ours, and almost succeeded in doing so.

Experience has taught me not to expect to review the pamphlet from which I take these statements without coming upon attempts to make sacred literature influential in behalf of this system. "Much good," it is stated, "can come out of Missouri as well as Nazareth," "The founder, Dr. Still, ostracized by the members of his own profession, was all that appealed to humanity. God speed the day when the Science shall be better known." The following falsehood is characteristic of pamphlets of this sort: "The science of osteopathy is recognized by the most intelligent of our land, and some of the most learned of the medical profession have seen fit to adopt its principles and practice."

I now present without detail the following: Some time ago an enterprising genius (a lurking admiration for whom I have not been able to banish from my mind) prepared mud-baths for his patients. He taught that the Scriptures tell us we are dust; mud is soaked dust—therefore it is appropriate for us to become saturated with this element. He had many followers and accumulated a goodly fortune.

The notorious George Jacob Schweinfurth was for a number of years the spiritual director of a communist society that rejected the marriage ceremony. Headquarters were at Rockford, Ill., with branches in five other cities. Latterly, however, the enthusiasts could not stand the pressure of the world's disapproval, and the experiment was abandoned. Schweinfurth then became a Christian Scientist.

Weltmerism is a mode of "magnetic healing" originated in Pennsylvania. Weltmer treats absently, and we are assured that he has in this manner cured more than fifty thousand people.

The Reverend DeWitt Talmage Van Doren, of Norwalk, Conn., diagnosticates disease by "simply placing the palm of the patient's right hand against his own ear." A telephonic communication is thus established, by which he is able to listen to the circulation of the blood and the flow of nervous energy. By this simple device he can locate and understand any ailment. Thought transference and thought influence accomplish the cure.

In Paris there is the "pigeon cure," which is employed by persons who believe that the blood of a freshly killed pigeon is a remedy for certain maladies, e. g., influenza or meningitis. The head of the patient is shaved, then the breast of the living pigeon is ripped open by the "operator" and the warm and bleeding carcass applied to the bared skull. "The believers in this practice imagine that all fever is drawn out of the body by the hot life-blood and the quivering flesh of the pigeon."

I mention now the names only of the Fire Baptized Holiness Association; the "Reverend" (so-called) Charles F. McLean and many others who have claimed to be Schlatter come to life again; Mrs. Helen Milmans, who has abjured Christian Science and who now conducts an enterprise of her own; the Peculiar People; the Holiness Society, of West Virginia; the cure in Maryland "by saying words"; the Pennsylvania Hexen Charms, the metaphysical healers, the mind curists, the viticulturists, the somatotherapists, the magnetic healers, the phenopathists, the sun-curists, the medical clairvoyants, the esoteric vibrationists, the occultists, the venopathists, the psychic scientists; those who furnish Astrological Health Guides; those who use or abuse the manipulations of hypnotism; those who claim the power to concentrate the magnetism of the air and to excite the vital fluids "by arousing the proper mental vibrations," or by some equally lucid and demonstrable procedure; those who advertise magnetic cups and positive and negative powders; those who treat absently by outputs of psychical force; "colleges of fine forces"; "psychical research companies," which offer diplomas and degrees for a three weeks' course of study or the reading of a book, etc., etc., ad infinitum.

On reviewing these data a number of considerations present themselves.

It is natural to inquire how valid are the claims of irregular practitioners to have achieved marvelous cures.

Some time ago I made an investigation of the claims of Christian Science "healers" which were set forth in the *New York Medical News*. After much labor and after questioning a great many I was able to submit the histories of twenty people who considered that they had been "healed in Christian Science." These cases were offered me by their leaders. They were looked upon as remarkable cures. Their failures I had no opportunity to examine. What was remarkable to me was the vast disproportion between the claims of the "healers" and the results of my investigation.

To be specific: I had heard of cases of yellow fever, locomotor ataxia, cancer and phthisis in patients that were well and happy after having gone through fearful ordeals at the hands of ordinary physicians; these patients I was not permitted to examine. Mrs. Eddy stated: "I healed consumption in its last stages, the lungs being mostly consumed." "I healed carious bones which could be dented with the finger; I healed them while the doctors were preparing their instruments for operation." "I healed in one visit a cancer that had so eaten the flesh of the neck as to expose the jugular vein so that it stood out like a cord." Judge Septimus J. Hanna, Mrs. Eddy's counsel, has issued a statement to the effect that "cancer, malignant tumor, consumption, broken bones and broken tissues in numerous instances have been healed through the power of Christian Science prayer without the assistance of any material means whatever." Mr. Carol Norton has publicly announced that Christian Science has cured "locomotor ataxia, skin and bone diseases, palsy, softening of the brain, paresis, consumption, tumor, Bright's disease," etc., etc. Judge William D. Ewing has publicly stated that "under the power of Christian Science the lame do walk and the blind do see."

I did not in my investigation come upon a single case of these diseases which I have enumerated. Not one—from yellow fever down to blindness.

Then, we may ask, what attitude should the law take toward these "healers" and their congeners? Certain it is that drastic measures would arouse the emotional among our public to their defence. However, three observations may be made: It is, I understand, a principle of law that a person undertaking any duty must possess skill and knowledge competent for its successful discharge. Again, the State should conserve the rights of its minors, especially of sick children who are unable to choose a physician for themselves. Again, the rational portion of the community should be protected against the spread of contagions by ignorant fanatics.

There are a number of factors which can only be suggested in this paper; indeed, adequate consideration of any one of these might in itself well take up a paper, or a volume, for that matter.

To what degree, for instance, are the peculiar mental states of these devotees dependent upon physical conditions? It is manifest that mental states cannot be entirely divorced from physical states. The mind is at least conditioned upon the health of the material body. Undoubtedly Schlatter, after he had starved himself, in his mind's eye saw visions. It was so with Luther, who, in his nightly vigils, saw the devil. And on one occasion, so we are informed, the apparition was sufficiently realistic for Luther to shy his ink-well at it.

Then there is the subject of medical miracles. Of what scientific value, for instance, are the manifold accounts of miraculous cures which the Christian churches have through many centuries handed down? To what extent, indeed, may the mind dominate the body? How far may emotional states—faith or despair—influence one way or the other the structure of a bloodcorpuscle, the potency of a drop of lymph, the behavior of an excretory cell? All this seems simple enough; yet, depending as it does upon the nature of mind and matter, it is, in the last analysis, impossible of solution. We can, at best, reach only an approximate estimate. For no one has ever, so far as we know, been able to explain conclusively the nature of mind, and what matter is; these ultimates have thus far eluded successful exposition.

Then we might ask to what extent these devotees are sane. The question has immense medicolegal importance, for the disposition of large legacies has repeatedly depended upon its solution. Yet how very difficult the question is; for when our alienists are so put to it to define insanity, how much harder is it to draw a borderline between healthful and unhealthful mental states.

Other factors which make for the development of these psychopathic epidemics are: The activity of a leader who is either unscrupulous or of abnormal mentality, or both. Then there is the vast preponderance of women in them, no doubt because the feminine nature is much the more emotional. Then there is the assumption of religion. Eddyism and like hypocrisies attract very many honest and devout people who are under the impression that these movements must be good and wholesome because they invite adherence in the name of religion.

But by far the most potent influence is that inherent in imitation, suggestion and social excitement. Through many centuries has the human mind undergone evolution, until the present splendid average of intellection has been reached. Yet, under the influence exerted by these three factors, the highest and latest developed faculties, those dominating reason, memory, association, judgment and the like, are paralyzed, and the individual becomes subservient to the lower and more primitive centers; he then becomes unreasoning, passionate, impulsive, instinctive and uncontrollably emotional. And these factors bring their hypnosis to bear not only upon the dull and stupid, but also upon many well-cultivated minds.

The subject is indeed a most pregnant one, and to the student of mankind there can be no more interesting study. The works of LeBon, Podmore, Jastrow, Patrick and others are most inviting. From their perusal one may comprehend the spread of many extraordinary movements in times other than our own—the crusades instigated by Peter the Hermit; the children's crusades; the dancing manias of the Middle Ages; the witch persecutions; the tulip mania in Holland; the French Revolution; epidemic religious revivals in all countries, notably those in America in the time of the elder Edwards; the South Sea bubble; the Mississippi scheme, and the countless like phenomena with which the pages of history teem.

And the reader of these works will then understand, I believe, how it has come to pass in our day that a Simpson can relieve his packed audiences of their millions, how a Sanford or a Dowie can degrade the multitudes subject to their baneful influence, how a "Truth" can gull his thousands, and how Eddyism has come to be the most pernicious and the most prodigious social and religious falsehood of our generation.

Observations Concerning Stagnation-Hemorrhages; in Particular as the Result of an Epileptic Attack.—K. Pichler (*Zentralb. für innere Med.*, January 24, 1903) reviews the literature cncerning hemorrhages resulting from sudden venous stagnation, many of which have been of traumatic origin. Some cases have been reported, however, in which the hemorrhages did not occur from trauma, but from vomiting and the like, the hemorrhages being extremely widespread. He describes an instance in which a young man, apparently previously well, had what was probably an epileptic attack while sleeping. **After this attack he was found to have small hemorrhages, punctiform or as large as peas, scattered over the mucous membrane of the mouth, throat, larynx and nasal cavities, in the ear and over the skin of he face and neck, to a sharply limited horizontal line at the level of the fourth cervical vertebra.** Below this there were only a few scattered points. There were many hemorrhages in the conjunctiva. The bleeding had apparently been been due to the increased tension during the epileptic attack. [D. L. E.]

Health Reports.

Health Reports.—The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon-General, U. S. Public Health and Marine-Hospital Service, during the week ending March 21, 1903:

SMALLPOX—United States.

ALABAMA:	Mobile	Mar. 7-14	4	
CALIFORNIA:	Berkeley	Mar. 4-11	1	
	Los Angeles	Feb. 28-Mar. 7.	5	
	Sacramento	Feb. 28-Mar. 7	1	
	San Francisco	Mar. 1-8	8	
COLORADO:	Denver	Feb. 28-Mar. 7	17	
DISTRICT OF COLUMBIA:	Washington	Mar. 7-14	2	
ILLINOIS:	Chicago	Mar. 7-14	8	2
INDIANA:	Elwood	Mar. 8-15	1	
	Evansville	Mar. 7-14	2	
IOWA:	Davenport	Mar. 7-14	8	
	Dubuque	Mar. 7-14	1	
KANSAS:	Douglas County	Feb. 1-28	1	
MAINE:	Biddeford	Feb. 28-Mar 14	8	
MARYLAND:	Baltimore	Mar. 7-14	5	
MASSACHUSETTS:	Boston	Mar. 7-14	1	
	Fall River	Mar. 7-14	3	
	New Bedford	Mar. 6	1	
	New Bedford	Mar. 7-14	1	
MICHIGAN:	Detroit	Mar. 7-14	17	
	Grand Rapids	Feb. 28-Mar. 14	24	
	Port Huron	Mar. 7-14	3	
MISSOURI:	St. Louis	Mar. 8-15	4	
NEBRASKA:	Omaha	Mar. 7-14	2	
NEW HAMPSHIRE:	Manchester	Feb. 28-Mar. 14	16	
NEW JERSEY:	Camden	Mar. 7-14	1	
	Jersey City	Mar. 8-15	3	
	Newark	Mar. 7-14	1	
NEW YORK:	Buffalo	Mar. 7-14	2	
	New York	Mar. 7-14	2	
OHIO:	Cincinnati	Mar. 6-13	10	
	Cleveland	Mar. 7-14	1	
	Dayton	Mar. 7-14	7	2
PENNSYLVANIA:	Altoona	Mar. 7-14	1	
	Philadelphia	Mar. 7-14	44	5
	Pittsburg	Mar. 7-14	48	2
SOUTH CAROLINA:	Charleston	Mar. 7-14	3	
	Greenville	Feb. 28-Mar. 7	2	
TENNESSEE:	Johnson City	Feb. 28-Mar. 7	14	
	Memphis	Mar. 7-14	2	
	Nashville	Mar. 7-14	1	
WASHINGTON:	Colfax	Mar. 1	Present	
WISCONSIN:	Greenbay	Mar. 8-15	3	
	Milwaukee	Mar. 7-14	2	

SMALLPOX—Insular.

PHILIPPINE ISLANDS:	Manilla	Jan. 3	2	

SMALLPOX—Foreign.

AUSTRIA:	Prague	Feb. 14-28	20	
BELGIUM:	Brussels	Feb. 14-28		9
BRAZIL:	Pernambuco	Jan. 15-31		10
	Rio de Janeiro	Feb. 5-12		8
CANADA:	St. John, N. B.	Mar. 13	1	
CHILE:	Antofagasta	Jan. 1-31		13
ECUADOR:	Guayaquil	Feb. 7-21		1
FRANCE:	Rheims	Feb. 8-15	2	
	Reubaix	Feb. 1-28		6
GREAT BRITAIN:	Birmingham	Feb. 21-28	11	
	Cardiff	Jan. 25-31	1	
	Glasgow	Feb. 27-Mar. 6		1
	Leeds	Feb. 21-28	9	
	Liverpool	To Feb. 28	60	7
	Nottingham	Feb. 14-21	4	
	Sheffield	Feb. 28-Mar. 7	2	
INDIA:	Bombay	Feb. 10-17		36
	Calcutta	Feb. 7-14		2
	Karachi	Feb. 8-15	1	
	Madras	Jan. 31-Feb. 6		1
ITALY:	Palermo	Feb. 21-28	5	
MEXICO:	City of Mexico	Feb. 22-Mar. 1	7	4
	Vera Cruz	Feb. 28-Mar. 7	1	
RUSSIA:	Moscow	Feb. 7-21	11	2
	Odessa	Feb. 14-28		4
	St. Petersburg	Feb. 14-28	100	9
STRAITS SETTLEMENTS:	Singapore	Jan. 17-31		10

YELLOW FEVER.

BRAZIL:	Rio de Janeiro	Feb. 5-12		40
COLOMBIA:	Panama	Feb. 26-Mar .5	2	1
MEXICO:	Vera Cruz	Feb. 28-Mar. 14	7	4

CHOLERA—Insular.

PHILIPPINE ISLANDS:	Manila	Dec. 27-Jan. 31	6	4
	Provinces	Dec. 27-Jan. 31	1985	1436

PLAGUE—Insular.

PHILIPPINE ISLANDS:	Manila	Dec. 27-Jan. 3		3

PLAGUE—Foreign.

INDIA:	Bombay	Feb. 10-17		888
	Calcutta	Feb. 7-14		171
	Karachi	Feb. 8-15	23	19
MEXICO:	Mazatlan	To Mar. 13	313	255
	Oso	To Feb. 15	1	

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See Advertising Page 8

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Exophthalmic Goiter.—It is said that this condition was recognized by Morgagni in 1761 and by C. H. Parry, an Englishman, in 1786. Basedow, of Magdeburg, described the disease in 1840, and the Germans call it Basedow's disease. The English call it Graves's disease, Graves having published his account of the malady in 1835. Morbo di Flagani is the term used in Italy, from Flagani, an early Italian observer. The best name is exophthalmic goiter. The cause of exophthalmic goiter is not known. The blood, the heart, the cerebral cortex and the sympathetic nervous system have been cited by various investigators as the origin of the disease. Others believe it to depend on faulty lymphatic circulation or on intestinal intoxication. That the symptoms are produced by an increased injection into the circulation of the internal secretion of the gland is supported by clinical and experimental data. Strange to relate, thus far no specific microorganism has been described.

The earliest therapeutic efforts were founded on the hypothesis that the condition was the result of an anemia or a chlorosis, hence the administration of iron and quinine. Electricity, balneotherapy, hydrotherapy, cardiac sedatives, vasomotor constrictors, nervous sedatives, intestinal antiseptics and alteratives have been advocated by various clinicians with various theories. Bloodletting, local massage, injections into the gland and the administration of potassium iodide and thyroid extract are properly condemned as absolutely useless or distinctly harmful. Perhaps most physicians at the present time rely on one of three drugs, sodium phosphate, extract of thymus gland or extract of suprarenal gland.

Medical treatment has been notoriously impotent in exophthalmic goiter, yet the disease has been an unsuccessful but increasingly formidable candidate for surgical intervention since 1880, when Tillaux performed the first operation for this malady. In 1894 Mannheimer collected 42 cases which had been subjected to operation; in 1895 Heydenrich collected 61 cases, and in 1896 Staar collected 190 cases. During the last few years operations have been much more frequent. Ehrhardt collected 230 cases with 68% cured or greatly improved. Schultz collected 319 cases with 79% cured or improved. Kocher has operated upon 59 cases with cure or great improvement in 90%.

The operations employed for exophthalmic goiter are exothyropexy (Poncet) or simple exposure of the gland, resection of the cervical sympathetic ganglia (Jaboulay), ligation of three of the thyroid arteries (Kocher) and partial extirpation, which we believe to be the procedure of choice. Huntington, in the January *Annals of Surgery*, states that argument as to the legitimacy of surgical therapy in Basedow's disease is unnecessary, that the transient relief attending protracted efforts at medical and electrical treatment is generally admitted, and that it is surprising that competent observers should persist in attempts at treatment that are unsatisfactory and disheartening, advising radical measures as a last resort. Kocher believes that all cases of exophthalmic goiter should be operated upon. In a report of four cases successfully treated by partial extirpation, Huntington describes a method of regional anesthesia which he employed and which consists in exposing and cocainizing the superficial cervical nerve along the posterior border of the sternomastoid muscle at the level of the thyroid cartilage.

The Value of Nonalbuminous Nitrogenous Food.—For many years it has been taught that nonalbuminous nitrogenous foods are of little value as nutriment. On the basis of apparently conclusive work, it has been usually considered that these foods act chiefly as stimulants to the digestive tract, and possibly also to the excretory organs; but that they have little value as producers of tissue. In recent years there has been a considerable study of the possible nutritive value of the digestive products of albumin that have passed beyond the peptone stage, viz., leucin, tyrosin and a series of other products of proteolysis; and the conclusions generally reached are that these substances have no tissue-producing value and, at most, yield a comparatively small amount of energy for the daily work of the body.

If this were true, there would undoubtedly be a large waste of material in the organism and also in artificially digested dietetic preparations. Drs. Zunz, Cohnheim, Kutscher and Zeemann and a number of other investigators have demonstrated clearly that a very large proportion of albuminous food passes beyond the peptone stage in the process of digestion. A contribution of a great deal of interest in this connection, and one that may prove to be of considerable practical importance, has just been made by Loewi, who has adopted a new method of studying the question. He subjected pancreas to autodigestion and administered to a dog the mixed products of this digestion, biuret reaction being absent and all nitrogenous substances being, consequently, no longer present as albumins. He found it very difficult at first to administer this mixture without causing serious digestive disturbances, but ultimately he was able to give it without any other form of nitrogen, and to maintain the animal in general nutritive equilibrium as well as in nitrogen equilibrium and even to cause the animal to put on tissue.

This work, if confirmed, definitely indicates that nonalbuminous nitrogenous substances are capable of preventing a tissue loss and even of causing a gain in tissue. Meats produce this result more readily than do nonalbuminous substances, but the difference is not extremely striking. Loewi also finds that the caloric value of the nonalbuminous nitrogenous products of digestion is much higher than it has been considered to be, and that they therefore yield more energy than they have been thought to yield.

The author gives a critical discussion of the literature concerning the question, and concludes that it is probable that nearly or quite all the nitrogenous food that we absorb is absorbed in nonalbuminous form. He believes that it is carried, in combination with "combining bodies" of a character similar to those postulated in Ehrlich's theory of immunity, through the bloodstream to the cells, and that the cells then build up albumins of their own specific kind from these end-products of digestion. In case Loewi's views are found to be correct, they will modify a number of points in the prevalent teaching of dietetics.

The Panama Canal.—The new Panama Canal will offer a splendid opportunity for the activities of the Society for the Study of Tropical Diseases which has just been organized in Philadelphia. We should like to commend this great project to the notice of the officers of that society. It seems probable now that the canal will be pushed ahead in the near future by the United States Government, and the announcement has already been made that the sanitarians are to go in advance of the engineers in preparing for that great work. The problem is one that is unexampled in importance and opportunity. It will be the greatest field yet offered to the sanitarians to prove their efficiency and to confer a great benefit upon civilization.

In the light of what has been accomplished in Cuba by American scientists, it is not too much to expect that this new problem will not be too great for the energies and skill of our sanitary experts. We do not feel competent within these narrow limits to offer practical suggestions, but we can at least call attention to the fact that the reputation and skill of our experts are to be put to the test. The work will be followed not only with keen interest but also with sharp criticism. It will not do to allow the isthmus of Panama to remain a hotbed of tropical diseases during the progress of this great work. We trust the new Philadelphia Society will see its way clear to profit by this opportunity.

Dr. Patrick Manson, in a recent address in London, spoke of some of the problems involved. He suggested an international commission to act for the prevention of disease, and especially to prevent its wide dissemination. While the co-operation of specialists from other countries should be heartily welcomed, the fact remains that the responsibility will be largely on our own Government. Not only must the country be made as sanitary as possible, but means must be adopted to prevent the isthmus from becoming a focus for the dissemination of disease. Thousands of laborers—probably many of them Asiatics—will be employed. They can export yellow fever, and they can import plague. In fact, they might be the means of introducing yellow fever into regions of the globe where it has never prevailed within the historic period. The canal will not only be a new route for commerce, but it will also be a new route for disease. Pestilence always follows on the heels of trade.

We merely allude here to some of the problems involved. The alert minds of our officials will doubtless not ignore these problems, but they will need all the light they can obtain. Some of these problems must be solved before a spadeful of earth is turned.

Stamping Out Plague in San Francisco.—The last issue of the Public Health Reports furnishes gratifying evidence of the energetic work which is being done in San Francisco by both the local authorities and the officers of the Marine-Hospital Service. The crusade is being waged by a vigorous and repeated house-to-house surveillance in order to prevent overcrowding of inmates in tenement and lodging places; the sick are inspected daily, the bodies of the dead are carefully examined, and autopsies are insisted upon in doubtful cases in order that no case of plague escape detection. Throughout Chinatown, the population of which is about 15,000, a war of extermination has been waged upon rats by means of traps and poisons, and the same method is also plyed at some of the wharves. The last case of plague was reported December 11, 1902, and the last infected rat was found December 8, 1902. The bodies of all rats are examined bacteriologically, and all of those caught since December 8, of last year, have been found free from the disease. Besides the measures of preventing overcrowding, and thorough medical inspection, the Chinese quarter has been repeatedly cleaned, disinfected, and all unsanitary places, such as closets, cellars, etc., have been carefully limed. The disappearance of the epidemic is a gratifying evidence of the thoroughness with which the authorities have prosecuted their work. It is to be hoped that there will be no cessation of these efforts, notwithstanding the apparent temporary disappearance of the scourge.

Hydrophobia in Children.—The doctrine that hydrophobia is a disease of the imagination is refuted with great force by the fact that it occurs both in children and in the lower animals, and that it is rapidly fatal in both. Even if this were not so, the fact that the disease is rapidly fatal in the adult ought to convince even a Philadelphia coroner that it is something more than a disease of the imagination, for diseases of the imagination rarely, if ever, kill. In fact, we do not at this writing recall a single instance.

The truth of these facts is painfully brought home by the recent death of the young son of a New York physician from rabies. The case seems to have been an unequivocal one, and the members of the profession everywhere will sympathize deeply with the bereaved father. He has lost his child from an affection which has always been a peculiarly horrifying one, but one which modern science has done much to rob of its terrors. It seems that in this particular case the treatment according to the methods of Pasteur was tried but failed. Inoculations from the body of the rabid dog gave prompt results in rabbits.

From a case so painful, and so adapted to draw the sympathies of our readers, we have felt it justifiable, in the cause both of science and humanity, to point to the only logical conclusion—a conclusion that seems to require to be illustrated with amazing frequency. That conclusion, of course, is that hydrophobia is not only a disease, but one of the most malignant infections that can assail mankind. And yet in Philadelphia we have a coroner who has abolished hydrophobia by his official fiat!

The Temperance Movement in Russia.—In connection with the present agitation in and out of the Legislative Assemblies to fight intemperance by the enactment of laws, it may be interesting and instructive to note the effect of such laws in Russia. Some seven years ago the Russian Government undertook to restrict drunkenness by the establishment of a government monopoly of the sale of intoxicating liquors. Private saloons (*kabaki*) were abolished, and taverns owned and controlled exclusively by the government substituted; the sale of strong drinks was restricted, and the price raised; habitual drunkards, intoxicated persons and minors were denied the privilege of obtaining liquor. Beneficial results were confidently expected, and the battle with intemperance looked upon as half won.

That these expectations were not in the least realized is evident from the statistics collated by Prof. Chodsky. It appears that, in the 35 districts in which the monopoly has been in operation, intemperance has actually increased, and the progressive increase is maintained. Instead of 0.91 of a gallon per capita prior to the introduction of the monopoly system, the consumption has increased to 1.05 of a gallon. The expenditure per capita has also increased from 2.42 roubles to 3 roubles. Other effects were the increased consumption of liquor at the homes, the women and even children participating in the practice; the enormous increase in the number of speak-easies and increase of drunkenness on the streets and public places. In a word, intemperance has been transferred from the saloons into the homes and the streets, and far from being under control was actually placed beyond the possibility of direct supervision. Human nature is the same, no matter what tongue it speaks, and what has taken place in Russia has occurred and is occurring in our own towns and cities in which local option or prohibition has been introduced. It is well to bear in mind that laws do not improve morals, but laws may make criminals.

The Nelk Case.—The trial of young Nelk in this city a few days ago for the murder of his mother, does not appear to have been of particular significance from the medicolegal standpoint. Nelk killed his mother in cold blood with a hatchet, his motive being to obtain money. With the money thus secured he went off on a spree, leaving a paper pinned to the wall avowing his deed. The motive and the method of the crime both seem inadequate to the minds of ordinarily normal persons to explain the deed. Arrest and conviction were inevitable. Judgment and execution could be but swift and sure.

A rational man, it is argued, would have been incapable of such an unnatural crime for such a sordid and inadequate motive. Herein lies a *non-sequitur.*

It is a principle of law—and a good principle—that the extreme atrocity of a deed is no proof *per se* that the perpetrator is of unsound mind. Nevertheless, there is a tendency on the part of some academic casuists to reason from the quality of a deed to the moral accountability of the actor. By such a process of reasoning all practical ethics would fall to the ground. What is impossible for one man is quite possible for another. The very idea of crime presupposes that criminal acts are out of the ordinary; they are not the deeds of the average individual, but of the occasional malefactor. If they were not *extra*-ordinary, all the members of society would be criminals and at war with one another. Society would be impossible.

The tests for responsibility must—or should—rest upon the scientific principles of psychiatry. If the prisoner does not present the well-recognized symptoms of mental alienation (apart from the mere *quality* of his act), he should be accounted sane and responsible. According to this standard, the case of Nelk failed to satisfy the court and jury that the accused man was insane. The defence was ably presented and, we understand, was based on the asseveration of dementia præcox. This was a somewhat novel defence, for dementia præcox is a yet somewhat novel disease. We do not recall that it has ever before (at least in this city) been made the ground for defence in a criminal trial. To this extent, and to this only, did the case present any novel features.

Mr. Hutchinson in India.—We learn from the *Indian Medical Record,* under date of February 25, that Mr. Jonathan Hutchinson had just delivered in Calcutta his lecture on fish and leprosy. The *Record* prints an abstract of the lecture; and any one who is familiar with Mr. Hutchinson's logic and rhetoric will recognize it at once. In fact, it is very much like the things which this British surgeon has for a long while been saying about fish and leprosy. Before he left home for India, he published one of his characteristic papers in the *Polyclinic* for January, 1903, and his Calcutta lecture is a repetition of part of this paper almost verbatim.

Mr. Hutchinson received no more encouragement from his hearers in Calcutta than he usually does elsewhere. The Anglo-Indian doctors disagreed with him by a large majority. But this makes no difference to Mr. Hutchinson. He is serene in his confidence in his theory that leprosy is caused by a fish-diet, and apparently he has gone to India fully persuaded that he can solve this problem in that vast country off-hand. The spectacle of Mr. Hutchinson peregrinating through India and Ceylon, note-book in hand, inquiring here and there who eats fish, and preparing more papers for the *Polyclinic,* is truly extraordinary. In the vast Hindoo peninsula with its teeming millions of people, with its inscrutable castes, and its antiquated ways and customs—in the midst of all this Mr. Hutchinson wanders serene, bent upon solving one of the most complex problems of modern pathology. With nothing but his note-book and his one idea, he keeps on his search for the ichthyophagi, and thinks he will bring back to civilization a demonstration in the etiology of disease that will astonish the world. Thus thinks and thus intends Mr. Hutchinson. Without losing our respect for this amiable enthusiast, we are irresistibly reminded of Don Quixote.

This errand of Mr. Jonathan Hutchinson to India offers one of the most curious psychological problems of the day.

An Up-to-date Journalist.—The following tragic tale, which appeared in the *Baltimore Sun,* will be appreciated by such of our readers as have a well-developed sense of humor. The alienists especially will rejoice at the discomfiture of this enterprising scribe. They are the ones who suffer most from the frantic attempts of the newspaper reporters to fathom all the mysteries of the madhouses, and from the futile endeavors of some of these same gentlemen to "show up" the abuses of the asylums.

> A Paris journalist, desirous of learning how lunatics were treated, got himself up in a fantastic costume and accosted a gendarme in the street with an angry demand why he did not salute Emperor Napoleon I when he met him, writes the Paris correspondent of the *London Chronicle.* The gendarme promptly arrested the journalist and removed him to the station, when in due course he was transferred to an asylum as a patient suffering from dangerous illusions. After learning thoroughly the system of treatment to which lunatics are subjected, the journalist desired to leave the asylum and give his paper the benefit of his experience. He, therefore, requested to be brought before the medical board of examiners, to whom he explained the situation, but was horrified when the doctors gravely shook their heads and reported that they considered he was now become really dangerously mad. He was, therefore, kept under the closest watch and restraint and nearly made himself mad with anxiety before he induced one of the nurses to convey to his paper the news of his plight. But even then his troubles were not over, for the doctors refused to accept the explanations offered, and have all certified that the man is a dangerous lunatic. A special commission was appointed to investigate his case.

We do not vouch for the authenticity of this yarn, for it is suspiciously lacking in names and dates: but we do answer for its containing a fine moral. It is too good a story not to be true.

Current Comment.

THE PATIENTS GO HIGHER.

The Christian Science people must be somewhat confused over the varying decisions in the courts touching their right, under the law, to allow a sick person to die without providing medical relief of any kind. This difference of opinion is well illustrated in the case of J. Luther Pierson, of Westchester County, New York. In March, 1901, he had a child, less than 2 years old, sick with catarrhal pneumonia. Christian Science was his method of cure, and no physician was permitted to aid the child, who died. He was arrested, tried and convicted and fined $500. On appeal the Supreme Court, by a majority vote, in an opinion rendered by Judge Bartlett, reversed the lower court, deciding that Pierson was not obliged to call a qualified medical doctor. In a minority opinion Judge Goodrich took the contrary view, holding that Pierson's action was "a plain refusal to obey the law." Whether or not the case will go up any higher is not known; but there have been other judicial divisions of opinion on this question.

—*The Philadelphia Press.*

KNIFE-AND-FORK SURGERY.

This name is given by *The Hospital* to a method of operation lately described by König at Berlin, intended to prevent infection of the subject by the surgeon's hand. Says this paper:

"According to this an attempt is made to perform the operation without ever touching the tissues, much as we eat our meals by aid of forks and spoons instead of clawing our food. By practice with suitably devised metal instruments, which, of course, are capable of complete sterilization, he has found that he can get through very many operations without ever touching the wound. Even in abdominal cases, in many of which it is often impossible to avoid introducing the hand, he carries his instrumental method to its extremest limit. In operating on cases of appendicitis during the quiescent interval he has been able to do the entire operation with instruments. This is a method which, while it has its advantages, has also its limitations. One can hardly doubt, however, that the surgeon often does things with his fingers which, by aid of a little practice, could be done just as well with an instrument, and, if we are to accept as correct all that is said about hand-infection, it would often be well, in suitable cases, to adopt the 'knife-and-fork' method of surgery."

—*The Literary Digest.*

Correspondence.

THE STUDY OF GREEK AND THE USE OF THE CATHETER.

By THOMAS R. EVANS, M. D., of Ashland, Ky.

To the Editor of the **Philadelphia Medical Journal**:

In writing to the **Philadelphia Medical Journal** sometime since upon the lack of preliminary education in the case of so many American doctors, I, of course, did not intend to convey the impression that, because a man, from various causes, did not dig among Greek and Latin roots, that his usefulness as a medical man was necessarily crippled. Professional pride, and facility in teaching and in learning inspired the letter. For thousands of doctors Dunglison supplied the gap in Cæsar and Xenophon. It is probable that Jenner's preliminary education was slight. A few days ago I was talking with a doctor, now in Huntingdon, W. Va.

The presumption is that this doctor never saw a Latin grammar during his preliminary training. He once practised medicine in one of the backwood counties in West Virginia. He came on a case of retention of urine in a paralytic man. This M. D. was many miles from home and did not have a pocket case with him. The nearest doctor was fifteen miles away, and, upon sending to him for a catheter, the doctor was not at home, and a catheter could not be found among his instruments. The patient suffered all night, but joy came to him in the morning in a most unexpected manner. The doctor, saddened by the pain of the patient, and by his impotence to relieve, took an early walk into the garden. He espied a castor oil plant. The leaf of this plant gives a bend to the stalk like the curve of the male catheter. Its caliber, the fact that it is hollow, its ease of lubrication by slightly scraping it, and its comparative toughness, all rendered it a natural catheter. Eureka! The long pent-up water was drawn off with a most unusual device, and the patient was borne to an elysium through the "mole bean." The patient used this green catheter upon himself for several days. No amount of preliminary education would have conduced to such boldness and such resourcefulness.

Yet, no doctor feels safe in the hands of the layman's so-called "natural born doctor." The term doctor means learned, and the title should be made good.

By the way, a translation of the applicable portions of the Hippocratic oath would serve as a good test of preliminary education in the classics.

CARE OF SPUTUM OF CONSUMPTIVES.

By HENRY ASTHALTER, M. D., of Pittsburg, Pa.

To the Editor of the **Philadelphia Medical Journal**:

Dirt and darkness are the favoring causes of tubercular phthisis. Dirt ground to dust and rolled into clouds by the wheels of traffic is a carrier for the tubercle bacillus. Dust abrades the tender lung tissue and plants the germ. To lessen the number of bacilli would be a helpful step. I have for a number of years advised my patients to use paper for the reception of their sputum. The idea is that each coughing patient—ambulant or bedfast—for any malady of the lungs, be taught to use paper instead of spittoon or cloths. When toilet-paper cannot be had, I have the patient cut the ubiquitous daily paper into slips of the requisite size, so that for each expectoration one slip shall be used, then folded, placed into the pocket or into any other receptacle and afterward burnt. This method of taking care of the sputum is hygienic and cheap. For years I have seen its many advantages in my practice. It will be found cleaner than the evil-smelling spittoon or the foul cloths, either of which in the warm season is a resort for flies, and more convenient for the exhausted patient. He is not tempted to swallow his sputum, and thus will often escape the bowel infection. When, by careless patients, the slips are thrown upon the street, they draw closer to their charge as they get dry. Should some manufacturer take up the idea, it might be well to number each tenth sheet and print a few simple rules thereon in watermark. Each sheet should be about seven by seven inches; that is the size I have found most convenient. They could be made into book-shape or into a roll, taking up no more space then a spectacle case. If the publishers of the popular novel could be induced to adopt the size and quality of such paper, a great benefit might accrue to the sufferers.

Reviews.

The Internal Secretions and the Principles of Medicine. By Charles E. de M. Sajous, M.D., Fellow of the College of Physicians; Member of the American Philosophical Society, the Academy of Natural Science of Philadelphia, etc.; Knight of the Legion of Honor and Officer of the Academy of France; Knight of the Order of Leopold of Belgium, etc. Formerly Lecturer on Laryngology in Jefferson College and Professor of Laryngology and Dean of the Faculty in the Medico-Chirurgical College; Formerly Professor of Anatomy and Physiology in the Wagner Institute of Science. Volume First. With forty-two illustrations. Philadelphia, F. A. Davis Company, publishers, 1903. Price $6.00 in cloth.

Dr. Sajous has essayed in this volume to place medicine in its "proper position among allied sciences." He has studied as a mathematical problem the relation of facts derived from actual observations by various authorities and has blended these facts into a homogeneous whole. He has endeavored to eliminate theories, and to reconcile, by fuller comprehension, differing factors, in his analytic and synthetic conception of physiological and pathological processes.

The author's position is bold and revolutionary, and in the preparation of this work in which these propositions are maintained Dr. Sajous has put his best efforts, the labor of fourteen years, in the prime of his mental activities. It is almost impossible within the scope of a book review to attempt to do justice to a work of this character and extent. While Dr. Sajous' studies have placed a different interpretation upon a vast amount of experimental work which has been done, the ingeniousness of his conception has dovetailed many seemingly contradictory points into a concrete whole. Bold theories are apt to be scoffed at and set aside with a wave of the hand. We, as medical men, should take out our balances and weigh the new propositions with honesty and candor. It is useless for us to look through eye-glasses strongly tinted with the faith in the convictions we already hold. The scientific spirit demands a mental attitude open to the force of argument but justly agnostic. In this **Journal** of March 7, 1903, Dr. Sajous published a brief exposition of the views which his volume sets forth in greater detail. It was our privilege to comment somewhat briefly, editorially, upon some of the main features of the author's theory, so that our readers are at least somewhat familiar with the scope of Dr. Sajous's work. Dr. Sajous regards the ductless glands as organs of the first importance in vital functions. He states that he has been able to trace the adrenal secretion as far as the pulmonary alveoli, but not beyond. Here, it was found to hold in combination the various constituents of hemoglobin and to endow both the latter and the plasma with their affinity for oxygen. He holds that the oxygen-laden adrenal secretion, dissolved in the plasma, carried on all of the processes of oxidation of the organism. He accords to the red bloodcells but a secondary role as oxygen-carriers. He believes that it is the physiological function of the internal secretion of the adrenals loosely to combine with the atmospheric oxygen in the lungs, and to endow the bloodplasma with the all-important oxidizing properites. To this oxygen-laden adrenal secretion he has suggested the name **adrenoxin**. His investigations lead to the opinion that the adrenals were directly connected with the anterior pituitary body through the solar plexus, the splanchnic nerves and the cervicothoracic ganglia of the sympathetic. To the anterior pituitary body, therefore, he assigns the function of governing the activity of the adrenals, and he believes that all general symptoms seen in morbid conditions in which the blood is invaded by a poison of any kind, are in reality manifestations of overactivity, insufficiency or inactivity of the adrenals. He believes that there is an adrenal system composed of the thyroid gland, the anterior pituitary body and the adrenals, which are functionally interdependent. This system has for its purpose the sustaining of physiological oxidation and the metabolic activity of all tissues. The posterior pituitary body is held to be the chief functional center of the nervous system and serves as a co-center to the anterior pituitary body in sustaining cellular metabolism. He follows Schiff in considering jointly the spleen and the pancreas. The secretions of these two organs unite in the formation of a powerful proteolytic ferment which in addition to being supplied to the intestinal canal passes, in part, into the splenic vein as an internal secretion and thence into the portal vein To this ferment he ascribes a leading part in the production of immunity, its main functions in the bloodstream being to destroy toxic albuminoids. Phagocytosis is regarded as the preponderating factor in immunization, but trypsin is, according to Sajous, the agency which digests bacteria in the digestive vacuoles of the phagocytic leukocytes. He attempts to simplify Ehrlich's "side-chain" theory by stating that his amboceptor (Bordet's sensitizing substance) is adrenoxin and his complement trypsin, but he ascribes to fibrinogen an important place in the conversion of bacterial products in the blood. Fibrinogen is a body containing phosphorus, while adrenoxin contains oxygen. The heat generated by the union of these two elements renders possible the proteolytic action of the trypsin. Insufficiency of any of these three bodies is asid to compromise the issue of the disease in which it occurred. Sajous holds that the mitoma of leukocytes are not mere protoplasmic threads but minute channels for bloodplasma and granules. In this way he explains that the plasma and its adrenoxin permeates the nucleus of the leukocytes. According to the hypothesis of Sajous, the treatment of diseases resolves itself into the treatment of the adrenal system. The power of an organism, he says, to antagonize the constitutional effects of poisons of whatever kind is directly proportionate, all else being equal, to the functional efficiency of the adrenal system. Fever is essentially a protective phenomenon, as the process advances the alkaline salts are consumed and, being inadequately renewed, the vital and defensive functions are hampered. The employment of saline solution is strongly recommended as an effective therapeutic measure. When a favorable reaction does not follow the use of saline solution it is because the adrenal system also requires direct stimulation, such as that afforded by the hypodermic administration of such drugs as strychnine and digitalis. Viewed in this light the administration of antipyretics is to assist in the defeat of nature's effort to relieve the organism of pathogenic elements. Discussing the value and the limits of serum therapy, Sajous holds that the various antitoxic serums are more or less active in proportion as the quantity of thyro-iodine contained in them is great. The proportion of thyro-iodine in a given serum is commensurate with the degree of stimulation to which the adrenal system of the supply animal is subjected by the toxin employed to obtain this serum. The use of antitoxic serum or of the various serums introduced is only indicated in morbid processes characterized by a deficiency of trypsin. In all other pathological conditions, he declares, drugs are productive of better results because these can be scientifically controlled. The anatomical and physiological portions of this work are elaborated with great clearness, and we would especially commend the section devoted to the histology and physiological chemistry of the neuron. The first volume of Sajous's treatise, of which the above is a necessarily incomplete review of even the major points, will be bound to awaken the active interest of the profession. [T. L. C.]

Surgical Anatomy and Operative Surgery. For students and practitioners. By John J. McGrath, M. D., Professor of Surgical Anatomy and Operative Surgery at the New York Post-Graduate Medical School. Illustrated with 227 illustrations, including colors and half tones. Pages XIV, 559. Royal octavo extra cloth, $4.00 net, sheep or half Russia, $5.00 net, delivered. Philadelphia. F. A. Davis Company, Publishers.

Many works on operative surgery give little space to the surgical anatomy of the parts concerned in the various surgical procedures described. Such omission may not be objectionable to the active surgical specialist, whose daily work keeps him fresh in regional anatomy. The occasional operator, however, needs the help of a treatise, which discusses applied anatomy, as well as operative surgery. Dr. McGrath's book will therefore be particularly valuable to young surgeons and to those whose surgical experiences are not constant; for it devotes a considerable part of its pages to the description of the anatomical relations of the structures involved in operative fields. This feature will undoubtedly be valuable also, even if not essential, to surgeons of wide opportunity.

The treatise is the outgrowth of the author's course in operative surgery on the cadaver, given in the New York Post-Graduate Medical School, and is accordingly very practical and instructive. The use of diagrammatic illustrations, instead of finished and complex pictures, shows that he has the true teacher's instinct; which recognizes the necessity of accentuating the essential to the exclusion of that which is only confusing. Much space is given to anatomy, and some pages are well devoted to embryology, but these topics do not exclude a full and satisfactory account of the usual operative procedures.

The publisher has not attempted to make a handsome book, for the paper and binding are commonplace; but, after all, a book is consulted for its teachings, not for its external beauty. [J. B. R.]

News and Notes.

AMERICAN

PHILADELPHIA AND PENNSYLVANIA.

The Ray Bill Amended.—The Ray bill, making a diploma from a high school or college necessary to enter the second year of a medical college in Pennsylvania, which has already passed the House of Representatives, has been so amended by the Senate as to read, "provided that graduation from a literary college of good standing after 2 years of scientific work in the college shall be accepted by the medical council of the State of Pennsylvania as an equivalent for the first year in a recognized medical college, provided that it is accepted by the medical college as dealing adequately with chemistry, physics, physiology, anatomy and the biological sciences." The bill was vigorously opposed by representatives of the smaller colleges in the State. There seems no doubt that it will pass as now amended. Had the bill been passed in its original shape, it would have sent many medical students out of the State, since it would have barred their entering the second year of most of the large medical schools.

Against Smallpox.—The bill appropriating $50,000 for the suppression of smallpox in Pennsylvania, under the direction of the State Board of Health, was signed by the Governor, March 26, in its amended form. It has been stated that Johnstown is to be the headquarters for the campaign against smallpox in Western Pennsylvania. It is understood that Dr. W. R. Batt, of Philadelphia, is to be placed in charge of the work by the State Board of Health.

University of Pennsylvania.—Dr. John Marshall, professor of chemistry in the Medical School, who has occupied the office of dean for so many years, has been granted leave of absence owing to ill health. He is soon to sail for Europe, for a rest.

Philadelphia's Hospitals May be Built in Other Counties.—The bill introduced into the House of Representatives of Pennsylvania by Mr. McConnell, providing "that the several cities of this Commonwealth shall have power to acquire by purchase any real estate within the city limits which they may need, upon which to erect or construct necessary municipal buildings, fire-engine houses, gas and electric light works—and within or without the city limits, upon which to erect hospitals, water works, and for the purpose of a poor-farm, and in case they cannot agree with the owner or owners as to the price thereof, or in case the owner or owners thereof are absent, or are incapacitated from any cause, or are unknown by reason of which no agreement can be made, it shall be lawful for each respective city, and they are hereby authorized and empowered to take and appropriate for said purposes the necessary real estate, within or without the city limits, as the case may be, after an ordinance shall have been passed providing for such taking and appropriation," was signed by the Governor, March 26, and has become a law. It is plain, from this, that Philadelphia may erect hospitals or water works in any adjoining county without the authorities of that county having any power to prevent the erection of such buildings.

American Philosophical Society.—The annual meeting was held in the hall of the society, in Independence Square, Philadelphia, April 2, 3 and 4. At the first session Dr. Edgar F. Smith, of Philadelphia, president of the society, delivered his address of welcome. Among the other speakers were Professor Angelo Heilprin, of Philadelphia, on the Activity of Mont Pelée, Dr. Daniel C. Gilman, of Baltimore, on the Carnegie Institution During the First Year of Its Development, and Dr. W. H. Welch, of Baltimore, on the Objects and Aims of the Rockefeller Institute for Medical Research. There were a number of other speakers, including Dr. M. P. Ravenel, of Philadelphia, who discussed the warfare against tuberculosis.

Medical Club of Philadelphia.—Although the reception held at the Hotel Bellevue, Friday evening, March 27, in honor of Dr. William Osler, of Baltimore, was largely attended, Dr. Osler was unfortunately unable to be present on account of the recent death of his sister.

Henry Phipps Institute for the Study, Prevention and Treatment of Tuberculosis.—About 20 beds will be ready for patients in the temporary hospital of the Phipps Institute early next week. Dr. Flick, director of the institute, says that many people who have been in prison leave the prison with consumption. Besides the physicians on duty at the institute, whose names appeared in our issue of March 21, Dr. H. R. M. Landis has been added to the staff.

Smallpox at Susquehanna.—The report that there were 24 cases of smallpox at Stevens Point, more than half of the inhabitants of the village, has been found to be absolutely untrue. In the neighborhood of Susquehanna there are but 2 cases of smallpox, at Danville. There even seems some doubt, as yet, as to whether the disease is smallpox.

Philadelphia Hospital for the Insane.—Plans have been prepared for the erection of this new building at Holmesburg. They show a large, well-equipped administration building of 3 stories and a basement. In the basement will be a steam-heating plant, the switch-board for the electric lighting system, boiler rooms and lavatories. The first floor contains a reception room, offices for the superintendent, resident physician, supervisors' offices and a drug room. On the second story are to be a library, 4 rooms for assistant physicians and supervisors. The third floor will contain 8 rooms and a lavatory. The bath-rooms and corridors will be of white marble. Attached to this administration building will be 2 large ward buildings. It is believed that the institution will soon be erected.

Society Meetings Next Week.—The following societies will meet next week, at the College of Physicians, Philadelphia, at 8.15 P. M.: Monday evening, April 6, Academy of Surgery: Wednesday evening, April 8, Philadelphia County Medical Society, and Thursday evening, April 9, Pathological Society.

The Health of Philadelphia.—During the week ending March 28, there was an increase in all infectious diseases reported except typhoid fever. This increase, however, was but slight. There were only 154 cases of typhoid fever, with 41 deaths, reported, as compared with 247 cases, with 27 deaths, during the previous week. There were 94 cases of scarlet fever, with 5 deaths, reported as compared with 62 cases, with 4 deaths, in the week preceding. There were 54 cases of diphtheria, with 12 deaths, reported as compared with 48 cases, with 7 deaths, in the week before. There were 31 cases of smallpox reported, with 2 deaths, as compared with 26 cases and one death during the previous week. The British steamer *Riverdale* was quarantined on her arrival March 27, on account of a case of smallpox among the crew. The sick man was removed to the Government hospital at Reedy Island, and the steamer quarantined.

Bill Before the Pennsylvania Legislature to Regulate and Control the Sale of Cocaine and Morphine.—An Act, Regulaing the sale or prescription of cocaine or morphine or of any patent or proprietary remedy containing cocaine or morphine, and prescribing penalties for the violation thereof. Be it enacted by the Senate and House of Representatives of the Commonwealth of Pennsylvania in General Assembly met, and it is hereby enacted by the authority of the same: That no person shall sell, furnish or give away any cocaine, or morphine, or any patent or proprietary remedy containing cocaine or morphine, except upon the prescription of a registered practising physician, or of a dentist, or of a veterinarian, nor shall any such prescription be refilled, nor shall any physician, dentist or veterinarian prescribe cocaine, or morphine, or any patent or proprietary remedy containing cocaine or morphine for any person known to such physician, dentist or veterinarian to be an habitual user of cocaine or morphine;

Provided that the provisions of this act shall not apply to persons engaged in the wholesale drug trade regularly selling cocaine or morphine to persons engaged in the retail drug trade. Any person violating any of the provisions of this act shall be sentenced to pay a fine of not more than One Hundred Dollars and undergo an imprisonment of not more than Six months or both or either, at the discretion of the Court.

NEW YORK AND NEW JERSEY.

Tent Sanatorium for Consumptives.—The commissioner of the Health Department, New York City, recommends the expenditure of $36,000 by the city for the erection of a sanatorium on the tent and "ducker" plan, on a tract of 90 acres of land in Orange county, which has been offered to the Health Department free of charge for 3 years. He states that the institution should be open from May until January, and should accommodate 60 patients and 15 attendants. In his letter to the Mayor, he stated that, during 1902, 7571 persons died of phthisis in New York City, and that 1312 persons died of other forms of tuberculosis. During 1901 the deaths from phthisis numbered 8135. In 1902 there were 12,914 cases of tuberculosis reported, as compared with 13,703 in 1901. He says that tuberculosis remains the greatest single cause of death in New York City. He added that consumption could be checked by the open air cure. Such a temporary institution is needed, to demonstrate that New York City shall be justified in establishing an institution upon a scale commensurate with the extent of this most fatal of diseases.

Bronchitis and Pertussis in Brooklyn.—An epidemic of bronchitis and pertussis was reported last week, over 800 cases having occurred in Brooklyn, with a number of deaths. Most of those affected are children.

No More Typhoid Fever in Ithaca.—A statement has been made upon the typhoid fever situation in Ithaca, by Dr. G. A. Soper, of the New York State Board of Health. He says that a careful consideration of the matter leads him to believe that typhoid fever in epidemic form has passed. If the food, milk and water-supply are kept free from infection from the surrounding country, and infectious matter in the town is destroyed, there will be no opportunity for another outbreak. President Schurman, of Cornell University, says that the assurance which the letter contains will go a long way toward a definite decision to hold a regular session of the summer school, and that he will propose to the trustees at the next meeting that the summer session be held as usual. Since the epidemic began, there have been 681 cases of typhoid fever with 51 deaths.

Willard Parker Hospital, New York City.—Plans have been filed describing the new building, to be erected as an annex to the Willard Parker Hospital, on Sixteenth street, near Avenue C. The building will be of brick, 6 stories high, and will cost about $350,000.

Consumption in Clinton State Prison, Dannemora, N. Y.—According to the physician in charge of this institution, there are 250 inmates with tuberculosis, one quarter of the population. Of these 195 were transferred from other institutions. Only 54 cases of consumption can be treated in the hospital, leaving about 100 patients scattered through the prison. From 90 to 100 tuberculous cases are being discharged every year. Thus the contagion is being spread, both in the prison, on account of insufficient accommodation for the treatment of tubercular criminals, and outside, after their discharge.

Smallpox in Newark, N. J.—A case of smallpox was discovered in Newark early last week, which was, however, not reported until death had occurred. The doctor in charge had made the diagnosis of scarlet fever. A physician of the Board of Health forced his way into the house and found what he claims was hemorrhagic smallpox. The matter has not yet been settled. No other cases of smallpox have occurred.

Seaside Home for the Ailing.—The Seaside Sanatorium and Home is the name of a new charitable organization just formed at Long Branch, N. J. The purpose of the new association is to provide a summer home in the country, where poor children and adults in delicate health may spend a few weeks.

NEW ENGLAND.

Greenwich Hospital, Greenwich, Conn.—As we announced March 21, subscriptions are being collected for the erection of a general hospital at Greenwich. It has been decided that the sum of $100,000 will be collected for this purpose. At the first meeting at which the subject was discussed, 33 persons became life-members at an annual fee of $10 each. In all, almost half of the amount has already been subscribed.

Association of Military Surgeons of the United States.—The twelfth annual convention will be held in Boston, May 19 to 22 next. The president of the association, elected at the eleventh annual meeting, at Washington, last year, is Brigadier-General Robert A. Blood, Surgeon-General. The committee of arrangements consists of Captain Myles Standish, Lieutenant-Colonel W. H. Devine, Lieutenant-Colonel Otis H. Marion, Major C. M. Green and Lieutenant F. L. Gibson. Besides the official meetings, at which the Governor will deliver an address, Dr. H. O. Marcy will give a luncheon at his residence. The secretary of the association is Major James E. Pilcher, U. S. V.

WESTERN STATES.

Society Meetings This Month.—The Tri-State Medical Society of Iowa, Illinois and Missouri met at Hannibal, Mo., April 2 and 3. The Western Ophthalmological and Otolaryngological Association will meet at Indianapolis, Ind., April 9-11. The Iowa State Medical Society will meet April 15-17 at Sioux City; the Medical Society of the State of California will meet April 21, at Santa Barbara; the Nebraska State Medical Society will meet at Lincoln, Neb., April 28-30, together with the Medical Association of Nevada; and the Illinois State Medical Society will meet at Chicago, April 29 to May 2.

Missouri State Medical Association.—Among those scheduled to read papers at this meeting, to be held at Excelsior Springs, April 21 to 23, are Drs. Ohmann-Dumesnil, St. Louis; C. E. Clark, Kansas City; F. L. Henderson, St. Louis; F. B. Hiller, Kahoka; Hal Foster, Kansas City; Hugo Summa, St. Louis; Robert Luedeking, St. Louis; John Zahorsky, St. Louis; R. T. Sloan, Kansas City; A. E. Taussig, St. Louis; Carl Fisch, St. Louis; G. C. Crandall, St. Louis; J. P. Bryson, St. Louis; Bransford Lewis, St. Louis; H. L. Nietert, St. Louis; O. B. Campbell, St. Joseph, and many others.

Chicago's Largest Man Dead.—From Chicago comes the news of the death of a man, only 5 feet 10 inches high, yet weighing 480 pounds. It is said that he was so broad that he could not enter the turn-stiles of the elevated railways in Chicago or the Illinois Central Railroad. The only surface cars in which he could ride were those having double sliding doors. To make him a complete suit of clothes required 12 yards of cloth, and underwear large enough for him was not manufactured in the United States. Everything he wore was, therefore, made to order, in Europe. His hat was number 12. The furniture provided for his use was made with special care, on account of his great weight.

SOUTHERN STATES.

Diphtheria at Norfolk, Va.—Twenty cases of diphtheria were reported, March 29, among the 1500 men on the receiving ships *Franklin* and *Richmond*, stationed at Norfolk, Va. These ships have been quarantined, the patients having been removed to the Naval Hospital. It was also reported that there were 50 more suspected cases of diphtheria on board the receiving ships. On being questioned, the ship's doctor asserted that the report of an epidemic was incorrect. He admitted, however, that 6 cases of the disease had developed among the men on board the ships, one of these having already proved fatal. The doctor does not believe that the disease will spread, as every precaution to prevent spreading has been taken. The disease is of a mild type, and no alarm is felt among the officers or men.

Georgetown University Hospital, Washington, D. C.—In accordance with the plans devised last winter, a large 4-story addition is now being built to Georgetown University Hospital, which will double the capacity of the institution.

An Anniversary.—Dr. George Ruehling, who founded the Maryland Eye and Ear Infirmary on October 1, 1868, celebrated the 35th. anniversary of his arrival in Baltimore, March 23 last. This institution has since become the Eye and Ear Department of the Maryland General Hospital. A native of Hesse-Darmstadt, he studied under von Arlt, von Jaeger, Mauthner, Becker, Politzer and Siegmund, of Vienna, and later with Professor Pagenstecher, at Wiesbaden.

Medical Corps, U. S. A.—Surgeon-General Van Reypen states that there are 27 vacancies in the grade of assistant surgeon, in the United States Navy. Surgeon-General Van Reypen is soon to make speeches at medical colleges, in which he will point out the advantages of a Naval career.

Society Meetings This Month.—The Florida Medical Association will meet at St. Augustine, April 8; the Medical Association of the District of Columbia will meet at Washington, April 14; the Tennessee State Medical Society will meet in Nashville, April 14-16; the Medical Association of Georgia will meet at Columbus, April 15; the South Carolina Medical Association will meet at Sumpter, April 15 and 16; the Mississippi State Medical Association will meet at Greenville, April 21-23; the Medical Association of the State of Alabama will meet at Talladega, April 21-24; the Texas State Medical Association will meet at San Antonio, April 28; the Louisiana State Medical Society will meet at New Orleans, April 28-30; the Medical and Surgical Faculty of Maryland will meet at Baltimore, April 28-30; and the American Laryngological, Rhinological and Otological Society will meet at Lexington, Ky., April 30 to May 2.

No More Smallpox in Chestertown, Md.—Dr. Rohrer, of Baltimore, who has been in charge of the smallpox hospital in Chestertown, released all suspects and patients, March 27. He reports that every one who was successfully vaccinated proved immune, those taking the disease having in every case not been vaccinated.

Röntgen Rays in Cancer.—Dr. T. C. Gilchrist, of Johns Hopkins University, delivered an address before the Johns Hopkins Scientific Association, March 26, upon the treatment of cancer, lupus and other diseases by means of light-rays and X-rays. The cost of the apparatus for giving these light-rays closely approximates $20,000. A number of illustrations of cases treated with Röntgen rays in Baltimore illustrated his address.

Book and Journal Club of the Medical and Chirurgical Faculty, Baltimore.—At the meeting, held March 26, Dr. Alfred Stengel, of Philadelphia, read a paper on Some Old Instruments and Methods for Treatment of the Stomach; Gastric Sensations Interpreted as Live Animals in the Stomach. Dr. William Osler presented the library with 123 theses of American students at the University of Edinburgh between 1760 and 1810, and Dr. H. B. Jacobs spoke upon a Century of Faculty of Medicine of Paris, 1794 to 1894.

Death of Dr. Steuart.—Dr. James A. Steuart, for 16 years Health Commissioner, of Baltimore, died of pneumonia at his home in Baltimore, March 27, aged 75 years. His father and grandfather were both well-known physicians in Baltimore. Dr. Steuart was born April 3, 1828, and was graduated from St. Mary's College, Baltimore, in 1847, receiving his M. D. degree from the University of Maryland Medical School in 1850. Until 1854 he was physician at the Baltimore dispensary; from 1854 to 1861 he was assistant physician at the Maryland Hospital for the Insane. He was appointed Health Commissioner and was president of the Board of Health of Baltimore in 1873, and in a short time had revolutionized the methods of guarding the population of the city against disease. He carried the town through several dangerous smallpox visitations, and to his vigilance and untiring effort is attributable Baltimore's escape from a great yellow fever epidemic nearly 20 years ago. The scourge broke out in the lower part of the city, and there were a number of cases. He transported a whole colony, patients and those who had been exposed to the infection, to Anne Arundel county and thereby effectually stamped out the malady. This action was commented upon by the American Public Health Association as one of the most remarkable feats of sanitary protection ever known. Another achievement of Dr. Steuart, which aroused great opposition at the time, but which has borne excellent fruit, was the shutting down of the old pumps from which many persons got their water-supply and which were contaminated with disease germs. There were many of these pumps in the city when he began the crusade against them, and, though it was slow and difficult work, he succeeded in having nearly all of them removed. Dr. Steuart retired from the Health Department in 1889. In 1894 he became secretary of the State Board of Health and continued in that capacity for three years. He was physician to the Maryland School for the Blind for 35 years. He was a member of the American Medical Association, Medical and Surgical Faculty of Maryland, and of the American Public Health Association.

MISCELLANY.

Bubonic Plague.—The situation in Mazatlan, Mexico, has improved greatly. Five patients were discharged March 29, leaving only 8 in the hospital, suffering not from the plague itself, but from the consequences of the disease. No new cases have developed at Villa Union. News from Siqueiros is not reassuring.—Reports from Canton, China, state that 100 deaths from bubonic plague had occurred at Phauthai, near Kityang, before March 21.—Two cases of the plague occurred at Hilo, H. I., March 17.

Smallpox at Trinidad.—Quarantine is being enforced in Jamaica against arrivals from Trinidad, the Governor of Jamaica believing that the disease at present prevailing in Trinidad is smallpox.

Yellow Fever in Yucatan.—New cases of yellow fever have been reported about Merida, Yucatan, March 29. It is said that the epidemic is taking a new hold and covering a wider field. At Vera Cruz, Mexico, between December 14 and March 7, 64 cases of yellow fever, with 27 deaths, have been reported. At Panama, Colombia, between December 16 and March 5, there have been 41 cases with 13 deaths.

Obituary.—Dr. Samuel W. McJunken, at Terrell, Texas, March 8, aged 48 years.—Dr. Peter Klein, at Detroit, Mich., March 15, aged 89 years.— Dr. John G. Giles, at Brockville, Ont., March 12, aged 69 years.—Dr. Clayton T. Hall, at Mason Ohio, March 11, aged 36 years.—Dr. Samuel H. McLean, at Lincoln, Ill., March 18, aged 53 years.—Dr. Nathan Udell, at Denver, Iowa, March 6, aged 86 years.—Dr. Frank Fontelle Brigham, at Lynn, Mass., March 10, aged 40 years.—Dr. Alvin Jayne Cole, at Fort Madison, Iowa, March 6, aged 65 years.—Dr. Noyes Carstow, at Springfield, Mass., March 16, aged 82 years.—Dr. Liberty M. Chilton, at Stanberry, Mo., March 9, aged 63 years.—Dr. Walter W. Bunyan, at Chicago, Ill., March 16, aged 26 years.—Dr. Almer M. Collins, at Shelbyville, Ill., March 10 aged 58 years.—Dr. John G. McPherson, Milwaukee, Wis., March 10, aged 77 years.—Dr. Braxton Banks, at Garner, N. C., March 12, aged 50 years.—Dr. De Forest Hunt, at Grand Rapids, Mich., March 10, aged 61 years.—Dr. Patrick N. Kelly, at Pine Island, Minn., March 14, aged 46 years.—Dr. Charles F. Parker, at New York City, March 24.—Dr. H. H. McCauley, at Joliet, Ill., March 24.—Dr. Robert Safford Newton, at New York City, March 25, aged 45 years—Dr. Charles H. Jones, at Brooklyn, N. Y., March 26, aged 25 years.—Dr. Walter S. Leaming, at Cape May, N. J., March 29, aged 49 years.—Dr. D. Gilbert Gordon, at Baltimore, Md., March 28, aged 44 years.

FOREIGN.

GREAT BRITAIN, ETC.

Isolation Hospital, Trowbridge, England.—The Trowbridge and district joint isolation committee has decided to erect a new isolation hospital, to cost about $35,000.

The Treatment of London's Poor.—About 2,000,000 of London's inhabitants get no medical treatment save that of charity dispensaries or hospitals, and it is said one in four of them goes to bed hungry every night.

Cambridge University.—Sir Michael Foster, K. C. B., professor of physiology, has announced his intention of resigning that position in the near future.

CONTINENTAL EUROPE.

The German Empress Injured.—While riding in the Grunewald, near Berlin, on the afternoon of March 27, the horse which the Empress was riding stumbled, throwing its rider heavily to the ground. Examination, undertaken later by Professor von Bergmann, showed a simple fracture of the lower end of the radius of her left arm. This was confirmed by radiography. She is rapidly recovering, as there is no longer any swelling or pain.

Death of Dr. Bottini.—Dr. Enrico Bottini, formerly professor of operative surgery in the University of Pavia, died at San Remo, Italy, March 11, aged 65 years. He was graduated from the University of Turin in 1860 and became obstetrician and surgeon-in-chief in the Ospedale Maggiore, at Novara, 5 years later. His work in antisepsis came close to anticipating the discoveries of Lord Lister. In 1877 he became professor of surgery in the University of Pavia, where his studies with the galvanocautery were carried out. He became a deputy in the Italian Parliament in 1887, resigning his chair as professor. In 1891 he became Senator. Last summer he suffered a stroke of apoplexy from which, however, he soon recovered. His death was due to a second violent apoplectic seizure.

Obituary.—Dr. Bouilly, surgeon to the Paris hospitals for a number of years and professor agrégé in the Paris Medical School, died recently. He was well known as a gynecologist. He was a member of the Société de Chirurgie and of the Académie de Médecine.—Dr. Michele Crisafulli, professor of clinical medicine in the Medical School at Messina, also died recently, aged 75 years.

The Latest Literature.

BRITISH MEDICAL JOURNAL.

March 14, 1903. (No. 2202.)

1. A Lecture on the Diagnosis of Pulmonary Tuberculosis. C. THEODORE WILLIAMS.
2. The Nature of the Infectivity of Phthisis: A Study of the Views of Koch, Flügge and others. ALFRED HILLIER.
3. Human and Bovine Tuberculosis. The Possibility of Human Infection from Cattle. NATHAN RAW.
4. Phthisis and House Infection. J. R. JOHNSON.
5. The Dietetic Treatment of Pulmonary Tuberculosis from the Point of View of its Hematology and Histopathology. J. J. GALBRAITH.
6. The Sanatorium Treatment of Pulmonary Tuberculosis, With Special Reference to Nordrach Methods. P. S. HICHENS.
7. Sanatoria Plus Homes for Consumption. W. RUSHTON PARKER.
8. On the Consolidation of the Public and Professional Interests of Medical Men. VICTOR HORSLEY.

1.—In a paper on **the diagnosis of pulmonary tuberculosis,** Williams, after discussing the pathology of the disease, the history and the examination of the sputum, says that of the physical signs the earliest in a great many cases is the appearance of a crepitant rale which is often not heard until the patient coughs. Very often only one of these rales is heard at a time, and that one appears at the end of expiration after coughing. He says that he knows of no auscultatory sign which is so pathognomonic of tuberculous disease. [J. M. S.]

2.—Hillier's paper is principally a résumé of the literature on the **infectivity of phthisis,** in the course of which he refers to the work of the medical officers of health in Great Britain. As a result of his studies he believes that it is conclusively established that both dried tuberculous sputum dust and the minute drops coughed out by the consumptive are capable of conveying infection. The latter contain tubercle bacilli of greater virulence than the former and are, therefore, a more potent agent of infection. Although the diease is undoubtedly infective, the degree of infectivity is not a high one. [J. M. S.]

3.—Raw is of the opinion that primary intestinal tuberculosis, tabes mesenterica and other tuberculous affections of the serous membranes in children are probably cases of **bovine tuberculosis** conveyed by milk and are not related to **human tuberculosis.** He believes that bovine tuberculosis is more virulent for children than is human tuberculosis. He believes that scrofulous glands in the neck are produced by the absorption of tubercle bacilli from milk through the tonsils and the pharynx. He interprets his clinical experience as indicating an antagonism between the tuberculous manifestations in children and in adults. [J. M. S.]

4.—Johnson has studied the occurrence of **phthisis in** Richmond in its relation to **house infection.** The basis of the study is formed by 11 cases of tuberculosis of which 6 occurred in old, ill-ventilated, narrow-windowed, sunless or dirty houses; 2 in houses known to have been lived in by tuberculous patients; and 3 were imported. In the study of the transmission of tuberculosis it is impossible to ignore the danger of house dust. [J. M. S.]

5.—Galbraith says that in its early stages **pulmonary tuberculosis** is characterized by a total absence of leukocytosis; while in the later stages there is a leukocytosis due to mixed infection. In cases **treated by the open air method with a diet rich in animal nitrogen** there is a moderate leukocytosis, a large absorptive lymphocytosis and an almost constant eosinophilia. From a histopathological point of view rational dieting consists in furnishing a diet rich in the appropriate albuminous constituents. Such a diet may be regarded as possessing curative value. He says there is a diminution of the nitrogenous element in the body of the patient, both relative and absolute, out of all proportion to the diminution in the other elements. [J. M. S.]

6.—The routine **treatment at Nordrach for tuberculous patients** consists in abundance of fresh air at all times and in all weathers, abundance of nourishing food, and rest and exercise graduated according to the body temperature. Hichens believes that the only way to estimate the effect of exercise on consumptives is by the systematic taking of rectal temperatures. He believes that it is a physician's duty to put a patient on thorough open air treatment as soon as the diagnosis of pulmonary tuberculosis is made. [J. M. S.]

7.—Parker says that, if all **consumptives** could be treated in **sanatoria** for 3 months during the earliest stage of their disease and taught how to preserve the health there regained, very few would reach the dangerous advanced stage. [J. M. S.]

LANCET.

March 14, 1903.

1. Hunterian Lectures. (Abstract of) Some Points on the Anatomy and Pathology of the Vermiform Appendix. Lectures I and II. W. McADAM ECCLES.
2. Hunterian Lectures on the Nature and Anatomy of Enteroptosis (Glénard's Disease). Lecture III. ARTHUR KEITH.
3. On the Problem of Glycosuria and Diabetes. W. HALE WHITE.
4. The Use of Salicylic Acid as a Preservative in Food. C. J. MACALISTER.
5. Concerning Antistreptococcic Serum and Its Use in Malignant Endocarditis. CYRIL OGLE.
6. How to Prevent the Spread of Pellagra in Egypt. F. M. SANDWITH.
7. The Etiology of Sleeping Sickness (Preliminary Note). ALDO CASTELLANI.
8. On Prolapsus Uteri; With Special Reference to an Operation for Reproduction of the Sacro-uterine Ligaments. E. STANMORE BISHOP.

1.—In his Hunterian Lectures Eccles discusses some points in the **anatomy and pathology of the appendix.** He refers first to the variations in the meso-appendix, particularly as regards its length. He emphasizes the fact that it is when the aperture of the appendix is closed that trouble is apt to ensue and not when it is unusually patent. As a rule, the aperture is from 2½ to 3½ cm. inferior and posterior to the ileocecal opening. In referring to Treves' suggestion that a muscular contraction of a portion of the rectus upon palpation of the abdomen may produce a sensation to the examining hand similar to that of the appendix, Eccles says that in some cases at least he thinks the tissue felt is the contracted anterior longitudinal band of the cecum, which contracts under manipulation. Because of the large amount of lymphoid tissue in the submucosa of the appendix, this organ has been called the intestinal tonsil. Eccles next points out the characteristics of a normal appendix. He states that it is impossible to say that an appendix is normal until a microscopical examination has been made of its mucous membrane. Regarding the function of the appendix he believes it to be in part absorptive and in part secretive. Regarding the etiology of appendicitis he believes that in every case the disease is caused by bacteria. The various forms found in a diseased appendix are referred to. Primary tuberculosis of the appendix is decidedly rare, but secondary tuberculosis is by no means rare. Actinomycosis of the appendix is now an established fact, though of rare occurrence. The various pathological results of inflammation of the appendix are referred to, including secondary abscess. The second lecture closes with some remarks on the examination of the blood in appendicitis. [J. H. G.]

2.—Keith, in this, his third, Hunterian lecture, discusses **ptosis of the liver and stomach.** This condition arises from relaxation of the abdominal muscles, which maintain the visceral shelves on which these organs rest, or from constriction of the cavity by clothing. This remark is excellently illustrated by a cut which represents the waist and viscera of a woman, 45 years of age. After death the waist was reduced from 26 to 22 inches, the tissues hardened and the result represented in the cut obtained. The author devotes considerable attention to the various agents which aid in the fixation of the kidney. Displacements of this organ are brought about by compression of the thorax with clothing, by the partial collapse of the thoracic wall following chest and spinal disease, and by the permanent contraction of the diaphragm which follows a relaxed or paretic condition of the abdominal walls. Keith accounts for the infrequent displacement of the left kidney by the fact that the splenic flexure of the colon acts as a safety valve when this region is constricted, being, as it is, very freely movable. He shows how easily it is displaced to the left and downward by a full stomach. In addition, the left kidney is bound to the spleen, and the spleen is bound to the diaphragm. On the right side the arcuate fibers draw down the heavy liver against the kidney, whereas on the left side it is only the fundus of the stomach that is drawn down. Attention is called to the fact that in infants there is no difference in the position of the kidneys in the two sexes. It is shown that the kidney may be displaced upward as well as downward by lacing, according to whether the woman maintains a high or low waist. In closing, fixation of the intestinal tract, its movements and displacements are briefly considered. In discussing the fixation of the intestinal tract the subject is looked at from the point of view of comparative anatomy. The intestinal displacement may be due to a diminution of the costal part of the body cavity, the subcostal viscera being thrust down upon it, or to the want of support afforded to the muscular wall of the stomach. [J. H. G.]

3.—White considers **the problem of glycosuria and diabetes.** He asserts that the universal copper reduction test is unsatisfactory, because one of a number of bodies, when present in the suspected urine, may cause the characteristic precipitate. The polarimeter, fermentation and the formation of osazone crystals are all excellent tests but have their disadvantages, as the first requires an expert, the second is tedious, the third needs time. He holds that we need information about the occurrence of other sugars than dextrose in the urine, namely—levulose, lactose, and pentose. Three-quarters of those who developed glycosuria during pregnancy recover, and he asks the profession, what becomes of the other quarter that does not recover—do they become genuine diabetics? He suggests that, when dextrose is found in the urine, the condition should be termed dextrosuria, thus harmonizing with levulosuria, lactosuria and pentosuria. He comments on the loosely applied term "diabetes" and thinks that more accuracy of thought should be employed in its connection. He favors Dr. F. W. Pavy's suggestion that we should speak of alimentary diabetes and use the phrase "composite diabetes" to indicate patients who pass sugar and oxybutric acid and its derivatives. While many patients with so-called alimentary diabetes are really in the first stages of composite diabetes, yet others are examples of a much less harmful condition which always remains alimentary glycosuria, never passing on to a composite diabetes, and which lacks the serious metabolic phenomena of this disease. Passing on to a discussion of composite diabetes he remarks that no satisfactory explanation has as yet been advanced to explain the fact that a diabetic patient who is on a strictly carbohydrate diet, if given a little carbohydrate, excretes far more sugar than he was given, and further that the strange disappearance of sugar in the urine, when coma comes on, is also one of the unexplained problems in this curious disease. He is of the opinion that the destruction of the islands of Langerhans is of great importance in connection with diabetes, and in this connection he thinks that we are in want of information: (1) Is alteration in the islands of Langerhans the essential feature of the pancreatic disease which causes diabetes? (2) Can we, during life, tell which patients have and which have not pancreatic disease? (3) What is the relationship of the internal pancreatic secretion to diabetes? He then briefly discusses some points in the treatment of diabetes. [F. J. K.]

4.—Macalister and Bradshaw discuss **the use of salicylic acid as a preservative in food.** They assert that the allegations which have been made against the employment of salicylic acid in moderate quantities cannot be maintained, nor do they think that a single instance can be brought forward showing that bodily injury has resulted from its use. They further hold that the use of this substance enables manufacturers to place on the market wholesome, agreeable and inexpensive articles of food which form an acceptable and beneficial variety in the diet of persons who cannot afford more costly luxuries and which, above all, supply the place of intoxicating drinks. [F. J. K.]

5.—Ogle presents his **views concerning antistreptococcic serum and its use in malignant endocarditis.** His article includes 2 tabulated lists of cases in which serum was employed. From his study he draws the following conclusions: (1) That the gravest symptoms, combined with streptococcic infection, even of the bloodstream, are not incompatible with recovery if treated with injections of antistreptococcic serum. (2) That this is true also in malignant endocarditis, but that here the chances are probably less favorable on account of the colony of micrococci involved in the vegetations in constant contact with the bloodstream. (3) That, in malignant endocarditis, staphylococci are frequent, or a mixed infection of staphylococci and streptococci. (4) That, if an examination of the blood be negative, it would be prudent, therefore, to use injections of antistaphylococcic together with antistreptococcic serum. [F. J. K.]

6.—Sandwith thinks that the prevention of the spread of pellagra in Egypt could easily be controlled by Government regulation, and that all maize for exportation should be examined in Alexandria before it is allowed to be shipped to other markets. [F. J. K.]

7.—Castellani presents a preliminary note **on the etiology of sleeping sickness.** This observer has discovered a micro-organism which he considers to be the probable cause of sleeping sickness. He has isolated this organism always in pure blood, in 9 out of 11 post mortem examinations from the cerebrospinal fluid and from the blood of the heart, secured with aseptic precautions; *in vita*, once in the blood and in 2 out of 3 cases from the cerebrospinal fluid removed by lumbar puncture. This germ may be considered a distinct variety of the streptococcus group, its appearance being very variable, depending upon the different media on which the germs have been cultivated, so that all transitions from long chains to typical diplococci may be found. It stains readily by the ordinary aniline dyes; it may be cultivated upon gelatine, agar, glycerine agar; it does not produce gas in sugar agar; the color of litmus agar is not changed by its growth, and it does not coagulate milk. It grows freely on the potato; it may be cultivated on bouillon and upon bloodserum. He points out that this micro-organism may be differentiated from the streptococcus pyogenes by its much more vigorous growth on all media, especially on agar; by the tendency of its colonies to coalesce, and by the noncoagulation of milk. He thinks that this micro-organism is a distinct variety of streptococcus and suggests that it might be called **the streptococcus of sleeping sickness.** [F. J. K.]

8.—Bishop describes an operation for reproduction of the sacro-uterine ligaments for the cure of **prolapsus uteri,** which differs from Jessett's operation not only in some points of technique but essentially in its aim and in the result produced. Jessett, in his operation, fixes the cervix to the sacrum behind and the fundus to the abdominal wall in front. So long as the adhesions which he makes between the structures, hold good, the uterus is rigidly retained in position. Bishop, in his operation, endeavors to obtain as near as possible a return to the normal condition, leaving the uterus free to move within normal limits but not beyond, and to develop in its extent during a succeeding pregnancy. His technique is as follows: The protrusion being reduced, the patient is placed in the extreme Trendelenburg position, and the abdominal wall is opened by median incision. Two threads are passed through the broad ligament, one on either side of the uterus, enclosing tube and round ligament. The ends of these threads are tied, and, by them as tractors, the fundus of the uterus is drawn forward. A special sound is passed up the vagina and made to press upward the posterior fornix so as to render it prominent. On either side a stout silk thread is passed vertically through the substance of the fornix, avoiding the mucous lining, so that each protruding end is half an inch distant from the other, and the whole loop is from one-half to three-quarters of an inch from the cervix. The fornix is now applied to the sacrum, and a spot is chosen directly opposite, free from vessels and subjacent nerves and ureter and well outside the rectum, where the needle carrying the suture is entered deeply, so as to embrace the periosteum covering the bone; it is brought out again half an inch directly above the point of entrance. Before tying this suture a narrow strip of peritoneum is removed from that portion of the fornix which lies in its grip. This is repeated on the opposite side, and the sutures are tied. The new ligaments are now formed and the cervix hangs in its normal position from the sacrum by that portion of the vagina which lies between it and the suture. [W. A. N. D.]

MEDICAL RECORD.

March 28, 1903.

1. Renal Decapsulation for Chronic Bright's Disease. GEORGE M. EDEBOHLS.
2. Specific Treatment of Diphtheria. GEORGE B. PHILHOWER.
3. The Psychical Elements in Hay Fever. RAYMOND WALLACE.
4. On the Biological Relationship of Proteids and on Proteid Assimilation. P. A. LEVENE.

1.—Edebohls discusses the results of his operation of renal decapsulation for chronic Bright's disease since January 10, 1898. He states that in all he has operated on 51 patients, embracing 47 operations upon both kidneys and 4 operations on one kidney only: Seven patients died within 17 days after operation. Seven patients died at periods after operation varying between 2 months and 8 years, the average period of life after operation being one year and 8 months. Two patients do not show improvement satisfactory in every respect. Twenty-two patients are in various stages of satisfactory improvement and progress toward health at periods varying between 2 months and 15 months after operation. The urine of several of these is at present free from albumin and casts. They have not, however, passed the probationary period of 6 months of normal urine, before the expiration of which no patient is entitled to a place on the list of cures. One patient, after a cure extending over a period of 4 years, again has chronic Bright's disease. One of her kidneys only was operated upon. Nine patients were cured of chronic Bright's disease and remain cured at periods after operation varying from one year and 9 months to 10 years, the average duration of cure being over 4 years. Three patients disappeared from observation after leaving the hospital, and no trace of them can be found. [T. L. C.]

3.—Wallace, discussing the **psychical element in hay fever,** cites cases which tend to prove, and others which tend to disprove, the importance of the psychical element. He states that, from the pathology of the disease which is a disturbed equilibrium of the entire nervous mechanism, a vasomotor neurosis, it is reasonable to suppose that the irritation causing the attacks which may be either direct or reflex, may be a psychical irritation coming to these areas through the various sensory channels, as well as mechanical irritation, by dust, pollen, odors, etc. We know that direct sunlight entering the eyes often precipitates an attack. Here the reflex is through the optic tract. Why, then, may not impulses or irritations, originating in the psychical areas reflexly excite a vasomotor spasm or paresis, and thus precipitate an attack? [T. L. C.]

4.—Levene presents a preliminary note on the **biological relationship of proteids and on proteid assimilation,** basing his comments upon the work in which he and Dr. L. B. Stookey have been for some time engaged. The work already done justifies the conclusion that the foreign proteids do not enter, as such, the general circulation. It is not improbable, however, that in pathological conditions they pass the digestive organs unchanged. [T. L. C.]

MEDICAL NEWS.

March 28, 1903. (Vol. 82, No. 13.)

1. Spinal Concussion, So Called. CARL E. BLACK.
2. A Brief Consideration of the Mechanism of Mental States Encountered in Alcoholic Insanity, with Illustrative Cases. W. K. WALKER.
3. Scope of the Vaginal Section. H. J. BOLDT.
4. The Scope of Vaginal Section. HIRAM N. VINEBERG.
5. How Easily We Can be Mistaken in the Diagnosis of Cancer of the Stomach. MARK I. KNAPP.
6. The Operative Treatment of Fracture of the Patella. RUSSELL S. FOWLER.
7. Some Physiological Observations on a Crustacean Heart. GEORGE V. N. DEARBORN.

1.—Black believes that the word **concussion** would be perfectly plain if it were confined to the method in which the injury was received, instead of trying to make it also describe the resulting condition. The author divides injuries produced by concussion into *primary effects*: (1) Sprain; (2) contusions of the spinal cord; (3) minute hemorrhage into or around the cord. *Secondary effects, or complications*: (1) Shock or collapse; (2) acute hysteria; (3) neurasthenia; (4) chronic hysteria. While one or more of these conditions, sprain, a contusion and a mental or capillary hemorrhage, may be present in a case, we no doubt have many cases in which all these are present. [T. M. T.]

3.—Boldt would limit **vaginal celiotomy** to those patients who have a well-defined pelvic hematocele, and to those in whom the diagnosis is made before rupture of the tube. The author has given up vaginal operations for backward displacement of the uterus, preferring shortening of the round ligaments to other methods. [T. M. T.]

4.—Vineberg, excluding vaginal hysterectomy and operations which are performed for the correction of a uterine displacement through the vaginal route, mentions the following conditions in which vaginal section is applicable: (1) Pelvic abscess; (2) pyosalpinx and ovarian abscess; (3) conservative surgery in diseased adnexæ; (4) ovarian cyst; (5) myomectomy; (6) ectopic pregnancy. [T. M. T.]

5.—Knapp reports 2 cases **resembling cancer of the stomach** from which the following important facts are deducted: (1) That we must not be too hasty in our conclusions and not make a diagnosis of cancer of the stomach until a test-meal examination is made; (2) we must not forget the grave clinical picture gastrosia fungosa may give. [T. M. T.]

6.—Fowler takes up 3 headings: (1) The advisability of operative treatment; (2) the technique of the procedure employed by the author; (3) a brief résumé of those patients upon whom the author has operated for this condition, and of whom he has been able to collect reliable data. [T. M. T.]

7.—Dearborn concludes with the following facts: (1) There is strong physiological evidence that the heart of the daphnia has nerves connected with it, the stimulation of which inhibits its action, and evidence of a similar sort, although negative, that the heart has no augmentor nerves. (2) This heart appears to him an eminently automatic organ and one very independent, especially in its rate of beating, of agencies usually modifying or even destructive. (3) Puncture of many parts of the brain and body, especially just ventral to the heart and in a supposed caudal ganglion, inhibits the heart for a few minutes only, but in other portions or spots of the brain and body mechanical stimulation produces no apparent effect. (4) The break and make of galvanic currents tend to inhibit the heart in diastole, and during the passage of the current the disatole is apt to be exaggerated. (5) Division of the animal into parts inhibits the heart for a time or permanently, according to the mode and place of section. Opening of the circulation's channels lessens both the force and the average size of the beating heart. (6) When a daphnia dries up, the heart continues to beat after all the other organs are still. (7) The drugs, alcohol, nicotine, chloral hydrate, aconite, chloroform, curare and digitalis, all have a powerfully poisonous effect on the heart, in general not unlike their respective effects on other hearts. (8) The embryonic pulse-rate is one-half, on the average, of that of the adult animal, which latter may be said to be about 240 per minute. The cause of this needs explanation. [T. M. T.]

NEW YORK MEDICAL JOURNAL.

March 28, 1903.

1. Syphilitic Pseudotabes. Report of a Case; The Differential Diagnosis of Tabes. JOSEPH COLLINS.
2. Streptococus and Staphylococcus Bronchitis. JOSEPH M. PATTON.

3. Intestinal Resection and End-to-End Anastomosis with the O'Hara Forceps in a Case of Tubo-ovarian Abscess with Appendicitis: Recovery. GEORGE GRAY WARD, JR.
4. The Special Dispensary as a Factor in the Combat of Tuberculosis as a Disease of the Masses. S. A. KNOPF.
5. Opium in Surgery. EDWARD WALLACE LEE.
6. Retinoscopy. DANIEL H. WIESNER.
7. On the General Characteristics of Corneal Astigmatism. H. DAVISON SARIL.

1.—As a test for his paper on **the differential diagnosis of tabes** Collins reports a case of syphilitic pseudotabes. The conditions with which tabes is likely to be confused are: (1) Spinal arterial sclerosis; (2) multiple neuritis; particularly that form which follows some acute infection, such as diphtheria; (3) multiple sclerosis; and (4) syphilitic pseudotabes, the disease with which it is most likely to be confounded, a condition that presents the clinical picture of tabes and pathologically lesions of the cord or meninges, or both. The symptoms and signs presented by this patient were characteristic of tabes. The pathological examination, however, did not reveal the changes seen in posterior sclerosis, but arterial and vascular changes characteristic of pseudotabes were found throughout the meninges and cord. Several illustrations showing the microscopical changes in the cord and meninges accompany this paper. While a syphilitic history could not be elicited in this case, the author believes it to be one of syphilitic origin. The paper is to be concluded. [P. B. B.]

2.—Patton presents this paper to call attention to certain more or less well-defined types of bronchitis which result from certain micro-organisms. The numerous classifications of bronchitis thus far set forth are more or less confusing, and the author, therefore, presents this paper on **streptococcus and staphylococcus bronchitis.** This classification he considers of much importance. The symptoms caused by staphylococcic infection show a tendency to chronicity and are mild in type, whereas streptococcic infection is more or less of a virulent nature, accompanied with symptoms of general toxemia. When the symptoms are of moderate severity and continuous, the differentiation of this form is very difficult and may rest largely or entirely on the sputum examination. In the treatment of these patients the best results are obtained through tonics, alterative expectorants and local medication by deep inhalation. [P. B. B.]

3.—Ward presents the case-history of a patient operated upon for **tubo-ovarian abscess and appendicitis.** A loop of the ileum was involved in the inflammatory mass, and several openings were found in its wall which necessitated a resection of about 7 inches of the canal. **End-to-end anastomosis** was, therefore, performed with **O'Hara's forceps.** The patient made a good recovery. The author is enthusiastic in his praise of O'Hara's instruments. [P. B. B.]

4.—Knopf contributes this paper as a plea for the more universal recognition of the value of special **dispensaries for tuberculous patients.** In France and in Germany the special dispensary is in more general use and its value fully realized by the authorities. But the facilities are inadequate even in those countries. The author says the function of these sanatoria should not only be that of caring for patients more or less advanced in the disease, but for those in the incipient stages who can be taught the value of personal hygiene and prophylactic measures and thus enable them to continue their duties. The author is strongly in favor of special divisions for tuberculous patients in dispensaries, somewhat after the pattern of the one established in Havana. Patients who receive dispensary instruction, instead of becoming sources of infection, will become educational factors in the community and useful citizens. Knopf would favor a salaried visiting staff in order to avoid pauperizing and indiscriminate medical charity. [P. B. B.]

5.—Lee says that **opium and its alkaloids** have a definite place in **surgical therapeutics.** The disfavor with which it has been met by some is no doubt an instance of its injudicious use. The writer sets forth the following indications in which it can be employed with advantage, if judiciously used: (1) Fractures; (2) to relax the vesical sphincter during catheterization; (3) in traumatic shock if accompanied with pain or hemorrhage; (4) preliminary to the administration of anesthetics, especially in neurotics and alcoholics; (5) in various forms of hemorrhage companioned with much restlessness; and (6) in obstinate or exhausting vomiting after operation or anesthesia. When used in accordance with these indications, the author has found that the beneficial effects so overshadow its injurious properties that the latter are not demonstrable. [P. B. B.]

6.—Wiesner contributes a paper on **retinoscopy,** the purpose of which is to direct the attention of the general practitioner to this method of testing refractive conditions of the eye. The writer speaks of the various refractive errors and outlines the course pursued by him and the application of this instrument to practical work. He does not, however, rely upon this instrument alone, but uses it with the other ophthalmological measures. He also calls attention to the prevailing abuse of the unskilled and ignorant class of so-called refracting opticians, outside of the medical profession. [P. B. B.]

7.—From the predominating influence of a **corneal astigmatism** on the causation of asthenopia, kindred neuralgias and various sequelæ, Saril contributes a paper describing the general characteristics of the condition. Astigmatism exists in all human eyes to a greater or less degree, but the term physiological is not approved of by the author. The various forms of astigmatism and the phenomena presented by each are described with more or less detail. The symptoms, he says, are those of asthenopia in general. The methods of its detection are then described. [P. B. B.]

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

March 26, 1903. (Vol. CXLVIII, No. 13.)

1. Extensive Cavity Formation in the Central Nervous System, Presumably Due to the Bacillus Aerogenes Capsulatus. EMMA W. MOOERS.
2. The Bacillus Shiga in an Epidemic of Diarrhea. LAWRENCE W. STRONG.
3. Systemic Infection Due to Natural Teeth Conditions. D. D. SMITH.
4. Suppuration of the Frontal, Ethmoid and Sphenoid Sinuses. With Brief Report of the Treatment of Two Hundred and Thirty-Seven Cases. EDGAR M. HOLMES.

1.—Mooers reports a case with extensive cavity formation in the central nervous system and says that, in view of the large number of bacilli found in the brain and spinal cord of this patient and in view of the gas-producing power possessed by the *bacillus aerogenes capsulatus,* which she believes to be the bacterium concerned in the case, she agrees with the views of other recent observers that the cavity formation in the brain and cord is due to the development of gas therein by the bacteria. [T. M. T.]

2.—Strong reports an **epidemic of diarrhea** in which the facts at least suggest that there was a common cause for a certain proportion of the unusual number of cases encountered. Ileocolitis was conspicuous, though there was no one characteristic form of diarrhea. There were positive bits of evidence afforded that the bacillus Shiga was present in 4 cases of ileocolitis. If the clinical inference that some simple diarrheas passed into infectious diarrhea, and that the infectious diarrheas were either fermental or ileocolitis, according to the place of lodgment of the irritating matter, is correct, then the bacillus Shiga might be the common cause sought for. [T. M. T.]

4.—Holmes has found that the sphenoid cavity was diseased in 182 cases, nearly 77%, and in 19, a little more than 8% of the whole number, both sides were affected. In

56 of the sphenoid cases the ethmoid cells were found to contain and discharge pus, and in 3 all of the accessory cavities were suppurative. In 39 patients he was able to demonstrate pus in the ethmoid cells, and could prove no associated disease in any of the other sinuses. In 11 there was co-existing suppurative inflammation in the frontal sinus. In 5 cases of frontal sinus suppuration he was unable to prove suppuration of the ethmoid cells. [T. M. T.]

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

March 28, 1903.

1. Iodized Catgut. NICHOLAS SENN.
2. The Administration of Calcium Salts in Nephrolithiasis Due to the Uric Acid Calculi. ALFRED C. CROFTAN.
3. Glioma Retinæ with Report of Five Cases. CHRISTIAN R. HOLMES.
4. Gastro-intestinal Perforation and their Diagnosis. F. GREGORY CONNELL.
5. The Respiratory Quotient as Influenced by Tuberculosis. T. M. ADERHOLD and W. S. HALL.
6. The Intracellular Toxins of Some of the Pathogenic Bacteria. VICTOR C. VAUGHAN.
7. Angiosarcoma of the Liver. Report of a Case. J. C. COOK.
8. The Recognition and Prompt Removal of Postnasal Adenoids in Children. LOUIS J. LAUTERBACH.
9. Cyclic Vomiting in Children. With Report of Cases. THOMAS C. ELY.
10. The Typhoid Epidemic at Ithaca. The Divisions of Ithaca in Relation to the Typhoid Incidence. (By our Special Commissioner.)

1.—Senn describes the **preparation of catgut by the Claudius method** and states his satisfaction in the use of gut prepared in this way. The method consists in soaking the commercial raw catgut in a one per cent. solution of iodine for 7 days. It is not only claimed that this renders the catgut aseptic but that it also gives it antiseptic qualities. The practical results obtained from the use of this gut show that no irritation of the tissues results from the presence of iodized catgut, which is probably to be accounted for by the fact that iodine is converted into potassium and sodium iodides by chemical combinations formed with the salts of the tissues. The method of preparation is so simple that it commends itself particularly to those separated from the surroundings which are necessary to the proper sterilization of catgut by the more complicated methods. The results of experiments being conducted in the Rush Medical College to determine the bactericidal power of iodine will be published later. [J. H. G.]

2.—Croftan discusses **the administration of calcium salts in nephrolithiasis due to uric acid calculi.** He writes that the uric acid of the urine is held in solution by di-sodium phosphate and is precipitated by monosodium phosphate. To prevent the formation of uratic calculi, the increase of diphosphate and the decrease of monophosphate is therefore desirable. This can be accomplished either by decreasing the phosphoric acid or by increasing the sodium of the urine. The desired effect is produced by the calcium salts, as they decrease the excretion of phosphoric acid through the kidneys by binding the preformed phosphates of the food and preventing their absorption and by binding the phosphates of the blood and causing their elimination through the bowel. The fact that sodium salts render the urine permanently alkaline when administered in sufficient doses to prevent uratic calculi formation, is most undesirable. He recommends the administration of calcium carbonate in doses of 15 to 20 grains, 3 times a day. He thinks this treatment is efficacious and deserves an extended trial. [F. J. K.]

3.—Holmes reports **5 cases and discusses glioma retinæ.** He thinks that a large percentage of recoveries can be secured when extensive resection of the optic nerve is practised during the first stage of the disease. [F. J. K.]

4.—See **Philadelphia Medical Journal,** June 21, 1902, page 1101.

5.—Aderhold and Hall discuss **the respiratory quotient as influenced by tuberculosis.** They describe their methods of experimentation, and their results are tabulated. They reach the following conclusions: (1) Time of feeding causes the greatest fluctuation of the respiratory quotient. Under favorable physical conditions it may rise to nearly 100 after the consumption of food, and may fall to about 70 during periods of fasting. (2) The respiratory interchange of gases is very much greater per gram animal per hour for the very small animals than for the larger ones. (3) Tubercular animals consume relatively less oxygen and exhale relatively more carbon dioxide than do normal animals under similar circumstances. (4) The respiratory quotient is raised under the influence of tuberculosis. [F. J. K.]

6.—Vaughan contributes an article **on the intracellular toxins of some of the pathogenic bacteria.** His investigations show that the anthrax toxin is a constituent of the bacterial cell, from which it cannot be removed except by certain chemical disintegrations of the cell substance, and the part of the cell, which remains after extracting the above-mentioned toxin with dilute sulphuric acid, is also toxic. He considers the intracellular toxin of diphtheria not identical with the soluble toxin, and he holds that this offers a plausible explanation for the fact which has been observed by others that natural immunity to diphtheria toxin may be possessed by animals which are not immune to diphtheria infection. [F. J. K.]

8.—See **Philadelphia Medical Journal,** June 21, 1902, page 1113.

9.—Ely reports **cases of cyclic vomiting in children,** at some length discusses this condition and gives the treatment. He emphasizes the following conclusions: (1) The importance of being watchful, on one's guard for the vomiting of this gastric neurosis, distinguishing it particularly from bilious vomiting and the vomiting of kidney disease and reflex vomiting, as of brain disease. (2) In children of gouty and neurotic history the 3 cases reported point to a toxin allied to the uric acid series as the possible blood irritant causing the vomiting. (3) The importance in severe cases of hypodermic injection of morphine and atropine in conjunction with elimination, by high saline enema; by gavage; and, in extreme cases, hypodermoclysis and even intravenous injections of saline solutions. [F. J. K.]

10.—Abstract will appear when article is concluded.

AMERICAN MEDICINE.

March 28, 1903.

1. The Psychical Nature of Some Disturbances of the Acts of Urination and Defecation. CHARLES J. ALDRICH.
2. The Prevention and Outdoor Treatment of Pulmonary Tuberculosis. FRANK WARNER.
3. Post Partum Subinvolution. JAMES E. KING.
4. Course of Diseases During Pregnancy. E. CASTELLI.
5. Gastroptosis and Gastrectasis. E. S. FOGG.
6. A Diagnosis of Post Mortem Laparotomy. C. A. DREW.

1.—Aldrich presents a number of case-reports illustrating **psychoses of urination and defecation.** [T. L. C.]

2.—Warner discusses **the prevention and outdoor treatment of pulmonary tuberculosis.** Among the causes which contribute to decreasing one's resisting power to the disease he mentions **neglected colds, vitiated air, employment in confined spaces and in insufficient light and air, insufficient sleep, excessive and continuous use of alcohol, congenital feeble resistance, faulty diet and feeble health following** pneumonia and various fevers, etc. He mentions the possible prevention of the disease through a form of vaccination, desribing the **"immunizing antituberculous Jennerization"** of Behring. The outdoor treatment of tuberculosis is described as carried on (1) at home, (2) in tents, usually roughing it, and (3) in sanatoria. [T. L. C.]

4.—Castelli, discussing the **course of diseases during pregnancy**, has found that heart lesions detected in women who have had 3 or more pregnancies and whose histories did not show any special diathesis were, in the proportion of 4 to 5, affected by **valvular insufficiency** which he is inclined to believe is the so-called **relative insufficiency** due principally to the hypertrophic condition of the different segments of the heart during pregnancy, which is always accompanied with a diminished nutrient power of the blood. This relative insufficiency would also seem to explain the systolic murmur noticed sometimes in the cardiac area. If the heart lesions co-exist with pregnancy, the condition renders the course of cardiac diseases more serious, as a rule. This is due to the fact that an amount of cardiac hypertrophy which is entirely compensatory for pre-existing valvular lesions, is not able to overcome the increased arterial and venous pressure prevailing during pregnancy, nor to adapt itself to the sudden variations in the vascular tension during labor. The mitral lesions, especially stenosis, are more markedly affected than aortic lesions. If the patient with cardiac trouble reaches full term, one of the most common and very dangerous complications is the **metrorrhagia** during or after labor. The various conditions affecting the veins are also discussed, and the treatment is outlined. [T. L. C.]

6.—Drew gives the clinical notes of a difficult case in which the diagnosis was made at autopsy. What had been taken for an enlarged and displaced kidney or neoplasm was an abnormally shaped right lobe of the liver, prolapsed presumably by a severe straining during a severe attack of whooping cough following a long illness with rheumatic (?) fever. [T. L. C.]

MUENCHENER MEDICINISCHE WOCHENSCHRIFT.

February 10, 1903. (No. 6.)

1. Surgical Intervention in Strictures of the Esophagus. H. LINDNER.
2. Central Actinomycosis of the Lower Jaw. V. BRUNS.
3. A Case of Infantile Bulbar Paralysis. F. KAUFMANN.
4. The Soxhlet Nutrient Sugar in the Dietetic Treatment of Sick Nurslings. O. ROMMEL.
5. The Management of Birth in Private Practice in Cases of Narrow Pelvis. A. MUELLER.
6. The Frequency and Etiology of Tubal Pregnancy. W. HAHN.
7. The Determination of the Sensibility of the Skin to Pain with the Algesimeter. R. v. HOESSLIN.
8. A Pipette with an Automatic Catch, for Counting Blood-cells. R. MAY.
9. First Aid: Aseptic Dressings for War Surgery, and for the Surgical Work of the Practical Physician. G. PERTHES.
10. A Peculiar and Remarkable Case of Poisoning with Carbonic Acid Gas. K. WOLF.
11. Intestinal Obstruction as a Result of Thrombosis of the Mesenteric Vein. A. REITZENSTEIN.
12. The Treatment of a Case of Intestinal Paralysis, with Intestinal Obstruction Occurring in the Course of a Syphilitic Meningomyelitis, with Atropine. A. HOMBURGER.

1.—Lindner divides the **strictures of the esophagus** into the malignant and the benign. As soon as a diagnosis of the latter condition is made, the only possible relief must be from surgical intervention. He does not believe in sounding cases of malignant stricture, nor in the introduction of a tube. He does not believe it will be possible to reach the thoracic portion of the esophagus for purposes of operation. Moreover, the results of radical operation for carcinoma of the esophagus are terrible for the patient, that is to say, life with an esophageal fistula is necessarily miserable. He has, however, observed 3 cases in which it was possible to operate upon the esophagus from the neck. One of these patients, an old man, had a carcinoma which extended downward and, as the operation showed, rather deeply into the thoracic cavity, it was resected, but the patient died shortly afterward of pneumonia. The second patient, a man of 56 years, had a gradually increasing obstruction apparently 22 cm. from the teeth. At the operation it was found that the stricture was not removable, but a sound was placed in it. Later, however, it again became partially closed, and the patient died with fever. The third patient, a man of 57 years, had a nodular tumor on the posterior wall of the esophagus which was readily removed, but he died two days later of pneumonia. Therefore, the outlook for cases in which operation upon the esophagus is done is rather unfavorable. He then discusses the various methods of making gastric fistulæ, which at best is merely palliative and prolongs life. For benign strictures the prognosis is very much better. These may be either diverticulæ or foreign bodies, in both of which esophagoscopy is of the greatest use. If there is a cicatricial stricture which cannot be dilated, it is important to retain the patient's nutrition, if possible, and for this purpose gastrostomy is indicated. After it has been performed, Hecker's method of sounding by means of a thread introduced into the esophagus is of the greatest value. He reports the case of a boy of 7 years with a cicatricial stricture due to swallowing lye, in which this method was used with the greatest success. [J. S.]

2.—After calling attention to the extreme rarity of central actinomycosis of the lower jaw, Bruns reports a case occurring in a man of 80 years who for 6 months had had a gradually developing tumor in this region. A diagnosis of sarcoma of the bone was made, an operation performed, and a cavity found in the central portion of the bone that was found to be filled with a soft material in which the actinomycic bodies were readily recognized. Ten years later the patient was still perfectly well. [J. S.]

3.—A man of 57 complained of difficulty in speaking, chewing and swallowing, and of persistent salivation. He had slight kyphoscoliosis; otherwise he was normal. The tongue was motionless; the voice was nasal; swallowing was accomplished only by pushing one portion of food back with another. When finally the mouthful reached the isthmus of the fauces, there was a weak reflex, and then, by throwing back the head and pushing with the finger, the morsel was carried down the esophagus. Sometimes the patient got morsels of food into the windpipe. There was slightly impaired development of the extremities of the right side, some contraction of the right sternocleidomastoid, and athetoid movements of the right hand and fingers. The interesting feature of this case is that the bulbar symptoms had persisted since childhood. There was evidently inequality in the involvement of the two halves of the buccal cavity, and there was no extreme atrophy. Careful examination of the symptoms led Kaufmann to believe that there was no involvement of the bulbar nuclei, and, therefore, it represents a form of **pseudobulbar paralysis**. He collects a number of these cases from the literature and shows that his own closely resembles them. [J. S.]

4.—Rommel reports some **results obtained with Soxhlet's nutrient sugar**. Altogether 36 children were placed upon it for a sufficiently long time to determine the results. The period of treatment varied from 4 weeks to 6 months. All these children were suffering from gastro-enteritis. The treatment was usually commenced by placing them for 2 days on water, weak tea sweetened with saccharin or albumen water. Then they were given from 150 to 200 cc. containing about 100 calories divided into 5 or 6 meals in the course of 24 hours. Usually the stools became dark yellow, of neutral or alkaline reaction, and more solid. The odor became more fetid. The majority of the children improved in weight; 27 were very greatly improved or cured; 4 died and 7 were improved. The advantages of Soxhlet's sugar over Keller's malt soup are merely that it is somewhat simpler and more readily prepared. He appends the histories of the 36 cases. [J. S.]

5.—Mueller believes that the best method of testing the relation between the size of the head and the size of the pelvis is impression. If the pelvis is too small, the following procedures may be employed. Artificially induced premature labor, prophylactic version, high forceps, symphyseotomy and Cesarean section. The induction of artificial labor depends upon a number of conditions. If the patient has had children before, to a certain extent the accoucheur may be guided by the history. In any event for the 2 months preceding term impression should be practised frequently. As soon as the head is broader than the pelvic inlet, then labor should be artificially induced, either by profuse hot douches or by the metreuryse. In primiparæ it is the custom to wait a little longer than in multiparæ. If, because the physician has not called earlier or for other reasons, parturition does not occur until term, prophylactic version is indicated, unless spontaneous birth is recognized as impossible. In 117 cases in which Mueller has employed it, 90 patients lived more than 8 days, and 13 died either during birth or in the first 8 days. In 4 cases the child was dead before operation was performed, and in 10 cases perforation of the after-coming head was required. He does not believe that there can be any routine method of practising version either slowly, or after certain delay, or under any other circumstances. For high forceps the best method is to use great power for a brief time, as this injures the mother very much less than prolonged steady pulling. Under these circumstances fracture of the child's skull does not appear to be injurious. In regard to symphyseotomy Mueller believes that it is justified in rare cases in which the welfare of the child is to be regarded as superior to that of the mother. Cesarean section in private practice is also to be performed only in the rarest cases. Both it and symphyseotomy should give place to perforation. In case artificial premature birth must be made before the thirty-fourth week, Cesarean section is usually preferable. When the operation has been determined upon, it should be performed before the mother has suffered pain for any length of time. In regard to metreuryse Mueller has performed it 76 times, and he collects statistics of some 700 other cases. In no instance has any injury to the mother followed. In his 44 cases, in which he performed it for the purpose of inducing premature labor, 22 of the children lived more than 8 days, and none of those 22 died later as a result of any birth injury. Another method of inducing premature labor is that of Bossi, the forcible and rapid dilatation of the os with metal instruments. [J. S.]

6.—Hahn discusses the theories regarding the **etiology of tubal pregnancy** and quotes Glitsch's figures showing that, of 45 cases, 31 occurred between the ages of 25 and 35 years. He then gives the results of the operations in Vienna that he has collected, which show that in this city in the years from 1892 to 1899 inclusive 428 cases occurred, and 139 died. By an analysis of these cases he reaches the conclusion that the commonest cause is gonorrhea, and, therefore, that this condition occurs more frequently in large cities. In late years the number of cases appears to have increased very materially. The results of treatment are very satisfactory, and the best prophylaxis is prevention of infection. [J. S.]

7.—Von Hoesslin has prepared an ingenious **instrument for testing the pain sense.** It consists essentially of a hollow staff with a minute perforation in its flat end through which the point of a fine needle can be thrust a definite distance by turning a graduated screw. At the other end the instrument has a small knob for testing greater disturbances of sensation. He calls attention to the fact that Molschutkowsky constructed an instrument of essentially the same nature in 1894. As his instrument had been constructed before he knew of the other, and as he had made careful determinations of the pain sense in different parts of the body on a number of different individuals, in ignorance of Molschutkowsky's results, he thinks it is worth while to record them. He finds that in the skin of children the pain sense is somewhat more delicate than it is in the thick skin of adults. There are, however, many exceptions to this rule, and often the callous skin of the laborer's fingers is as delicate as that of a child. However, the pain sense in the body varies between rather large limits, from 0.15 mm. and 1.5 mm. The forehead appears to be the most delicate, the heel the least delicate portion of the body. He gives 4 illustrations, 2 of which show his results in normal persons as compared with those of Molschutkowsky, and 2 the results upon women suffering from tabes. The results of the 2 investigators correspond very closely. The instrument is particularly valuable in cases of hypalgesia, the results being much more definite than those obtained by any other method. [J. S.]

8.—May, after calling attention to some of the disadvantages in the **pipette used for counting leukocytes,** describes a pipette that he constructed which consists of 5 tubes and 2 stopcocks. The suction tube is first placed over one of the tubes which communicates by the end through 2 of the stopcocks. It is filled, the stopcocks are turned, and the middle tube in the point remains full of the mixing fluid. A rubber tube is placed over another tube, suction made, and the blood passes up into it past the lowest stopcock. This is then turned, and the mixing fluid in the middle tube is blown out with the blood in the lower end of the first tube into a glass and shaken. The mixing is exceedingly accurate; there is no opportunity for mistakes because the separation is done by the stopcock, and the blood blown into a small receptacle that can be transported to a considerable distance. The accuracy of the instrument itself can easily be tested by filling the thin parts with quicksilver and weighing them so as to determine whether the mixture of blood and fluid is correct. The glass into which the 2 fluids are blown has to be very carefully adjusted in order that, in shaking, not too much foam is produced. [J. S.]

9.—Perthes has had constructed a **portable emergency supply,** in the preparation of which the following points were observed: Each package holds just enough for a single case. Each package is dustproof and is sterilized for 30 minutes at 110°. Tests have shown that this is effective. When the package is opened, the filter-paper forms an aseptic material upon which the bandage can be laid. [J. S.]

10.—Wolf reports an interesting case of a man and 2 horses, all killed by **carbon monoxide poisoning.** They had slept in a stable which was in the basement of a house, and the symptoms of the poisoning were very distinct. It appeared that the gas had been generated in a stove in a small room which communicated with a passage leading to the stable, had passed along this passage and killed the man and the 2 horses in the lowest part. It appears that the generation of the gas was favored by the fact that the fire in the stove was kept low. [J. S.]

11.—A man, 39 years of age, had suffered for years from varicose veins. From time to time he had suffered from indefinite discomfort in the abdomen. During the autumn holidays he had ridden a bicycle to excess. After a period of lassitude he developed diarrhea and pain in the abdomen. There was fever, and finally the stools became mixed with blood. The patient rapidly collapsed and commenced to vomit feces and blood. After washing the stomach, the vomiting and diarrhea stopped, but the patient grew worse. A diagnosis was made of **paralytic intestinal obstruction as a result of thrombosis of the mesenteric vein.** At the autopsy this diagnosis was confirmed. The diagnosis of this condition is to be made first by the gradual development of the symptoms, pain, vomiting and diarrhea, frequent sudden cessation of the pain; the general meteorismus, a resistance that gradually appears in the right side of the abdomen, the hemorrhagic intestinal obstruction; the severe bloody diarrhea and other signs of internal hemorrhage. The differential diagnosis is to be made from strangulation, obturation, invagination, peritonitis and thrombosis of the mesenteric vessels. The first 3 usually occur suddenly with pain and shock. There is usually meteorismus and no diarrhea. In the present instance the diagnosis was aided by the existence of disease in the other veins of the body. [J. S.]

12.—A woman, 57 years of age, had acquired syphilis about 23 years before. She developed symptoms of **syphilitic meningomyelitis** for which she received specific treatment. Whilst in the hospital, she developed severe pains in the neck and back; the abdomen was slightly distended, and for 2 days there was no movement of the bowels. The tympanites increased, purgation had no effect, and the patient was given hypodermics of atropine. The abdomen gradually retracted, and finally an enema brought away large masses of feces. The patient gradually improved. The case was evidently one of spinal intestinal paralysis upon which the atropine had a beneficial effect. [J. S.]

BERLINER KLINISCHE WOCHENSCHRIFT.

February 23, 1903. (40 Jahrgang, No. 8.)

1. The Increase in the Body Albumin From the Food Ingested. M. KAUFMANN and L. MOHR.
2. Tuberculosis in Cattle and Man. ANGELO CIPOLLINA.
3. Adenocarcinoma of the Nose. H. CORDES.
4. The Production of the Reaction to Cold Water. SIMON BARUCH.
5. Food Tuberculosis. D. von HANSEMANN.

1.—Excessive food causes the deposition of fat. This malady causes an increase in the body fat, relatively very little going to increase the body albumin. Mohr and Kaufmann report their investigations, from which, however, rigid conclusions are impossible, as the estimation of the amount of CaO retained cannot be made. There is no doubt that, in overfeeding, the nitrogenous food furnishes the body albumin. Probably only about 5% of this nitrogenous material is retained in the cells of the body, the rest being excreted. [M. O.]

2.—Cipollina caused general tuberculosis in an ape, in which the tuberculin test was negative, by giving milk containing bacilli of bovine tuberculosis. The autopsy showed that the tubercle bacilli passed through the intestinal walls without the presence of any primary injury. Attempts to cause tuberculosis in a calf with human tubercle bacilli failed, showing the great resistance of animals to this infection. Cipollina finds that human tubercle bacilli are much less virulent in animals than bovine tubercle bacilli. [M. O.]

3.—After collecting 7 cases of adenocarcinoma of the nose, Cordes reports the eighth case, the first in Germany, in a woman, aged 75 years. After 28 treatments with electrolysis, the tiny tumor remaining was excised. In all it had existed almost 2 years. The four types of primary carcinoma of the nose are described in detail. The tumor usually rises from the epithelium covering the ethmoid bone, and causes hemorrhage, pain and other pressure symptoms. The prognosis is unfavorable except in cases seen very early. The treatment is excision. Even though microscopical examination of bits excised shows an apparently benign adenoma, the tumor should be removed at once. [M. O.]

4.—In the use of cold water, the reaction obtained is the means by which vitality is restored to the organism. Thermic, mechanical and chemical stimulation may be provoked in hydrotherapy. Thus hot baths excite respiration, while cold baths control nervous symptoms. Mechanical stimulation, rubbing during the cold bath, promotes vasomotor action, thus reducing the body temperature. In cases in which the cold water bath with friction fails, chemical baths, containing salts which release CO_2, may be of value for stimulating vasomotor action. Rubbing is absolutely necessary during the cold bath. The great value of cold baths lies in the reaction produced. [M. O.]

5.—The expression food tuberculosis is not well understood. It should include all cases in which tubercle bacilli, entering the digestive tract with food, are absorbed. In 5 cases tubercular ulceration of the intestines alone was found post mortem, death having been due to some other disease, and no other signs of tuberculosis being found. In 12 cases of primary intestinal tuberculosis the mesenteric or peritoneal lymphglands were also affected. In 4 cases the disease caused affections of the serous cavities only, besides the primary intestinal lesions. In 4 cases the point of origin was doubtful. yet the bacilli probably entered from the intestines. This made 25 cases of primary intestinal tuberculosis, out of a great number of autopsies. But tuberculosis may attack any portion of the alimentary tract, showing that tubercle bacilli pass through the mucous membrane without causing any local symptoms at all. But all tubercle bacilli ingested are not absorbed, and do not cause tuberculosis. Primary intestinal tuberculosis is rare, occurring in old people mainly, after severe illness or in individuals otherwise specially predisposed to tuberculosis. In most cases early recovery follows spontaneously. No case has yet been found proving that phthisis followed primary intestinal tuberculosis. [M. O.]

WIENER KLINISCHE WOCHENSCHRIFT.

February 19, 1903. (XVI. Jahrgang, No. 8.)

1. Obturator Hernia of the Left Tube and Ovary. FRANZ SCHOPF.
2. Pellagra in the Southern Parts of the Bukowina. MAX WUERZEL.
3. Bossi's Cervical Dilator. ALBERT BLAU.

1.—Schopf reports in detail the case of a woman, aged 68 years, in whom an obturator hernia first appeared suddenly 3 years previously, with great pain and vomiting. Almost every 3 or 4 weeks since that time the pain in the leg and abdomen returned, accompanied with severe vomiting. Laparotomy was performed under local anesthesia, on account of the poor condition of the patient. An obturator hernia was discovered, the intestine being easily reduced, the left tube and ovary remaining immovable. Therefore, herniotomy was performed. Collapse with death resulted. The autopsy showed acute paralysis of the stomach and intestines, following incarceration of the intestine in the obturator hernia. A review of the literature is given. [M. O.]

2.—Würzel reviews the history, etiology, symptoms, course, complications, pathology, prophylaxis and treatment of pellagra, an intoxication caused by the ingestion of spoiled corn-meal containing vegetable parasites. The nervous system, glandular organs of the abdomen and circulation of the skin are affected. Patients generally have had malaria and are alcoholic, anemic and poorly nourished, and therefore of little intelligence. The skin changes affect only the uncovered portions, a diffuse dermatitis, with bullæ, deep ulceration, pigmentation, indigestion, mental and nervous disturbances of various kinds. In the treatment alcohol should be stopped, good nourishing food given, with arsenic, quinine and strychnine. Statistics showing the value of prophylaxis and several case-histories are given. [M. O.]

3.—After reviewing the various methods of dilating the cervix, Blau describes the Bossi dilator and its uses in detail. He reports its employment in a series of cases of eclampsia, premature separation of the placenta, threatening rupture of the uterus and in high fever with weak labor pains, with 12 case-histories. He concludes that Bossi's dilator should not be discarded now, but should undergo further experimentation. It is especially valuable in eclampsia with an undilated cervical canal, and may be useful in other cases. [M. O.]

VIRCHOW'S ARCHIV.

(Heft 1, Band 169.)

1. Plasmasomes and Granula in the Epithelium of the Kidneys. J. ARNOLD.
2. The Ability of the Lymphocytes to Emigrate. J. ALMKVIST.
3. Two Rare Cases of Hemicephalia with Prosoposchisis Complicated by Nasal Frontal Hernia. Clinical Observations and Anatomical Investigations. W. JOUKOVSKI.
4. The Origin of Cysts of the Female Adnexa, the Formations Attached to Them and to the Adenomata of the Lateral Section of the Tube. G. SCHICKELE.
5. Contribution to the Pathology of Primary and Secondary Carcinomata of the Biliary Ducts. F. MIODOWSKI.
6. Brief Communications. (1) Testing of the Function of the Mitral Valve for Examination of the Heart. Bleichröder. (2) The Preservation and Staining of Microscopical Preparations of Urinary Sediment. B. KOZLOWSKI.

1.—Arnold has undertaken a careful study of the epithelial cells of the renal tubules in order to determine what part the granules found in these cells have in their structure, and in what relation they stand to the plasmasomes, particularly to the rods. Moreover, he attempts to elucidate the functional significance of these bodies as far as it may be. His method was to employ the so-called vital and supravital staining of the kidneys of small animals and, as far as possible, of human beings. The supravital method is employed as follows: Sections are made with a double knife from the kidneys of a freshly killed animal and as quickly as possible placed in the staining solution. The staining occurs only after several minutes have elapsed. The literature of the subject is very carefully reviewed, and Arnold reaches the following conclusions: (1) That, when supravital staining with neutral red is employed, red granules appear in the inner third of the cells, and, after the stain has acted for some time, others appear also in the periphery; (2) the results with methylene blue are not very different; (3) if indigo-carmine is injected into the subcutaneous tissues, only the granules in the inner layer of the cell are found stained; (4) the rods stained with sodium chloride, osmic acid or by Gram's method show a granular structure indicating either that they are composed of a row of granules or of a homogeneous substance in which granules are imbedded; (5) the granular structure of the rods can also be seen in fixed preparations. Arnold does not believe that we are in a position to draw any conclusions regarding the essential nature of the granules, or their functions in the cells. [J. S.]

2.—Almkvist has made a series of experiments on **guinea-pigs, injecting them intraperitoneally with dead cultures of diphtheria and pseudodiphtheria bacilli.** The peritoneal exudate was then withdrawn from time to time and studied under the microscope, only those specimens being used in which a mixture of blood could be completely excluded. Usually leukocytes appeared about one hour after the injection, rapidly becoming more numerous, with a preponderance of the polymorphonuclear forms. Occasionally they appeared to diminish somewhat toward the end of the experiment. Lymphocytes also occurred very early, and it seems incredible that they should be derived from any source excepting the blood. In fact, there is every reason to suppose that they are subject to the same chemotactic principles as are the other forms of leukocytes. [J. S.]

3.—Joukovski reports 2 interesting cases of extreme **congenital deformity of the skull complicated by adhesions of the skull to the membranes of the placenta.** In the first patient there was apparently nothing in the history of either of the parents or of the pregnancy to indicate the cause of the condition. The child was well nourished, but the head was so profoundly altered that prolonged life was impossible. Briefly summarized, the conditions were unilateral prosoposchisis and hemicephalia. The child steadily decreased in weight, although partial feeding was possible. There was a very considerable reduction in the body temperature, a reduction of 10° C. occurring in the first 8 hours after birth. Death appeared to be due to a succession of violent convulsions which commenced on the second day and lasted until the seventh, when death occurred. The second patient also had nothing significant in the history of the parents or the pregnancy. The child was large, weighing 4000 gm. It lived 30 hours, and tetanic spasm appeared 20 hours after birth. There was marked reduction in the temperature, which fell in the course of 8 hours to 26° C. There was no post mortem rise. In this case, in addition to the hemicephalia and prosoposchisis, there was cleft palate and harelip. There can be no doubt that the children suffered from some intra-uterine disease which had produced the adhesions and deformities. [J. S.]

4.—Schickele briefly discusses the various forms of **cysts of the female adnexa,** which he classifies according to their origin as those derived from the germinal epithelium, those derived from the tubules of the epöophoron and those derived from the diverticula of the tubes, with a secondary classification of the pedunculated attachments of the epöophoron, into those derived directly from the tubules and those produced by innumerable invaginations of the celom of the epithelium, and finally a clinical classification of (1), (*a*) the germinal cysts; (*b*) the epöophoron, including the lymph-cysts; (*c*) the cysts of the diverticula of the tubes. (2) Adenoma of the lateral portion of the tube and of hypernephroma. (3), The pedunculated attachments of the lateral ligaments. He then describes forms of these different cysts in detail and exhibits many illustrations. He describes how sometimes in the cysts derived from the germinal epithelium as a solid mass of cells can gradually become hollowed, and he believes that all these masses of epithelium and the cysts derived from them are either derived from the peritoneal epithelium or from the germ epithelium, although after a careful consideration of the literature he concludes that the majority are derived from the latter. The epöophoron cysts are really derived from the transverse tubules of that body, usually those lying in the most lateral position, terminating in small nodular swellings. These may form small cysts. As the cysts increase in size, their relation to these tubules becomes increasingly difficult to determine, and finally impossible. Sometimes the transverse tubules are strangulated, and it is then easy to understand how cysts may be derived from them. Nevertheless, in all cases, whether the connection can be determined or not, Schickele believes such cysts are derived from the epöophoron. The diagnosis of such cysts is to be made from the character of the epithelium, the structure of the wall and its position. He does not believe that there are intraligamentary accessory tubes such as Kossmann has described, and would, therefore, discontinue the use of the term hydroparasalpinx. All the cysts that have been described in this category he includes among the intraligamentary cysts. Lymphangiomata, of which he reports 4 instances, are rather difficult to explain. Possibly they represent retrogressive changes. Certain cysts are also found upon the posterior surface of the tubes sometimes still communicating with the lumen of the tubes and sometimes entirely separate. They are probably to be regarded as due to irregularities in the formation of the duct of Müller. (The paper, which is very valuable, is still unfinished). [J. S.]

5.—Miodowski reports the case of a man, 47 years of age, who for 8 weeks had a sense of pressure in the abdomen, nausea and vomiting and extreme icterus. It was stated that in that period he had lost 52 pounds. The liver was enlarged; the spleen was not enlarged: there was a tumor in the region of the umbilicus. At the autopsy a carcinoma was found in the lower portion of the ductus choledochus invading the pancreas, which was sclerotic and showed areas of fat necrosis. It appears to be extremely rare that induration of the pancreas should be secondary to primary tumor of the ductus choledochus, only 2 other cases having been reported. Not infrequently the duct is involved when the pancreas is primarily affected. He reports a second case of a man, 43 years of age, who had had pain in the abdomen for 6 weeks, but for 3 weeks had been jaundiced. There was a history of attacks of colic, emaciation, enlargement of the liver and palpable gall-bladder. Cholecystotomy was performed and 2 stones the size of a cherry removed from the bladder and 2 from the cysticus. The icterus increased, although there was free discharge of bile through the fistula, and the patient died. At the autopsy a primary carcinoma of the ductus choledochus was found that had extended along the ductus hepaticus and ductus cysticus and involved the gall-bladder. There were secondary nodules in the liver. After a careful microscopical study it was considered possible that the primary tumor mass was in the middle of the ductus cysticus. The third patient, a woman of 54 years, at the age of 34 had had an attack of abdominal cramp associated with icterus and vomiting. At the age of 53 years she had had a similar attack followed at frequent intervals by others. She was emaciated, there was tenderness in the epigastrium, the liver could not be palpated, and the patient was deeply jaundiced. She died, and at the autopsy carcinoma of the ductus choledochus and ductus cysticus with suppurative cholangitis and cholelithiasis were found. There was some atrophy of the kidneys and infiltration of the areas surrounding the pancreas and gall-ducts. The carcinoma appeared to have arisen from the upper end of the ductus choledochus. Some necrosis upon its surface had extended into the ductus cysticus and finally had stopped in the gall-bladder. The fourth patient, a coachman, 50 years of age, had had pain for 5 months below the umbilicus. There was persistent sweating and itching in the body. He was jaundiced and had lost weight. There was a nodular mass extending from the symphysis to the umbilicus. The liver extended 3 fingers below the border of the ribs. A cystic tumor, probably the gall-bladder, was found laterally from the umbilicus. A diagnosis of cholelithiasis was made, operation was performed and the liver was found hyperemic and there were fibrous masses upon it. The gall-bladder was enlarged and adherent at the omentum; it contained half a liter of pus and some stones. The patient died the following day, and at the autopsy carcinoma of the lower portion of the ductus choledochus with stricture of the duct was found. This was situated in the lower third and apparently had arisen from the glands in wall of the duct. The stricture was brought about partly by infiltration of the wall of the duct by the tumor mass, partly by the inflammatory swelling of the periportal glands which had compressed the duct. Miodowski has collected altogether 37 case-histories of this condition from the literature, making altogether 41 cases, 26 in men and 14 in women, and one not given. All cases occurred in patients over 30 years of age, and 31 in patients between the ages of 40 and 70 years. These were situated, 16 times in the duodenal end of the choledochus, 7 of these being limited to the papilla; 11 times at the upper end of the choledochus; 6 in the lower half; in 8 cases definite data are not given. The tumors were usually small, occasionally papillary in character, and sometimes infiltrated. In general, when the histological picture is given, it was found to be that of a cylindrical cell carcinoma. Abscesses of the liver were present in 6 of the patients, and 4 had suppurative cholangitis. In 8 patients an enlarged cyanotic spleen was noted. In 4 cases there was slight ascites. In only one patient was there any dilatation of the duct of Wirsung. Metastasis to the liver was mentioned in 18 patients; metastasis to the neighboring glands was comparatively rare, apparently only one in 7 patients. In the 41 patients gall-stones were found 15 times. Of the symptoms, jaundice occurred in all the patients but one, and the symptoms usually associated with it were present. Hemorrhages from the gastro-intestinal tract were rare. Abnormal sweating is mentioned in 2 instances. The prognosis is extremely unfavorable. Operation appeared to offer little hope. He then reports a case of secondary carcinoma of the ductus occurring in a man, 44 years of age, who was admitted to the hospital with a history of having suddenly vomited 5 weeks before. He had cramp-like pains in the stomach, with loss of appetite and constipation. He had had icterus for 10 days, was emaciated, the abdomen was enlarged, and there was some tenderness just below the xiphoid cartilage. The diagnosis was doubtful, and exploratory laparotomy was performed. A large quantity of fluid was found in the peritoneal cavity, and a hard, nodular tumor was found at the opening of the liver which had also involved the ductus choledochus and ductus cysticus. He finally developed melena and died. A primary tumor was found in the cecum which had evidently given metastasis along the duct. The character of the tumor was not that found in the tumors of the gallbladder, but resembled that of carcinoma of the colon. Finally, in a postscript, he mentions another case occurring in a man of 59 years, who had had colic-like pains in the right upper portion of the abdomen. These had improved, but had recurred, and the patient became extremely emaciated. Tumor of the pancreas was suspected, but alimentary glycosuria could not be produced. An operation was performed, the gall-bladder was found distended and connected with the small intestine. Nothing was found in the choledochus. The patient died 7 days later. At the autopsy a tumor was found in the ductus hepaticus which had reached the size of a goose-egg. It resembled, in microscopical structure, an adenocarcinoma. [J. S.]

6.—(1) Bleichröder describes the following **method of testing the condition of the mitral valves.** The thorax is opened by an incision in the lower portion, the heart held with the apex directed upward, the aorta closed with the fingers, and a stream of water at a distance of about 10 cm. poured upon the heart. If the valves are competent the water remains in the ventricle, if not, a small slit can usually be seen between them, through which the water flows. (2) Kozlowski puts about 1 cc. of a 1% solution of eosin in a tube, pours in the urine, centrifugates, pours off the centrifugated fluid, again centrifugates, takes a drop and places it on a slide and mixes with a drop of Farrant's fluid, covers with a coverglass and absorbs the excess of fluid with blotting paper. Farrant's solution is made as follows: Equal parts of distilled water, glycerine and a saturated aqueous solution of arsenous acid are placed in a glass, and enough gum arabic in morsels added to occupy about one-half the volume of the liquid. This stands for 3 weeks and is stirred daily with a glass-rod until the gum arabic is dissolved. It is then filtered, although this is not absolutely necessary, and is very difficult. The fluid is slightly yellow and of about the consistency of castor oil. Preparations can be preserved for 5 years without change. [J. S.]

DEUTSCHES ARCHIV FUER KLINISCHE MEDICIN.

(Concluded.)

27. The So-Called Inflammatory Glaucoma. L. LAQUEUR.
28. Alkalinuria. H. LEO.
29. Treatment of Scarlet Fever with the Serum of Convalescents. E. von LEYDEN.
30. Observations from the Landesbad in Baden-Baden. F. NEUMANN.
31. The Pathogenicity of the Bacillus Pyocyaneus. O. SOLTMANN.
32. The Concentration of Solutions and their Influence Upon Lethal and Toxic Effects. STOKVIS.
33. Remarks upon the Nature and Diagnosis of the So-Called Nervous Dyspepsia. A. STRUEMPELL.

27.—Laqueur believes that the so-called **inflammatory glaucoma** is a neurosis. It occurs after emotional disturbances, may disappear very suddenly and apparently corresponds to a condition that could be brought about by irritation of the secretory nerves of the eye. The course of these nerves appears to be through the cervical sympathetic. The effect of extirpation of the cervical sympathetic which theoretically should give relief, is not yet positively determined. [J. S.]

28.—Leo reports the following case. A girl of 22 years had suffered from slight impairment of appetite and noticed that her urine was milky. Otherwise there was nothing abnormal. Examination of the urine showed that it had an alkaline reaction and heavy sediment which consisted of crystals of triple phosphate, amorphous phosphate, calcium phosphate and carbonate, and occasionally of ammonium urate and calcium oxalate, which alternated with the phosphaturia. The degree of alkalinity was considerable. It often required more than 70 cc. of normal salt solution to neutralize 100 cc. of urine. There was no diminution in the excretion of uric acid. There was diminished acidity in the stomach contents. The treatment seemed to be rather inefficient; change in the diet had no effect; the administration of inorganic acids caused some diminution in the weight of the sediment, and urotropin, which has been recommended by Caspar, was without effect. [J. S.]

29.—Von Leyden has **treated** a number of cases of **scarlet fever with the serum of convalescents,** injecting at first small doses and subsequently always 20 cc. Altogether 16 patients were so treated. Of these 16 patients, 13 are completed observations. Three were improved; 9 were slightly improved; and one was improved, although the diagnosis was doubtful. The remaining 3 were greatly improved. One showed a lytical fall in the temperature immediately after the injection, and the other 2 patients showed a critical fall in the temperature. There were no injurious effects of the injection of even 40 cc. of the serum. It should probably be injected as early in the course of the disease as possible. [J. S.]

30.—Neumann reports a variety of **cases** which he has observed in Baden Baden. The clinical notes cannot be repeated in an abstract, but they included 2 cases of scleroderma, and 3 of chronic stiffness of the spinal column. He also mentions the results of phototherapy which was employed in 92 cases. He observed that cases with inflammation of the nerves, chronic inflammations of the joints, etc., were not favorably affected. The Jandus lamp, however, proved very efficient in 6 cases of subacute and chronic nephritis. Several cases of arthritis deformans appeared to be improved. In 3 cases of peripheral neuritis with muscular atrophy there was considerable improvement. [J. S.]

31.—Soltmann reports the case of a boy, 13 years of age, who suddenly developed fever, headache, vomiting and constipation. He was admitted to the hospital, developed diarrhea, was cyanosed, and there were evidences of pneumonia. The spleen and liver were both enlarged. A diagnosis of infectious pneumonia was made, and shortly afterward the patient died. The lungs were hepatized and in addition were filled with small yellowish-white spots. There were numerous yellowish and yellowish-green spots in the mucous membranes of the gastro-intestinal tract. Cultures showed in addition to the presence of the diplostreptococcus, the **bacillus pyocyaneus** in considerable numbers and in a very virulent form. The paper is illustrated with some beautiful plates in colors. [J. S.]

32.—Stokvis calls attention to the fact that the prevailing principle that the lethal, toxic or therapeutic activity of a chemical substance is proportionate to the quantity used, is not yet placed upon solid foundation. There can be no question, he thinks, that the old doctrine *corpora non agunt nisi soluta* is true. He has performed a series of **experiments with potassium bromide upon the hearts of frogs** which were pulsating in a medium composed of 200 cc. of beef blood, and 600 cc. of a 0.6% sodium chloride solution. The dilution of the potassium bromide varied from 1 to 250 to 1 to 10,000; the molecular concentration varied from M/300, to M/12,000. It was found that 2 or 3 mg. was the lethal dose. It was also found that the dividing line between toxic and lethal was very sharply drawn; thus a molecular concentration of M/600 is lethal, and a molecular concentration of M/660 is merely toxic. The molecular concentration of M/12,000 is also toxic, and further dilutions were not tested. The effect of the drug was to slow the systolic action of the heart. The details of the experiments are given, and Stokvis concludes that, although they correspond very closely, we are not yet in a position to decide just what effect a given molecular concentration will have upon a heart of definite weight if allowed to act for a certain period of time, although he hopes that some day we shall be able to reckon exactly the effect. At any rate, the experiments show that the total amount according to weight of potassium bromide employed has not the effect upon the frog's heart which our present principles of dosage require. [J. S.]

33.—Strümpell discusses **nervous dyspepsia**, which occurs associated with a normal gastric secretion or when the secretion is disturbed, although he believes that we should accept a rather broader limit for secretory variations than is actually done. In addition to these changes in secretion, however, we should study very carefully the changes in the motor activity of the stomach and also the changes in the position of the stomach. However, we are still uncertain regarding the significance of any of these symptoms and particularly their relation to the nervous system. The manner of life of the patient is also of considerable importance. He also discusses the general physiological influence that excessively active physical representation exerts upon the functions of the body, and then the development of nervous perceptions as a result of psychical representations that correspond to an expected or feared sensation. This is commonly called autosuggestion. Finally, the will may be preventive in various ways, but particularly so as to cause interference with the taking of nourishment. He is very doubtful whether such a thing as a psychogenic dyspepsia exists, although he admits that in many cases a pure psychotherapy is efficient. He prefers to substitute the term—**functional dyspepsia** for the term nervous dyspepsia. [J. S.]

MEDICINSKOIE OBOZRENIE.

Vol. LVIII, No. 20, 1902.

1. On the Application of Antisyphilitic Treatment in Cases of Concurrent Syphilis and Tuberculosis.
A. P. LANGOVOY.
2. The Possibility of the Employment of Chemical Light-Rays in Ophthalmic Practice. A. A. MAKLAKOFF.

1.—Langovoy concludes from a review of the literature and his own observations that the diagnosis of co-existing pulmonary tuberculosis and pulmonary syphilis is at times extremely difficult, and that in such cases specific treatment should be employed. By curing the syphilis, the patient is left in a better condition to battle with the tubercular infection. [A. R.]

2.—Maklakoff discusses the employment of **phototherapy**, especially the chemical rays, in the treatment of some diseases of the eye. He reviews the literature on the subject and gives an account of his own experiments which show that it is **impossible to utilize the chemical rays of the sun for therapeutic purposes**, since by cutting off the heat we also remove the chemical energy. The only practical form of chemical rays is that derived from electric arc light, and the author believes that the chemical rays obtained from a Voltaic arch would be the best for therapeutic purposes. [A. R.]

DEUTSCHE ZEITSCHRIFT FUER CHIRURGIE.

January, 1903. (Vol. 66, Nos. 3 and 4.)

11. The Surgical Treatment of Cystitis and Vesical Tumors in Bilharziosis. CARL GOEBEL.
12. Appendicitis with Cholelithiasis or Cholecystitis.
ADOLF BECKER.
13. An Improved Method for Finding Tubercle Bacilli in the Urine. OLOF H. FORSSELL.
14. The Effect of Nephrotomy After Nephrectomy.
OSCAR LANGEMAK.
15. Arterial Suturing. HERMANN SCHMITZ.
16. An Operative Method for Reducing Old Subcoracoid Luxation of the Humerus. JULIUS DOLLINGER.
17. Functional Flatfoot of Traumatic Origin. HERHOLD.
18. Peripleuritis. KARL VOGEL.
19. Operative Reposition in Irreducible Dislocation of the Hip. HAEDKE.
20. Congenital Atresia and Hypoplasia of the Ileum.
ERNST FUCHSIG.

11.—Göbel has collected 16 cases of **bilharzic cystitis**, with urethral stricture in 7, for which external urethrotomy was performed; in 9 of which suprapubic cystotomy was the method of operation. He also has found 31 cases of **bilharzic tumors of the bladder**, some even carcinomatous and sarcomatous, treated by cystotomy or resection. His own 6 case-histories are given in full. He concludes that in severe forms of bilharzic cystitis suprapubic cystotomy and scraping out the bladder is excellent palliative treatment, relieving symptoms and making the patient again able to work. Suprapubic cystotomy is also indicated when bilharzic tumors exist in the bladder, the fistula remaining being much less of a complaint than the pain, etc., due to the tumor. [M. O.]

12.—Becker reports 5 cases of **appendicitis and cholelithiasis**. He finds that in diagnosis the fact should never be forgotten that both diseases may exist together. In one of his cases laparotomy was performed twice, first for appendicitis, later for cholecystitis. A review of the literature shows only 34 such cases. The diagnosis is most difficult. [M. O.]

13.—Forssell describes his **apparatus and method for discovering tubercle bacilli in the urine**. Bacilli are only found in the urine in large quantity when the urogenital tract is affected by tuberculosis. Otherwise it is very rare to find any. The differentiation of tubercle bacilli from smegma bacilli in the urine is as yet uncertain. [M. O.]

14.—Langemak reports a series of recent experiments upon animals to show **the effect of nephrotomy after nephrectomy**. He finds that the hyperemia induced by nephrotomy is of value in aiding the secretion of the kidney left after nephrectomy. [M. O.]

15.—After reviewing the experiments in **suturing arteries** in animals, Schmitz collected but 21 cases of sutures of arteries in human beings, 7 of them being upon the axillary artery. A fine needle and continued sutures, passed through all 3 layers of the arterial wall, are advised, the fingers being used to stop hemorrhage during operation. The best method seems to be circular sutures with invagination of the artery. [M. O.]

16.—Out of 19 **old subcoracoid luxations of the humerus**, Dollinger treated 11 by his **method of operative reposition**, while 6 were reduced by Kocher's method. Seven of these cases were uncomplicated. The steps of his operation, with details in the technique and diagrams, are described. He found that the retracted and sclerotic subscapularis muscle furnished the hindrance to reduction. This shows Kocher's statement that the hindrance was due to adhesions about lacerations in the joint capsule to have been incorrect. Suppuration occurred in 6 out of the 11 cases operated upon. [M. O.]

17.—Herhold describes several cases of **functional flat-foot**, which seems to occur easily in people of a gouty diathesis, following an injury, or with both conditions. There may be pain, pain only with injury, and varying grades of valgidity; or the valgidity varies when the patient stands, sits or walks. Both pain and valgidity may be absent except with movement. The condition is frequent among soldiers. [M. O.]

18.—**Peripleuritis** is an inflammation of the tissue lying between the costal pleura and the chest wall, generally going on to the formation of a circumscribed abscess. This is not so very rare, since Vogel has observed 9 typical cases, the histories of which follow. The abscess or fistula resulting was treated surgically. While most cases were primary, some were secondary, due to tubercle bacilli. The diagnosis is difficult and the prognosis very unfavorable. [M. O.]

19.—Haedke reports the case of a boy of 14, with **irreducible dislocation of his right hip**, following an accident. The bloodless operation gave an excellent result. [M. O.]

20.—Fuchsig reports the case-history of a boy of 3 days, who died of imperforate rectum in 24 hours, without operation on account of the low vitality of the infant. The autopsy showed **congenital complete atresia and hypoplasia of the ileum.** A sort of retroperitoneal hernia was found. [M. O.]

ANNALS OF SURGERY.

January, 1903.

1. Subdural Interposition of Rubber Tissue Without Removal of the Gasserian Ganglion in Operations for Tic Douloureux. ROBERT ABBE.
2. Considerations Relative to Basedow's Disease. THOMAS W. HUNTINGTON.
3. Ureter-Catheterism: Its Purposes and Practicabilty. BRANSFORD LEWIS.
4. On a Possible Cause of Difficulty in the Differential Diagnosis Between Renal Calculi and Hepatic Calculi. CHARLES E. BARNETT.
5. Some Points on the Ligation of Arteries. ROBERT H. M. DAWBARN.
6. A Case of Tuberculosis Resembling Carcinoma, in the Tongue of an Old Man. L. B. ZINTSMASTER.
7. Persistent Thyrolingual Duct: Complete Branchial Fistula. HORACE J. WHITACRE.
8. Cysts in Connection with the Teeth. JOHN CHADWICK OLIVER.
9. Excision of the Clavicle. H. BEECHMAN DELATOUR.
10. Osteoma of the Knee Joint. R. TUNSTALL TAYLOR.
11. Posterior Dislocations of the Head of the Tibia. JOHN G. SHELDON.
12. An Apparatus to Facilitate the Application of Plaster Jackets during Spinal Hyperextension. ERASMUS DARWIN FENNER.

1.—See **Philadelphia Medical Journal**, Vol. 2, No. 3, p. 105.

2.—Treated editorially.

3.—Lewis gives the indications for **cystoscopy** and reports 7 cases indicating its value. His cystoscope consists of an ocular tube, a handle and a beak, containing a small coal electric lamp. The electric contact is made at the handle. An obturator assists in the introduction of the instrument into the bladder, after which it is withdrawn and the ocular window is placed in its stead. This window is the only thing intervening between the eyes and the object undergoing inspection. There are no lenses, no magnification, no inversion of the image and no fluid to look through or become cloudy and prevent inspection. The bladder is inflated with air through a stop-cock on one side of the instrument. There are 2 tubes which transmit ureter catheters to the field illuminated. A lens or prism may be inserted if necessary. The table employed should be capable of giving a high pelvic elevation. Cocaine is used for anesthetization. [F. T. S.]

4.—Barnett points out the close relationship existing between the pelvis of the kidney and biliary conduits. A needle passed through the right lumbar region, piercing the pelvis of the kidney, would pass directly through the descending duodenum at a point at which the ductus communis choledochus and the pancreatic duct opens, then into the transverse colon. The space passed through would be extraperitoneal. In total occlusion of either the cystic duct or the ureter the muscular action in the gall-bladder and pelvis of the kidney would be the same. Pain in the interscapular region may be caused by involvement of the sympathetic nerves. After discussing the **similarity of symptoms existing between renal and hepatic calculi,** he reports a case in which gall-stones simulated nephrolithiasis. [F. T. S.]

5.—Dawbarn, in amputating, twists all vessels too small to have a name. For vessels large enough to have a name he ties, using either "granny" or "reef" knots, and he ties 3 times instead of the usual 2. For the main arteries he uses a suture-ligature and ties gently the first half of the friction knot. The tourniquet is then removed, and the ligatures tightened if necesary, after which the knot is completed. He gives some points concerning the anatomical guides for **ligation of various arteries,** and describes a kind of ligation forceps which resemble the ordinary Wells hemostat, excepting that the jaws are turned nearly at right angles to the handle. After gently working its blunt point around the artery, the jaws are opened and the catgut seized and withdrawn, after which it is used as a tractor until the knot is tied. [F. T. S.]

6.—Zintsmaster reports a case of **lingual ulceration** occurring in a man, aged 80 years. The tissue had all the clinical characteristics of carcinoma, but, upon examination, it gave the microscopical picture of tuberculosis. [F. T. S.]

7.—Whitacre reports a case of complete **branchial fistula** and a case of persistent **thyroglossal duct.** He draws the following conclusions: That the mesoblast in the neck undergoes complete circular segmentation to form 5 branchial arches, and that between these arches there are deep fissures, both on the inner and on the outer surface, which are separated from each other only by a double layer of epithelium (epiblast and hypoblast). That the persistence of these clefts may form a blind external or a blind internal pocket and that a breaking through of the separating membrane will form a free communication between the skin surface of the neck and throat. That the first cleft maintains its fetal arrangements and forms the auditory canal. The double layer of membrane forms the ear drum. The cleft cannot, therefore, form a branchial fistula. That the second cleft has its inner opening in the region of the tonsil. That the outer surface of the neck becomes so flexed that a pit forms (sinus præcervicalis). The bottom of this is formed by the second, third and fourth clefts. The pit gradually closes over the top on a level with the surface of the body and buries the original clefts. It is, therefore, apparent that a complete branchial fistula must be the result of an additional fistula connecting the skin surface with the pit, i. e., a failure of the pit to close completely. The outer defect in the wall of the pit may be at any point on the surface of the neck from the angle of the jaw to the clavicle, and from the middle line to the posterior border of the sternomastoid. The third and fourth clefts never form fistulæ. The second branchial cleft is the one that invariably gives rise to these fistulæ, and, while the outer opening may be anywhere on the surface of the neck, the inner opening is always in the region of the tonsil, the primitive position of the second inner cleft. Fistulæ never open into the larynx or trachea, because the respiratory bud comes off below the branchial clefts and arches. Median branchial fistulæ do not exist. The outer opening may be in the middle line, but the tract soon deviates to one side or the other. The thyroglossal duct may give rise to fistulæ, and these must of necessity be situated in the middle line and either below the hyoid bone, behind the hyoid bone, just above the hyoid bone or in the floor of the mouth. Branchial fistulæ usually manifest themselves before the age of 20, but may not appear before the age of 40 or even later. Embryonal defects are often hereditary. A large proportion of branchial fistulæ is complete, but is not recognized as such because the tortuous nature of the sinus baffles probing. The injection of a bitter fluid, which the patient may taste, or the use of colored fluids which may be seen, will aid much in establishing this point. The secretion is usually slight and mucous in character, or opalescent and sticky, and contains epithelial cells. The size of the outer opening is no guide to the size of the sinus, but a small skin opening often indicates a large cavity beneath. The wall of the sinus is usually made of connective tissue, lined by epithelium. The treatment consists in complete excision. [F. T. S.]

8.—The recognition of **cysts in connection with the teeth** rests upon the absence of a permanent tooth after it should have been erupted, absence of any history of its removal; upon the cystic nature of the growth; upon the crackling sensation of the thin, bony cyst wall when pressed upon; and upon exploratory incision. The prognosis is good as to life and from an esthetic point of view. Treatment consists in evacuation of the cyst, curettage and packing.

9.—Delatour reports 3 cases of complete and 2 of partial **excision of the clavicle.** The indications for the operation are: Tumor, necrosis, compound fracture and exuberant callus. In the cases of complete excision, complete functional result was obtained in a very short time. [F. T. S.]

10.—Taylor reports a case of **osteoma of the knee joint** following an injury, in which no external evidence of its existence was manifest; the condition having been treated for rheumatism. The X-rays revealed the tumor which was successfully removed by operation, perfect motion following. [F. T. S.]

11.—Sheldon reports 3 cases of complete **posterior dislocation of the head of the tibia** followed by gangrene of the leg. [F. T. S.]

12.—Fenner describes the Bloom **apparatus for extension during the application of a spinal plaster-jacket.** It consists of 2 iron frames upon which rest the pelvis and shoulders respectively, and of a jack-screw which exerts pressure directly upon the knuckle of deformity. [F. T. S.]

AMERICAN JOURNAL OF OBSTETRICS.

January, 1903.

1. Personal Views on the Surgical Treatment of Perforated Gastric Ulcer with General Infection of Peritoneal Cavity. Notes of a Second Successful Case. HENRY HOWITT.
2. The Mechanism of Labor, and Instrumental Assistance when the Head is Transverse in the Pelvic Brim. WILLIAM GILLESPIE.
3. The Mechanism of Labor in Posterior Positions of Vertex Presentations. SIGMAR STARK.
4. Removal of Vesical Papilloma Through an Incision in the Septum with the Patient in the Knee-Chest Position. HOWARD A. KELLY.
5. Malformation of the Uterus. R. S. HILL.
6. A Report of Two Cases of Pregnancy Complicated by Severe Heart Lesion. WILLIAM R. NICHOLSON.
7. Treatment of Gonorrhea in the Female. WILLIAM B. SMALL.
8. Puerperal Eclampsia. EDWARD T. ABRAMS.
9. Hernia of the Uterus: Both Ovaries—One of These Being Cystic—Fallopian Tubes, Bladder and Rectum in a Sac Formed by the Vagina. MANNING SIMONS.
10. Etiology and Prophylaxis of Lesions of the Female Pelvic Tract Following Labor. EDWARD J. HILL.
11. Rupture of the Urinary Bladder. JOHN W. KEEFE.

1.—Howitt, in speaking of the surgical treatment of **perforated gastric ulcer** with general infection of the peritoneal cavity, remarks that the onset of this accident is announced suddenly by an excruciating pain in the epigastrium. All the symptoms of profound shock follow immediately. The pulse is not greatly accelerated, as a rule, and may be even slower than normal at first, but it gradually becomes more rapid, thready and almost imperceptible at the wrist. The temperature is subnormal. Howitt urges the nonadministration of morphine until after the diagnosis has been made. The treatment consists in immediate operation with constant irrigation of the peritoneal cavity. The incision should be in the median line from the ensiform caritlage to the pubis. Evisceration of the bowels follows, and when the ulcer is exposed it may be excised if this be possible. Generally the perforation is simply closed with 2 or more rows of sutures. It is always advisable when practicable to attach a tag of omentum over the part. He believes it is always safer to resort to drainage. The suture should not be removed before the eighth day. [W. A. N. D.]

2.—Gillespie states that there are many conditions which render it advisable or necessary to apply **forceps at the superior strait.** He considers those conditions only which cause transverse positions of the vertex, such as flat pelvis. In these cases the head is not only transverse in the brim, but approaches that side of the pelvis toward which the occiput is directed, leaving the other side comparatively free. As the concave edge of the blade must be turned toward the occiput, it follows that the blade which must find lodgement under the pubes passes upon this comparatively empty side. There is, therefore, much less likelihood of the blade being nipped and held firmly between the side of the pelvis and the head than in the more normal oblique positions in which there is disproportion. So long as the sagittal suture is drawing nearer the pubes we should keep hands off; but when it begins to recede, showing that the point of contact with the promontory has become fixed, assistance comes within the range of possibility. Gillespie describes the method of applying the blade under these circumstances. A frequent cause of transverse position at the brim is an increased tilting of the brim as a result of excess of the sacrovertebral angle. Lack of flexion is another element in the problem of posterior rotation, which is intimately associated with abridgment of the conjugate. The author reports 3 cases. [W.A.N.D.]

3.—Stark describes the **mechanism of labor in occipitoposterior positions** under the various circumstances with which this complication occurs. He describes 4 varieties, and speaks of the form mentioned by Penrose in which the conversion of an occipitoposterior presentation into a mento-anterior presentation becomes possible. [W.A.N.D.]

4.—Kelly, after describing a case of removal of **vesical papilloma** through an incision in the septum with the patient in the knee-chest posture, concludes that the method of operating on the bladder in the knee-breast posture has a wide range of applicability, being well adapted to the removal of some vesical tumors. The distended bladder in this posture is far less vascular than in any other position. What blood does escape falls toward the vertex and does not obscure the field. The cut bladder wall is much thinner than in the contracted state. The vesical walls can be everted into the vagina to a remarkable degree. The bladder wall can be resected and sutured with security in this way. [W. A. N. D.]

5.—Hill confines the term **uterine malformation** to those conditions having their macroscopic origin only during the period of uterine development. Ill-formations from neoplasms are not included. He gives the embryology of the uterus and vagina. He divides malformation of the uterus into *infantile* uterus, caused by retardation or cessation of growth after birth; and *aberrant* uterus, produced by a departure or divergence from the normal development during embryonal life, with or without a retardation or cessation of growth. The simplest degree of malformation is the *nonfundated* and *grooved* uterus. The *septate* uterus is the next in degree of malformation. The third variety of the aberrant class is the *double-horn* or *bicornate* uterus. The *double* uterus or *didelphys* is probably the most frequent variety of the aberrant anomalies, and is the result of a separate development of the Müllerian ducts. The uterus with 2 cervices and one body is produced by the fusion of the extremities of the lower 2-3 of the Müllerian ducts, and of failure of the centers of the same parts of the ducts to unite. The *unicornate* or *one-horned* uterus is due to the failure of one, more often the right, Müllerian duct to develop, while the other continues its growth more or less uninterruptedly. *Absence* of the uterus is only a relative term; it is exceedingly rare. The *accessory* uterus may be either a second or a third uterus.

It has only been detected on *post mortem* examination, and, as a rule, is nothing more than a small, solid mass, though exceptionally it may be cavernous. [W. A. N. D.]

6.—Nicholson reports 2 cases of **pregnancy complicated by severe heart lesions**. He calls attention to the varying mortality records reported by the obstetrical authorities and believes that the difference is due to the different significance of the various murmurs. Mitral stenosis is to be regarded as the most serious form of cardiac complication, while aortic stenosis, aortic incompetency and mitral regurgitation follow in the order given. The most important point to be considered in the treatment of pregnancy complicated by heart disease is the advisability of terminating the gestation. This should be done if the case presents grave symptoms before the third month has ended. But it should always be remembered that the termination of pregnancy cannot be expected to accomplish a great deal at this time, as the uterus is so small that there can be no mechanical difficulty produced by the pregnancy, and the only relief that this termination can accomplish will be the relief from the slight increase in the heart work. [W.A.N.D.]

7.—Small considers the treatment of **gonorrhea in the female** in its various forms affecting the urethra, cervix, vagina, the vulva, the rectum and the inguinal glands. In specific urethritis he recommends the use of argyrol in from 5% to 20% solution. This is also of value in the cases in which the bladder itself is involved. In the chronic cases Finger's ointment is of value. The newer silver salts are also recommended in the treatment of the cervical and vaginal forms of the disease. Rectal gonorrhea is usually a sequence of infection by the vaginal discharge. A 10% solution of argyrol may be used to advantage in the treatment of this condition. [W. A. N. D.]

8.—In the treatment of **puerperal eclampsia** Abrams states that prophylaxis stands pre-eminent. The strictest hygienic life should be enjoined, and the emunctories must be stimulated. The use of thyroid extract has not given satisfactory results. In an eclamptic patient symptoms of thyroidism are very easily induced. The treatment may be summed up in the one word, elimination, and nothing will give such immediate results as blood-letting followed by infusion or transfusion of saline solution. [W. A. N. D.]

9.—Simons reports a case of **hernia of the uterus** in a colored woman, 57 years of age. Of 19 cases in literature, 13 have been observed in the inguinal regions, 5 on the right and 8 on the left side. The uterus has been found twice in femoral hernia, 3 times in umbilical hernia, and only once in an obturatur hernia. Generally the uterus is altered in its form, and its situation is modified. Frequently it is accompanied by the ovary and tube and occasionally the intestine and omentum have been found with it. [W. A. N. D.]

10.—According to Hill **perineal laceration** occurs in the vast majority of cases to one or other side of the median line. Most frequently it is found in the right posterior wall, more rarely to the left of the vagina. There are some forms of perineal laceration accompanied with so much atrophy of the tissue that their restoration proves an impossibility. Laceration of the vagina into the rectum above the perineum is rare. In a certain percentage of these cases the condition of the soft parts of the mother is abnormal. They are of low vitality and readily injured. Some of the tears result from a relatively large fetal head or an abnormal presentation of the fetus. Early rupture of the membranes is a frequent cause of perineal laceration, and operative interference causes the most frequent and by far the most serious injuries. Too rapid extraction of the fetus and podalic version very frequently result in injury to the maternal tissue. The result of these injuries is generally some form of prolapse of the soft parts. [W. A. N.D.]

11.—Keefe reports a case of **rupture of the urinary bladder** which resulted in a cure. Rupture of the bladder may involve one or all 3 walls of the viscus. The rupture is either intraperitoneal, extraperitoneal, or subperitoneal, the mucous and muscular walls being ruptured while the peritoneal covering is left intact; the latter variety is very uncommon. The most frequent location of rupture of the bladder is in the upper and posterior portion. The symptoms of bladder rupture are shock, pain over the hypogastrium, frequent micturition and the voiding of a small amount of urine mixed with blood. Catherization is of special value. The treatment consists in early operation with thorough drainage to remove the extravasated urine. [W. A. N. D.]

REVUE DE CHIRURGIE.

November, 1902. (22me. Année, No. 11.)

1. Simple Ulcer of the Large Intestine. E. QUENU and P. DUVAL.
2. Ethyl Chloride in General Anesthesia. H. GIRARD.

1.—Will be abstracted when concluded.

2.—Will be abstracted when concluded.

December, 1902. (22me. Année, No. 12.)

1. Heredity in Synovial Ganglions. C. FERE.
2. The Mechanism of Luxations of the Humerus by Muscular Action. ALEXIS de HINTS.
3. Simple Ulcer of the Large Intestine. E. QUENU and PIERRE DUVAL.
4. Ethyl Chloride as a General Anesthetic. HENRY GIRARD.

1.—Féré reports the history of a woman with **synovial ganglions**, who had 2 daughters, both of whom had synovial ganglions. Two of the 3 children of one and one of the 4 children of the other also had ganglions on the hands or feet, or both. Of her 8 grandchildren, most of whom have nervous disease of some kind, only 3 had ganglions. Among her descendants, of 8 girls, 6 were affected; of 9 boys, but one had a ganglion. In most cases the tumor developed suddenly, after an epileptic attack or some other form of brusque movement. [M. O.]

2.—In a comprehensive article de Hints finds that the deltoid alone may cause **subglenoid dislocation**, when the arm is raised and the trochanter strikes the acromion. The pectoralis major and latissimus dorsi may cause subglenoid luxation if the arm is raised and the deltoid contracts violently at the same time. The pectoralis major alone, in certain positions of the arm, may cause **subcoracoid, rarely suglenoid dislocation**. Dislocation under the coracoid process may be due to the pectoralis major with the deltoid. They may also cause **subacromial luxation**. Most of them are indirect dislocations; yet the pectoralis major may act directly in causing subcoracoid luxation. [M. O.]

3.—Quénu and Duval believe that **simple ulcer of the large intestine** may exist, analogous to simple gastric ulcer. The etiology of ulcer of the colon is unknown. But many cases have been described pathologically, both single and multiple. The ulcer may be superficial and heal, or it may be deep, perforating, causing peritonitis, abscess, etc. Several observations follow in full, showing that the arterioles are severely affected, either by obliterating or thrombotic endarteritis. There is probably some predisposing, dystrophic cause, such as general intoxication, with some determining, occasional cause, such as vascular lesions. The hemorrhagic necrosis once begun soon becomes chronic. Symptoms are difficult to recognize, pain, hemorrhage, constipation, indigestion, etc. Perforation is the most important complication. Hemorrhage or peritonitis may also occur. The diagnosis is very difficult. Operation is always indicated when serious complications arise, perforation, peritonitis, etc. The histories of 29 cases follow. [M. O.]

4.—**Ethyl chloride gives perfect anesthesia in man as in animals.** Its action is rapid, the excitement slight, there is no reaction, and the return to consciousness is instantaneous. Therefore, care is necessary to continue the anesthetic until the operation is over. As very little air should be inspired, a good apparatus is needed. It is to be preferred for minor operations, since it is not followed by nausea or vomiting. It does not irritate the larynx, but may produce renal, hepatic and cardiac lesions. It may be given first, followed by ether or chloroform, with good results. Tables of observations upon men and animals follow. [M. O.]

Society Report.

MANHATTAN DERMATOLOGICAL SOCIETY.

Meeting held March 6, Dr. Ludwig Weiss, president, in the chair.

Dr. J. P. Oberndorfer showed a patient, who had already been presented last November, with **milia and lichen planus.** Upon Unna's ointment and Asiatic pills, as many as 16 daily, the milia had greatly improved. The patient had not shown any effects of these large doses of arsenic. Dr. Abrahams considered the lichen more pronounced than formerly. Dr. Sobel advised curetting the milia. Dr. Weiss thought it an atypical case of lichen obtusus; he also believed that the large red infiltrated lesions might be beginning fibroma. Dr. Cocks said the lichen was more typical than when first presented. Dr. Gottheil said the production of a row of lichen papules following injury, such as a pin scratch upon healthy skin, was of peculiar diagnostic significance. Dr. Ochs had noted this phenomenon. He considered prutitus a primary symptom of lichen planus. Dr. Cocks had seen a case in which pruritus had preceded the eruption. Dr. Bleiman said that pruritus was generally considered a secondary symptom.

Dr. W. S. Gottheil presented a case of **nondiabetic xanthoma tuberosum** in a man who had nodular masses, single and in clusters, from the size of a large pinhead to a half inch in diameter, yellowish or orange in color, on the knees, arms, fingers and back of hand. They varied in consistency, some being very hard and infiltrated. Urine examination was negative. Dr. Crary thought that many of these nodules resembled keloid and rheumatic nodes. Drs. Oberndorfer and Weiss considered the nodules atypical, and Dr. Weiss believed the diagnosis to be doubtful. Dr. Abrahams agreed with Dr. Gottheil on the diagnosis, but stated that the nondiabetic form was extremely rare.

A discussion then followed upon **the treatment of erysipelas,** in which most of the members present took part.

IL POLICLINICO. (SEZIONE PRATICA.)

January 31, 1903.

1. Contribution to the Treatment of Acute Rheumatic Polyarthritis with Endovenous Injections of Corrosive Sublimate. G. AVANZINO.

1.—That acute rheumatic polyarthritis is of infectious origin is questioned by few; and the work of Singer, Wasserman and Dagnino furnishes some evidence that the pathogenic agent belongs to the pyogenic micro-organisms. Singer and Roncagliolo sought to overcome the pyogenic infection in such cases by endovenous injections of corrosive sublimate, with results sufficiently encouraging to stimulate the further essayal of this line of treatment. Avanzino has treated 16 cases of acute rheumatic polyarthritis by this method, and reports in all a short duration of the disease, absence of complications, a speedy lowering of the temperature and mitigation of the pain, permitting early movement of the affected joints, even though the swelling persisted. The author has observed that patients who received endovenous injections of sublimate had no return of their trouble, though prior to this treatment repeated attacks had been the rule. He also quotes the case of a young man who had been subject to acute rheumatic attacks, and who, after receiving numerous intramuscular injections of sublimate for the cure of syphilitic infection, remained free from rheumatic trouble after this treatment; this constituting, in the author's opinion, one more argument in favor of the efficacy of corrosive sublimate in the treatment of rheumatism. [R. L. E.]

Original Articles.

MOVABLE RIGHT KIDNEY AS A CAUSE OF PANCREATIC DIABETES.*

WITH A REPORT OF CASES CURED BY NEPHROPEXY

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"Diabetes mellitus, a disorder of nutrition in which sugar accumulates in the blood and is excreted in the urine, the daily amount of which is greatly increased—Osler." It is most common in males, occurs at all ages, but most frequently between 30 and 60. Hereditary influences may be traced in one third of all cases.[1]

Gout, syphilis, malaria and mental shock, have been regarded as predisposing causes, and severe nervous strain as an exciting cause. Obese persons, particularly those having much omental fat, are quite liable to it. Injuries to, or disease of, the spinal cord or brain have caused it—tumors and hemorrhages at the base of the brain, circumscribed lesions of the floor of the fourth ventricle, chronic alcoholism, sexual excesses, disorders of the liver and kidneys and intestinal tract; and it has occasionally followed the infectious fevers. It may set in during pregnancy, and in rare instances may only occur at this period.[2]

During the last few years observation has made it probable that the pancreas is the seat of the trouble, as glycosuria has been present with nearly every known pathological lesion of this gland, and most of our knowledge of diabetes mellitus has been largely determined from experimentation upon animals in whom it can be artificially induced by extirpation of the pancreas. Hausemann has found lesions of this organ in nearly fifty per cent. of the cases, although no one lesion is constantly present. In dogs it is necessary to remove the whole gland to produce glycosuria. If a small portion remains, sugar does not appear in the urine. Such facts have led to the theory that the pancreas, like the thyroid gland, forms an internal secretion, a ferment, which may easily enter the liver through the portal system and modify the hepatic glycolytic action.

A. Mathieu and L. Larrier[3] consider the experimental diabetes analogous to that seen in man, and conclude that diabetes of the obese is chiefly a nutritive disturbance, while diabetes in thin subjects is due largely to pancreatic disease.

E. L. Opie,[4] in the clinical and pathological study of chronic pancreatitis with diabetes mellitus, describes minute changes in the gland, in the so-called islands of Langerhans, also studied by Herter[5] and others. Ssobolew[6] has demonstrated that these so-called ductless islands form an internal secretion and are anatomically and functionally distinct from the ordinary digestive apparatus of the pancreas, by ligation of the pancreatic duct in dogs, cats and rabbits, without the production of diabetes; while the digestive structures disappeared, the islands remained unchanged.

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*Read before the Rocky Mountain Inter-State Medical Association, Cheyenne, Wyo., Sept. 9 and 10, 1902.

Blum[7] and Croftan[8] have produced diabetes in animals by injections of suprarenal extract. Herter and Richards[9], working on the same line, found in two dogs that died after injections of 6 cc. of adrenalin, 1 to 1,000, well-marked lesions in the islands of Langerhans, the neuclei refusing to stain.

Llewellyn Phillips,[10] of Cairo, Egypt, in a paper on the Surgical Aspects of Glycosuria and Diabetes, divides the cases into four classes as follows: (1) Those in which the glycosuria is caused by the surgical lesion. (2) Those in which the glycosuria causes the surgical lesion. (3) Those in which the glycosuria and the surgical lesion exist independently and do not influence each other. (4) Those in which the glycosuria exerts a baneful influence upon the injury or surgical lesion.

In the first class are placed injuries and sepsis, and it shows that septic intra-abdominal conditions often produce temporary glycosuria. In the second class it is doubtful, except as to balanoposthitis and cataract, diabetic gangrene depending upon nerve lesion or arteriosclerosis. In the third class the cases are numerous, and he shows that the dread of operation in this condition is not well founded.

W. T. Bull reports a case in which he removed the gland, but the patient died of diabetes soon after. Hirschfeld[11] has shown that traumatism to the pancreas produces diabetes, and that diabetes developing in a case of pancreatic disease may be traced to traumatism, and that trauma caused by the surrounding viscera, resulting from occupations which produce severe muscular exertion in diabetic patients, may cause important aggravations of the disease, chief among which is coma, and may transform a comparatively insignificant vascular affection into conditions which favor gangrene. That the pancreas, especially its neck, is so situated and fixed to the posterior abdominal wall, that it can be subjected to trauma from the adjacent movable viscera, especially the right kidney and liver, under certain pathological conditions, is very easy to undestand on going over the anatomy, especially that of the relations and means of fixation of the organ.

Glycosuria, to all intents and purposes, is a mild form of the disease, and can only be distinguished by its transient character. Osler recognizes acute and chronic forms of diabetes. There is no essential difference between them, except that in the acute the patients are younger and the course is more rapid.

(1) Lipogenic or dietetic, which includes the transient glycosuria of stout persons.

(2) Neurotic, due to injuries or functional disturbances of the nervous system.

(3) Pancreatic, in which there is a lesion of the pancreas.

The main symptoms are the glycosuria, polyuria, polydipsia, a voracious appetite and, as a rule, progressive emaciation.

The pancreas originates from the lower end of the foregut, which becomes the duodenum, by two outgrowths, which processes and their ducts join in about six weeks. It is developed in the mesogastrium and early has a complete peritoneal covering, but later the parietal peritoneum posterior to it, as well as its posterior visceral layer, become changed to connective tissue. With the union of the transverse colon and its mesentery with the posterior layer of the great omentum, the visceral layer covering the inferior surface of the pancreas is changed into connective tissue, so that in the adult we find that organ covered anteriorly by the peritoneum of the great omentum and inferiorly by the transverse mesocolon, lying in the retroperitoneal space.

The adult pancreas differs in shape as it is examined *in situ* or removed from the body. It is a compound racemose gland, similar in structure to a salivary gland, though softer and less compact. When hardened and examined *in situ* it shows various impressions for the different organs with which it comes in contact; it is prismatic and shows three surfaces. When removed from the body it flattens out with two surfaces and two borders. It is placed deep in the epigastrium at a level with the second lumbar vertebra, between the duodenum on the right and the spleen on the left. Winslow compared it to a dog's tongue, Meckel to a sort of hammer, Verneuil to a cross placed on its side, the short vertical arm representing the head. It is divided into four portions, head, neck, body and tail. It varies considerably in size, generally larger in men than women; its average length is 5 to 6 inches, breadth 2 inches, and its thickness ½ to 1 inch; weight, 2½ to 3½ ounces. In infancy and early youth it grows rapidly, and in old age it undergoes atrophy. The head is disk-shaped, flattened from before backward and conforms to the whole concavity of the duodenum made up for its four parts, and not *vice versa*. Therefore, its shape as a whole will depend upon the type of duodenum present. The head embraces the duodenum much as the parotid gland embraces the ramus of the lower jaw. It advances in front and behind, covering about one half of the circumference of the intestinal wall, generally more anteriorly than posteriorly. The second portion of the duodenum is more enveloped than any other. Union is established by the cellulofibrous tissue, by pancreaticoduodenal vessels, by the excretory ducts and longitudinal muscular fibers from the intestines which run between the lobules of the gland. Verneuil and Treitz believe the duodenum holds the pancreas in place, so that there is not only a relation of contiguity, but one of continuity. The head of the pancreas fills the space limited by the duodenum, then escapes as the neck by the opening of the intestinal ring, the extremities of the duodenum. There is an interruption below, to the left, in front of the pre-aortic portion of the duodenum where the mesentery passes, in which are contained the superior mesenteric vessels: vein to the right, artery to the left. Both vessels run in a groove on the posterior surface of the head. The common bile-duct runs in a canal near the descending or second portion of the duodenum, a part of the gland tissue, which is called the lesser head, is bent around behind the vessels. The relations posteriorly are vena cava, right crus of the diaphragm, celiac plexus, left renal vein and right renal vein, artery and right kidney. The relation of the kidney varies with the type of the duodenum. The neck, about one inch long, passes upward and forward to the left, bounded above by the first portion of the duodenum and below by the end of the ascending or fourth portion of the duodenum. Behind it the splenic joins the superior mesenteric vein to form the portal. Anteriorly, the stomach, if distended, touches it with the posterior surface of the pylorus. To the right it is grooved by the gastroduodenal and superior pancreaticoduodenal arteries.

The body and tail constitute the prismatic portion. His describes three surfaces, anterior, posterior and inferior, superior and two inferior borders. Some describe posterior and two anterior surfaces, superior and inferior, making the anterior border more distinct.

The body extends from the neck to the spleen and is moulded to the different structures, its anterior surface presenting a concavity for the filled stomach, separated by the bursa omentalis; the posterior more flat, except over the kidney, where the relation varies, two types being described. In one, it runs over the hilus and center, in the other crossing the upper part, leaving exposed above its edge a whole or part of the left suprarenal body. The relations posteriorly are: Internally, the aorta and left crus of the diaphragm and origin of superior mesenteric artery. It crosses the second or third lumbar vertebra. Near its upper edge are two furrows for the splenic artery and vein.

The inferior surface is narrow internally, presents a concavity directed downward, which rests on the duodenojejunal flexure and some coils of jejunum; laterally, a convexity. The superior border internally is a prominent blunt and flat elevation tuber omentale, and is in very close relation with the tuber omentale of the liver, separated by the lesser sac. It fits into and behind the lesser curvature of the stomach and is covered by the lesser omentum. Near the tail it is narrow and sharper. It is in relation above with the solar plexus and celiac axis, the hepatic artery passing to the right and the splenic to the left.

The inferior or anterior border is the dividing line for the two layers of the transverse mesocolon, the upper layer covering the anterior surface and forming the posterior wall of the lesser sac; the lower covering the inferior surface. The tail is the name given to the left extremity of the organ, and it rests in the lower part of the inner surface of the spleen, bound by a fold of peritoneum,—the pancreaticolienale ligament. In front of this portion is the left gastro-epiploic artery.

The excretory ducts begin as small tubes, consisting of a single layer of flattened epithelium, lying in the connective tissue. The union of these forms larger ducts, and they in turn join to form the pancreatic duct, which runs from left to right, or tail to head, through the center of the gland. As the tubes increase in size, a fibrous coat is added outside the epithelial, which is thickest in the pancreatic duct or canal of Wirsung. After reaching the neck it turns downward and backward to the right in the head and reaches the left side of the common bile-duct. They run obliquely through the coats of the duodenum for a short distance, then unite at an acute angle and empty into a little bladder-like pouch, the diverticulum Vateri. Just under the mucous membrane it throws up a papilla on the free edge of one of the valvulæ conniventes, the papilla of Vater, and has a single opening. The papilla is concealed by a mucous fold from above. There is an accessory duct, the ductus Santorini, running from the main duct through the upper part of the head and opening into the duodenum independently on a papilla, about one inch above the papilla of Vater. Means of fixation will be considered with the duodenum.

The duodenum begins at the pylorus and ends at the duodenojejunal angle or flexure, where it becomes the jejunum. It was named by Herophilus, on account of being the length of the breadth of twelve fingers. The intestinum pancreaticum, proposed by Luschka, would be a better name. Its length in the adult male is 10 to 12 inches, 30 cm.; circumference, 1.5 to 2 inches. Authors fail to agree on its direction and form. French authors give three portions—superior horizontal, vertical and inferior horizontal, ending at the superior mesenteric vessels. To this third portion, Henle, Krause, Quain and others add a fourth, ascending oblique portion toward the left. Luschka, His and Braune describe an annular form. Courvielhier, Young and Treves describe a fourth portion, 2 cm. long, coming forward at the end of the duodenum, at the duodenojejunal angle. These are all described as different types, of which, according to Jonnesco, there are three: (1) Annular or circular, infantile, but which does not occur in the adult; (2) U-shaped; (3) V-shaped. The U- and V-shaped are the adult types and rare in infants. The typical annular form is always found in the child up to the age of seven. The terminal point of this form is strongly fixed to the left side of the first lumbar vertebra and is exactly on the same level as the beginning of the duodenum. Between these points, the one fastened by the muscle of Treitz and the other by the hepatoduodenal ligament. The duodenum describes a regular curve in front of the vertebral column. The ring is filled and the margins overlapped by the head of the pancreas, the neck of which is limited by the two extremities of the ring. In the adult this type may be found, but the terminal portion does not usually attain the same level as the origin. It is pushed more to the left, as though the developing head and neck of the pancreas had forced the ring to open more widely for its lodgment. The adult duodenum separates from the pylorus at the right upper edge of the first lumbar vertebra. There is usually a dilatation, the antrum duodeni. The direction of this portion depends upon the condition and length of the stomach and the position of the pylorus. With an empty stomach it is nearly horizontal and transverse; with a distended stomach it is nearly anteroposterior. Its distal end is stationary, but the proximal is not. In general it is directed upward to the right and backward, under the quadrate lobe of the liver, and curves backward under the neck of the gall-bladder, to make a sharp turn to the right surface of the lumbar column. This is the initial curve. Its anterior and part of its posterior surfaces near the pylorus are covered by peritoneum derived from the ligamentum hepatoduodenale. The length of this portion is so variable—two inches, Quain; often almost inappreciable, Jonnesco—that Jonnesco unites it with the curve which follows it, under one name, the superior hepatic curve of the duodenum. The second, vertical or descending portion, placed on the vena cava and the right kidney, descends along the right side of the vertebral column a variable length to the fourth or fifth lumbar vertebra in the U type; in the V type, to the fifth lumbar vertebra. Starting from the right side of the first it is divided into two portions, the supra- and infracolic, since the transverse colon crosses its middle third, where the approximated surfaces of duodenum and transverse colon touch, except for a little areolar tissue, above and below that part of its anterior surface not overlapped by pancreas, and the right sides are covered by peritoneum. Above, it is in contact with the right lobe of the liver, leaving an impression. Posteriorly, it is connected with the kidney vessels at the hilus and the vena cava.

The pancreas on its inner side, the pancreatic and the common bile-ducts open into its posterior internal wall below the middle.

The third portion, transverse, pre-aortic or inferior angle. There are three types: High type, corresponding to the superior border of fourth lumbar vertebra, or the interarticular fibrocartilage between the third and fourth lumbar vertebræ seen in the child; the middle type, to the body of the fourth lumbar, 12 out of 20 cases in U-form in adults, but in some passes over the fifth lumbar. Low type to the body of the fifth lumbar, confined almost wholly to the V-type, so that length and relations will depend upon the type. It is crossed by the superior mesenteric vessels and the mesentery. It is covered on its anterior surface by peritoneum, except where the vessels cross it from above. Posteriorly the aorta or common iliac, vena cava or common iliac veins, ureters and spermatic vessels.

The fourth or ascending portion ascends along the left side of the vertebral column and aorta, touches the left kidney and ends at the left side of the first or second lumbar vertebra; in the infantile type first lumbar; in the adult, both U and V, the second lumbar. In the first type it approaches the median line, in the adult, thrown to side of column. The duodenum often turns abruptly forward here to unite with jejunum, forming the duodenojejunal angle, this terminal portion about 2 cm. long; considerably less than one inch has been described as a fourth portion, but with the U type it makes a fifth. The duodenum begins with short portion looking backward and ends with short portion looking forward. When the above arrangement is complete, the duodenum has the form of the letter U, considering the second, third and fourth portions. When, however, the descending and ascending portions unite by a short curve or angle, the third, or transverse, portion is practically lacking, and the duodenum is then V-shaped. The angle of the V is thrown to the right against the vena cava, or common iliac vein, and the ascending portion crosses the aorta with sharp angle.

These two types are accounted for by the fact that in fetal life, after differentiation in the size of the intestine takes place, with the large intestine thrown over the small, the cecum and appendix descend, forming the ascending colon. It obstructs the way for the duodenum, and the U shape results; but where there is no obstruction, the V shape is formed.

The length of the parts in the two types are:

	In U.	In V.
Superior curve,	4 cm.	4 cm.
Descending portion.	10.5 cm.	12 cm.
Pre-aortic portion.	9.5 cm.	2 cm.
Ascending portion,,	7 cm.	13 cm.
	31 cm.	31 cm.

Before considering the means of fixation, the development of the duodenum will show most of the structures and where they come from. The duodenum is developed from the lower end of the foregut, and early has a complete peritoneal covering with a mesentery anteriorly extending only as far downward as the umbilicus, the posterior mesentery being attached to the aorta. The stomach is developed from the gut just above the duodenum. The liver originates in a sprout-like process from the duodenum anteriorly, and at all periods of life is inseparable from the diaphragm, so that it divides the anterior mesentery into two parts. The part above becomes the lesser omentum, or gastrohepatic; the part below that runs to the umbilicus, forms the falciform ligament, and the ligaments on the superior surface of the liver. The pancreas originates in the posterior mesentery, opposite the liver. The duodenum is concealed from view by the development of the large intestine being thrown over it and the stomach and great omentum being developed from the posterior mesentery of the stomach and coming down over it.

Ligaments of the duodenum are the peritoneal folds connecting it to the neighboring viscera, but neither peritoneal adhesions nor ligaments really fix an organ. If they do, it is because they contain vessels and nerves and cellular tissue between the layers. (1) The ligamentum suspensorium duodeni or hepatoduodenale. The right edge of the lesser omentum passes from the hilus of the liver to invest the first portion of the duodenum, except part of its posterior surface; (2) ligamentum cysticoduodenale, from the neck of the gall-bladder to the superior curve of the duodenum; (3) ligamentum duodenorenale, from the right surface of the superior curve of the duodenum to the summit of the right kidney; (4) ligamentum duodenomesocolic, limit to fossæ of Treitz at the end of the ascending duodenum. One or two ligaments may run into the lower layer of the transverse mesocolon, or into the perirenal peritoneum. The real support consists of the ducts, common bile and the pancreatic, the two abdominal arteries, the celiac axis above and the superior mesenteric above and in front, which have retained their original position of fetal life and form a complete arterial circle connecting the posterior abdominal wall to the liver, stomach, pancreas, duodenum and spleen, the fibronervous investment which accompanies this circle is formed of cellular tissue and sympathetic nerve-plexuses.

They have two rôles, first, innervation, and second, support. The celiac and solar plexuses support as one the duodenum and its neighboring organs. Muscle of Treitz, described in 1853, extending from the duodenojejunal angle up under the pancreas to the left crus of the diaphragm. Lockwood says this band is continued down between the layers of the mesentery after its insertion into the duodenum, and with other constituents of the root of the mesentery is able to support the weight of the intestines and resist the pressure of the descent of the diaphragm. Treitz also describes a cellular membrane extending from the superior mesenteric artery on one side, the pylorus, duodenojejunal angle and concavity of the duodenum on the other, and forming a floor to the posterior surface of the pancreas. This represents the posterior mesentery in the fetus, but on account of its tenuity is unable to offer any fixation.

Such are the means of fixation in general. The duodenal ring is fixed in all its length, but unequally, being suspended by two fixed extremities, the superior hepatic angle to the liver, and the liver is fixed to the diaphragm by thick cellular tissue and numerous subhepatic veins emptying into the vena cava, nailed, so to speak, to the posterior abdominal wall and the diaphragm, but at the same time enjoying quite a range of motion, with respiration, which will be increased with certain deformities of the body, especially a contracted middle zone.

The duodenojejunal angle is absolutely fixed by the muscle of Treitz, and is reinforced when the angle penetrates the transverse mesocolon. The descending portion is fixed to the vena cava and right kidney by thick cellular tissue, which is further strengthened by the hepatic flexure and transverse colon which apply themselves directly to kidney and duodenum; but the kidney is a movable organ, with a range of motion of an inch or more in normal condition.

The pre-aortic portion is fixed by the large vessels posteriorly, vena cava and aorta or their terminal branches, but it also has the superior mesenteric artery surrounded by its fibronervous tissue at the root of the mesentery, pressing this portion down upon the aorta, constituting a sort of vascular press, lessening the caliber to what has been called the isthmus of the duodenum. The ascending portion has no means of fixation except the peritoneal covering and is easily displaced from left to right.

The relation of the duodenum to the right kidney authors do not agree upon. The difference is usually ascribed as due to variations in the position of the kidney. The kidneys are described as bean-shaped, four to four and three-fourths inches in length, two to two and one-half in breadth, and an inch to one and one-half in thickness, placed in the loins on each side of the vertebral column, in a bed of areolar-fatty tissue, the tunica adiposa, which is very thin anteriorly, the whole being enveloped by a sheath of thin fascia—the perinephric fascia—which has been specially studied by Anderson, Zuckerkandl, Gerota and others. The upper extremity is on a level with the upper border of the twelfth dorsal vertebra, the lower on a level with the middle of the third lumbar; the right is usually lower than the left, but occasionally the left, owing to its more elongated shape, extends downward lower than the right. Jonnesco shows the relation to the duodenum by three drawings, one for each type. In infancy it lies on the inner third of the anterior surface for the upper three-fourths of its extent. In the U-shaped duodenum it covers about half of the anterior surface, more above than below for the upper eight-ninths. In the V-shaped it covers more than half the anterior surface for the lower eight-ninths, just leaving the upper pole exposed.

Dr. Brooks, in "Cunningham's Anatomy," to show the various relations, has drawings from three distinct subjects; the first shows the relation to the anterior half of the upper three-fourths; the second shows the relation of the anterior half for about eight-ninths of its extent; the third shows the kidney very high, the duodenum low, one-third of the anterior surface below the hilum. The relations as given by Jonnesco are probably nearer normal condition, as found on close examination in the dissecting room. One can see what a very close relation exists between the pancreas, duodenum, right kidney, liver and stomach. The fixation of the head of the pancreas depends upon the duodenum. The extremities of the duodenal ring are the only absolutely fixed portions, and they separate the head from the neck of the pancreas, so that the neck will be the center of the radius for any motion that occurs in the duodenal ring and pancreas. The relation to the stomach, being at one end of the duodenal ring, shows disturbance from the simplest gastritis to great dilatation. Interference with its functions is one of the most common symptoms in loose kidney.

The liver is not only connected with the duodenum and pancreas by the common bile-duct, but the tuber omentale on the under surface of the left lobe, and the lower left corner of the Spigelian lobe projecting downward, fitting into the concavity of the lesser curvature of the stomach. Here it meets the tuber omentale coming upward and forward from the pancreas. In an enlargement of the liver, the pressure on the pancreas may be sufficient to interfere with the function of the pancreas and cause the presence of sugar in the urine. A. Gilbert and P. Lereboullett[12] reported three cases, two of hypertrophic alcoholic cirrhosis, one of a tubercular patient with enlargement of the liver associated with diabetes. They concluded that the diabetes was dependent upon the liver, as it followed the course of the liver disease in one of the alcoholics; the hypertrophy of the liver increased, causing death by diabetic coma. The tubercular case also ended fatally. In these three patients the pressure of the enlarged liver might have produced the diabetes.

The connection by the common bile-duct is much closer. Attacks of jaundice are not unfrequent, probably at first due to temporary compression which induces cholangitis and predisposes to gall-stones.

That cholelithiasis and diabetes occur together cannot be denied. A. Exner[13] found on the examination of the urine in forty cases of cholelithiasis that in all of these, with one exception, sugar was present, the amount usually being about 4%. The diagnosis was confirmed by subsequent operation.

He considered the presence of sugar of great importance in the diagnosis of gall-stones.

The intestinal symptoms which are very prominent in loose kidney, even down to Edebohl's symptom of chronic appendicitis, are explained by pulling on the duodenum, the colon with the duodenum where it crosses the kidney, and the pressure of the misplaced organ.

Case I. Mrs. S. D. J., of Eastonville, Colo., entered St. Anthony's Hospital Feb. 5, 1902, age 23, born September 12, 1878, Marlin Texas, physique slight, occupation, housewife.

Family history: Father living and well; mother not very well, now at the menopause. Four brothers and four sisters living and well. One brother died at birth. Cousin has epithelioma of the ear; great-aunt has tuberculosis. Had nearly all the diseases of childhood; two attacks of rheumatism, one at 17 involved lower limbs; last attack in December, 1901, in both hips; typhoid fever two years ago, sick seven weeks; malaria one year ago.

First menstruated at 12 years of age; flowed seven days; considerable pain; again six months later; duration less and flow scant. She has been irregular ever since; sometimes goes three months or so, and usually has to go to bed during the period. Married Feb. 15, 1897, became pregnant in October, 1897, was well during pregnancy, except marked constipation. Labor occurred during June, 1898, one month early on account of hard work; was long and tedious; three and a half days; no instruments; in bed ten days; lactation normal; four months later had vaginal discharge; was given local treatments; menstruated six months after childbirth; more regular than before, varying about two weeks; became pregnant again in March, 1901; vomiting was very severe during early months; had malaria for two weeks during the second month, was salivated with calomel at the fifth month and flowed profusely one night, nothing serious resulting. Labor, Jan. 1, 1902, lasting two hours and easy; had severe chill on the second day; headache, backache; severe uterine pains and the lochia were profuse; on the third day, after severe pains, she passed a large mass, about the size of two fists, after which pains ceased, but other symptoms and temperature continued; got up on the seventeenth day and had a chill that lasted four hours; had great thirst and passed large quantities of urine; condition the same after entering hospital.

Physical examination: Patient in poor flesh and very pale: skin dry with dark tint; sclera also darkened. Abdomen deeply pigmented and flabby, wall soft and thin; liver and spleen normal; right kidney movable; could palpate lower third of left; slight perineal laceration on left side; vagina patulous; uterus enlarged, size of an orange, and soft, movable and retroverted; tubes and ovaries prolapsed and enlarged; cervix lacerated laterally and posteriorly; right broad ligament thickened; bladder and rectum normal; lungs and heart normal; gland negative, teeth bad and gums diseased and receding from teeth; tongue coated.

Patient was ordered prepared for operation for the next day. The urine had been examined and sugar was found to be present to the amount of about 10% or more; color amber; odor aromatic; reaction acid, specific gravity 1026, albumin negative, sugar 10% or more; bile, none; pus, none; blood, none. Examined by Dr. McLean. The patient was given local treatments for the pelvic trouble and put on diet. The amount of urine secreted in twenty-four hours ran from 24 ounces to 40; the sugar dropped down to a small amount and remained stationary. The patient improved wonderfully. The only thing she complained about was the pain in the back from the movable right kidney.

On March 3 I operated, curetting the uterus and performing nephropexy on the right kidney, believing that the diabetes was of pancreatic origin and depending upon the kidney mobility. The sugar disappeared and has not been present since. The patient was put on an ordinary diet as soon after the operation as she could stand it. She was in bed three weeks after the operation, around the hospital one week, then returned home in good condition, the urine being examined every day while in the hospital. Patient was home only a few days when she was taken sick with la grippe. She returned to the hospital on May 4, with a bad leukorrhea. On May 7 the uterus was curetted, the cervix amputated, the abdomen opened, the adhesions broken up, small cysts on both ovaries removed, the uterus suspended and the appendix removed. She made an uninterrupted recovery and left the hospital on May 30. A few days later her oldest child died, and for several days the baby was not expected to live, which was a great shock to her. The urine had been examined from time to time, but no sugar had been present.

Case II. W. O., admitted to St. Anthony's hospital on April 29, 1902. Residence, city; age, 26; female, born Carson City, Nevada; occupation music teacher, single.

Family history: Parents living and in comparatively good health. One brother and one sister died in infancy. One brother died of heart disease.

Has always been in good health until the present trouble began about twenty months ago with dragging down sensation in lumbar region and lower abdomen; more severe and frequent in the latter, and frequently becoming painful; worse after any kind of physical exertion, especially dancing. Stomach became very much deranged, bowels always constipated, menstruation painful.

Physical examination: Right kidney movable. Urinary examination by Prof. Hill showed large amount of sugar. Operation May 1. Nephropexy. No sugar has been present in urine since.

For the report of this last case I am indebted to Dr. T. H. Hawkins, of Denver.

1. Thompson, Practice of Medicine.
2. Osler, Practice of Medicine.
3. Gaz. des Hop., 1899, No. 129.
4. Journal of Exp. Med., January 15, 1901.
5. Journal American Medical Association.
6. (Virchow's Archiv.) See Journal A. M. A., June 7, 1902, last issue.
7. Deutsches Archiv. f. klin. Medicin., Oct. 30, 1901.
8. American Medicine, Jan. 18, 1902.
9. Medical News, Feb. 1, 1902.
10. Deutsche med. Wochenschrift, Aug. 22, 1901.
11. Lancet, May 10 and 17, 1902.
12. Gaz. Heb. de Med. et Chir., May 20, 1900.
13. Deutsche med. Wochenschrift, Aug. 4, 1899.

IMPRESSIONS OF DIFFERENCES IN PRACTICE AT LOW AND HIGH ALTITUDES.*

By WILL H. SWAN, M. D.,
of Colorado Springs, Colorado.

Those physicians who for any reason have found it desirable to change their field of labor from a low altitude to a high one, have doubtless been on the lookout for any differences in the behavior of disease or normal conditions in the two localities.

In any investigation what is desired is *facts*; and to get at any such differences in a definite and conclusive way would first require carefully made physiological comparisons of the conduct of the various vital functions in the different localities.

Probably, conclusions arrived at by any other method would be fallacious and inconclusive. Yet many of our ideas in life are based on beliefs or impressions, and when definite, proven knowledge is impossible, beliefs and impressions must be the basis of our ideas.

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*Read at the meeting of the American Climatological Association, at Los Angeles, June 11, 1902.

With this limitation in mind, and for the purpose of getting evidence from physicians who had had opportunities for comparisons, the writer addressed a circular letter to 392 physicians, members of the Colorado State Medical Society and of the Rocky Mountain Interstate Medical Association, asking their impressions as to any differences they had noted.

These societies have their membership from Colorado, New Mexico, Arizona, Utah, Idaho, Wyoming and Montana.

However inconclusive and fallacious the deductions from this evidence may be, in the hope that it may serve as an introduction to a discussion or comparison of ideas by members of this society, the writer will give a summary of the replies.

There were received 199 replies, 86 of which were thrown out of consideration for various reasons, leaving 113 to be considered.

There was evidently some confusion as to the meaning of certain questions and, consequently, some uncertainty in the replies to them. The writer realizes the difficulty in stating one's meaning clearly and fully in such an arbitrary and succinct manner, either in asking questions or in making replies; but, for obvious reasons, more voluminous statements could not be asked.

As to the altitude at which these men formerly practised,

84 came from altitudes between sea level and 1.000 feet.
16 came from altitudes between 1,000 feet and 2,000 feet.
6 came from altitudes between 2,000 feet and 3,000 feet.
6 came from altitudes between 3,000 feet and 4,000 feet.

They are now practising at altitudes indicated as follows:

Between 3,000 and 4,000 feet, 2
" 4,000 and 5,000 feet, 20
" 5,000 and 6,000 feet, 53
" 6,000 and 7,000 feet, 27
" 7,000 and 8,000 feet, 5
" 8,000 and 9,000 feet, 4
" 9,000 and 10,000 feet, 22

In order to avoid repetition, I will read the letters and questions with the summary of replies, and some personal comments will be made later.

Colorado Springs,......

Dear Doctor:—

For the purpose of publishing results, I am endeavoring to get from a large number of physicians their impressions of the differences in medical practice at a low altitude and at an altitude of 4,000 to 10,000 feet.

I say "impressions," because in most of the following questions it would be impossible to state proven facts.

Will you kindly answer the following questions and state whether you see the conditions mentioned below more frequently or less so than formerly at a low altitude?

Thanking you........

WILL H. SWAN.

	More.	Less.	Yes.	No.	No difference.
"Biliousness" or other digestive disorders?	52	96			5
Lithemia	44	35			
Does urine analysis show more frequent excess of urates or uric acid?			56	28	
Rheumatism—acute?	51	45			
Rheumatism—chronic?	35	54			
Do heart affections occur more frequently during the course of acute rheumatism?			30	60	
Nervousness?	23	9			
Do the patients do as well at a high altitude?			24	61	
Hysteria?	21	12			
Do the patients do as well at a high altitude?			38	44	
Chorea?	15	14			
Do the patients do as well at a high altitude?			42	42	
Neurasthenia?	17	9			
Do the patients do as well at a high altitude?			31	55	
Migraine?	9	19			
Do the patients do as well at a high altitude?			50	31	
Insomnia?	19	12			
Do the patients do as well at a high altitude?			35	64	
Do wind or dust storms increase nervousness or insomnia?			95	15	
Do heightened electric conditions increase nervousness or insomnia?			75	20	
Acute lobar pneumonia?	19	15			
Is breathing more embarrassed?			64	28	
Are cardiac complications more frequent?			50	43	
Does the crisis occur earlier?			39	47	
Is it more fatal?			60	33	
Is convalescence more rapid or less so?	48	24			21
Typhoid fever	3	12			1
Does it run a longer course?			10	85	4
Is it more mild?			85	15	
Are pulmonary complications more frequent or less so?	14	68			8
Are cardiac complications more frequent or less so?	21	52			12
Diphtheria?	7	11			4
More fatal or less so?	8	44			26
Scarlet fever	5	8			5
More fatal or less so?	5	60			21
Measles?	4	11			4
More fatal or less so?	4	52			28
In febrile conditions do you find higher temperature?			30	67	5
Is convalescence after illness in general more prompt or less so?	61	20			14
Are people recently from a low altitude more easily fatigued?			95	13	
Are people long resident at a high altitude more easily fatigued?			24	79	

The influence of high, dry climates on tuberculosis has been so fully determined that it is not included in the foregoing list.

It would seem as if it should be possible to arrive at definite conclusions by comparison of statistics as to the occurrence and mortality of pneumonia, typhoid fever and the acute infectious diseases, and such an attempt was made. But those statistics obtainable were of such fragmentary and uncertain character that any conclusion based on them would have been of no real value.[1]

However, in the case of pneumonia, some statistics have been reported which are worthy of careful consideration.

Dr. H. B. Whitney, of Denver, some years ago reported 58 cases of acute lobar pneumonia occurring in his own practice during one winter, with a total of 13 deaths, or a mortality of 22.5%. Most of the cases were in adults, and 9 of the 13 deaths occurred in patients who were, or had been, victims of a prevailing epidemic of grippe.

Dr. H. W. Hoagland, of Colorado Springs, kindly gives permission to read some statistics which he recently reported to the El Paso County Medical Society—a series of 587 cases of lobar pneumonia, occurring during two years in Colorado, at altitudes between 5,000 and 10,000 feet, in which there occurred 124 deaths, giving a mortality of 21.11%.

		Cases.	Deaths.	Mortality.
Denver,	5,280 feet,	130	37	28.5%
Colo. Springs,	6,000 feet,	66	17	25.78%
Salida,	7,000 feet,	16	2	12.5%
Cripple Creek,	9,000 to 10,000 ft.	375	68	18%
		587	124	

He compared these with 221 cases occurring in four Philadelphia hospitals during a corresponding time, of which 58 died, yielding a mortality of 26.5%.

He also compared the Colorado figures with 5,567 cases collected as follows:

	Cases.	Deaths.	Mortality.
Philadelphia (above stated),....	221	58	26.5%
New Orleans, Charity Hospital,	3900	1100	28.25%
Montreal General Hospital,....	1012	206	20.4%
London (Albutt's Syst., Med.),..	434	111	24%
	5567	1475	

In these 5,567 cases there were 1,475 deaths, or a mortality of 26.5%. There was thus a difference in favor of the Colorado figures of 5.4% in both comparisons.

Osler says: "Hospital statistics show that the mortality ranges from 20% to 40%."

Hoagland's cases were treated in hospitals at Denver, Colorado Springs and Salida, with the exception of the 375 cases occurring at Cripple Creek almost entirely among miners, who are notedly alcoholic and, for the most part, live in cabins or shacks with very unsanitary surroundings. So they cannot be considered as "picked cases."

This result of comparison is opposed to the prevalent idea, and also to that of 60 of the 93 physicians who expressed their opinions in the letter referred to.

No mention is made as to the length of residence of the Colorado cases, nor of the age, in any of the statistics. Undoubtedly, pneumonia occurring in old people or those unaccustomed to a high altitude would be more fatal, and probably there is a limit in altitude above which the heart could not stand the extra burden of a pneumonia.

With reference to typhoid fever, 99 seem to think that it runs a shorter course at high altitudes, 10 that it does not, while 4 saw no difference.

The writer's impression is that more cases run a short, mild course than those he had formerly seen in Massachusetts.

The former prevalence of so-called "mountain fever" is an indication of the relative frequency of mild cases of typhoid. On the other hand, the more general resort to Widal's test will undoubtedly stamp as typhoid many mild febrile illnesses which were formerly not recognized as such in low altitudes.

The replies to the letter indicated a rather general impression of the more frequent occurrence and more intractable nature of the functional nervous disorders at high altitudes, with an exception in the case of migraine.

The writer thinks he sees functional nervous cases with about the same frequency, and that the patients behave very much as they used to lower down. However, he believes that people who are inherently nervous and had previously unstable nervous systems often are made more nervous in high altitudes, supposing they have the same causes for nervous fatigue and worry that they previously did. He believes that he gives more bromides and nervous sedatives than he used to, but there are many reasons for this, other than altitude.

Colorado Springs is an exceptional place in some particulars. Very many invalids are there under protest, so to speak; are separated from their families and those dear to them; often are greatly worried over the financial burden which their stay entails; some are despondent because of forced changes in plans; others are homesick. Moreover, there is a good deal of trading in mining stocks, and this, with the rise and fall of the market, is undoubtedly a cause for a certain amount of nervous tension, as it would be in New York or London.

On the other hand, many invalids who are inherently nervous do extremely well physically and nervously. Very much of the difference in the two classes depends on *how* they live—whether quiet, restful lives out of doors, with proper hygienic régime, or one indoors, too much "in society," with the strain that excesses of social pleasure entail.

Dr. Solly has aptly said that "nowhere is the invalid fool more surely or promptly punished for his folly than in Colorado."

The late Dr. Eskridge, a former fellow of this society and eminent as a neurologist, some years ago stated his conclusion, based on his own experience and that of representative men in Colorado, that "chorea was comparatively infrequent and of short duration in Colorado, and that the belief in high altitudes having a serious unfavorable influence on the disease was not justified by facts."

Dr. Howell T. Pershing, a neurologist in Denver, in stating the above conclusion, said he heartily concurred in it.

If it is true that neurasthenia and other functional nervous disorders are "manifestations of irritable weakness of the nerve centers, depending on the insufficiency of their nutritive processes to repair the exhaustion caused by overuse or by the depressing effects of auto-intoxication," and that our aims in treatment are "to improve nutrition, secure rest and recreation and to prevent auto-intoxication" (Pershing), surely the therapeutic indications are as well and fully met in such a climate as that of the eastern foothills of the Rocky Mountains as anywhere.

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[1] The careful system of recording vital statistics at present in operation with the Colorado State Board of Health will from now on give figures which can be used in making definite comparisons.

Dr. Pershing, in refuting the belief that functional nervous disorders are more common in high altitudes, calls attention to the recognized belief that the favorable effects of high climates on pulmonary and other tuberculous conditions are principally due to an improvement in the nutrition of the body as a whole, and it seems to me, his claim that "the climatic influence which strengthens the resistance of the whole body to tuberculosis also acts favorably on the nervous system" is sound logic. He states that Dr. S. G. Bonney found that his cases of tuberculosis with complicating neurasthenia did nearly as well as the average, and that the nervousness generally improved at the same time as the pulmonary lesions.

The fact that the blood is richer in red corpuscles and hemoglobin in a high altitude he points out as another condition of unmistakable value to the neurasthenic. The increased opportunity to be more in the open air, with its bright, cheering sunshine, either for out-door sports or for resting, is of immense importance.

As to *insomnia*, it appears to be the case that most overworked, debilitated, anemic individuals sleep better on coming to a high altitude, while the full-blooded, high-strung, nervous person sleeps better at sea-level. This is what physiology would lead us to expect.

It seems fair to claim that what has been said of some neuroses will, in the main, apply to all.

The *wind* and *dust storms* and times of heightened electrical conditions, which occasionally occur at high altitudes, undoubtedly do increase nervousness and insomnia in most people, but in the writer's experience these do not occur often enough to be of material consequence.

The writer believes that he sees rather less of so-called *biliousness* and digestive disorders than while practising at sea-level, though some people seem to be more prone to them. And he thinks he has observed that the latter class are those who are made nervously worse at high altitudes, and the former those whose general nervous tone is improved and who live and conduct their affairs in a placid, even-dispositioned manner.

As to the occurrence of *rheumatism, gout, lithemia or uric acid diathesis*, I will state, in a general way, that I find more frequent indications for the salicylates and drugs which are supposed to aid in elimination of uric acid; that there is more often an excess of urates in the urine; that chronic rheumatic affections—especially of a myalgic type—seem to me to be rather more frequent, while acute articular rheumatism seems less so.

No attempt will be made in this paper to discuss the pathology of these affections, but something will be said concerning the question of elimination at high altitudes.

In high, dry climates there is increased elimination of water and waste solid products by the skin and lungs. It is believed that the skin normally eliminates more, relatively, of solids than the lungs.

The skin is more active at warm, dry temperatures, while the lungs do more work when it is cold. So that in cold, dry weather, such as is usual in winter at high altitudes, the skin being less active, there is less free elimination of the waste solids. This throws on the kidneys the task of getting rid of more solids with an insufficient amount of fluids (granting that there is no increase in the fluids drunk). This is offered as one explanation for the greater frequency of gouty symptoms in winter.

In warm, dry weather, like that of the high-altitude summer, the skin is very active and excretes a large amount of solids, as well as fluids, so that the kidneys have less to do; but in dry climates the fluid part of the perspiration is evaporated very rapidly, probably leaving on the skin much more solid refuse to clog the sweatglands than would be the case if evaporation were less rapid and more of the perspiration absorbed by the clothing. This would diminish the elimination by the skin (unless frequent bathing were practised) and throw more work on the kidneys.

Now, if in the winter enough excess of fluids is drunk to keep the waste solids easily soluble, the kidneys will be able to keep up free elimination. Therefore, we are led to the inference that, if there are influences in high altitudes which tend to diminish elimination, this can be easily overcome by drinking more water and bathing more frequently.

It would seem that *convalescence after illness in general* is apt to be more prompt at high altitudes, because of the greater possibility of being in the open air and sunshine.

That people who recently came from a low to a high altitude are more easily fatigued is so definitely certain as to admit of no doubt. Ninety-five of 108 doctors reported that they found it so. This is a point of vital importance to tubercular invalids going to Colorado.

Not long ago the writer had occasion to call attention to it in a paper[2] in which he urged: "Instruct the invalid (before sending him to a high altitude) to rest and *keep quiet* after his arrival until some one competent to advise him considers it safe to begin to exercise, and then to have his manner of life and hygiene directed from time to time according to his progress and condition."

Seventy-nine doctors believed that people, long resident at a high altitude, were not more easily fatigued than when at lower, while 24 believed that they were. It has seemed to me that there is a capacity for doing rather more work, physical and mental, in a short time and without more fatigue, if the effort is not too long continued. But I am quite certain that prolonged, severe, nervous strain tires most people more. Whether this is true in regard to physical work, I do not feel at all sure.

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[2] Phthisis; Some Causes of Failure in its Climatic Treatment, Boston Medical and Surgical Journal, November 1, 1900.

A CRITIQUE OF THE LOGICAL PROCESSES OF MEDICINE.

By W. B. KONKLE, M. D.,
of Montoursville, Pennsylvania.

It should not be inferred that a critique of applied logic developed from the standpoint of medicine might not be essentially reproduced from other scientific points of view. Indeed, human mind is always and distinctly human mind, fundamentally the same in its structure and operations wheresoever and upon whatsoever it may act. The processes of ratiocination as to quality, method and result are, in the main, identical, and that, too, independently of the nature of the material therein concerned. So the various phases of criticism I would present as applicable to modes of reasoning discernible in the province of medicine are not to be considered inapplicable within the bounds of other scientific domain at large or in particular. In confining my discussion to the medical field principally I simply desire to refrain from trespass—to keep on "my native heath"—being, the while, not disregardful, I trust, of the requirements of relevancy.

In commendation of the direction and character of medical endeavor it may be said that induction is its key-note. The method of deduction is virtually ignored. In regular medicine dogma is dead as the Pharaohs; investigation is all in all; Aristotle is only a glimmering memory; Bacon is the quickening, moving spirit. And most truthfully may it be said that, in general, inductive logic has nowhere else been more faithfully and assiduously applied or yielded more abundant and important results. Modern medicine it not outranked by any of her sister-sciences as a benefactress of the race.

In submitting some adverse criticism of the logical processes noticeable in our movements, a generic error may first be cited. The fallacy is, however, so intimately a feature of human thought constitutionally surveyed, that it is impossible to confine our conception of it to medical questions. I refer to the natural tendency of thought to swing, pendulum-like, between extremes—to reach truth by a series of oscillations. One extreme position is almost invariably the occasion, the cause, the warrant for the occupation of another diametrically opposed thereto. Absolutism will be confronted by nihilism. From the despotism of a Louis XIV the leap will be made to the anarchy of 1793. So in medicine we see the pendulum swinging from promiscuous bleeding to no bleeding; from starving to stuffing; the most wonderful sweep thereof being that from the astounding abuse of drugs, as authorized by Brunonism, to the ridiculous attenuation of drugs, as advocated by Hahnemannism. By the way, not the least farcical element of homeopathy's epic jump is the manner in which it terminated in fixation to a preposterous position by the chains of a dogma from which it has never been able to break away—which, in fact, it cannot repudiate without thereby renouncing its logical right to exist. Ultimately this oscillatory movement of thought merges into permanent quiescence at the intermediate truth-point. But how much more satisfactory were it to go directly to the mean of a problem without such waste of time and energy! Will we ever learn to be moderate in our views and practices? Will we ever accept as a valid and valuable rule the Ovidian adage, *medio tutissimus ibis*—you will go most safely in the middle?

Another generic fallacy of logic as manifested in medical thinking pertains to the attitude frequently, even usually, assumed, and that, too, by many of the ablest minds of the profession, toward the moot problems confronting us. Our marked *penchant* is to be advocates rather than arbitrators. We prefer controversy to criticism—incline toward championship instead of umpirage—and in our eagerness to plead *pro* or *contra* the bench may be left without a judge, and the box without a jury. Ambassador White, in a recent article on Tolstoy, proffers the opinion that, grand and strong as the Count's intellectual work is in fact, some glaring faults attributable thereto might have been avoided had the renowned author been less self-centered—had he compared and weighed his ideas and systems with those of his mental peers elsewhere. Would not in medicine a more common adoption of the spirit of adjudication, in contrast with that of disputation, promote at once progress and harmony? Indeed, indeed, it would seem that reliable, capable men looking at the same phenomena from the same view-point and with the same opportunities should see more nearly alike. And is not the discrepancy of vision probably due largely to the circumstance that perception is transmitted through the eyes of the disputant rather than through those of the critic?

Another logical error distinguishable in medicine consists of imperfect or insufficient induction. The inductive method is as trustworthy as it is prolific, if only proper safeguards and checks be imposed upon it. Data must, however, be most painstakingly gathered and classified and tested. Systems of statistics are extremely elusive and delusive factors in the solution of scientific problems—with untiring, rigid care should they be scrutinized and garbled. Even extensive series of observations may involve inaccuracies if such precautions be not uniformly taken. *Festina lente*—make haste slowly—is a classical proverb that finds ample sanction from considerations in this connection.

Still another fallacy to which we are liable is the too broad generalization of recognized facts and laws. Some years since Goldwin Smith directed attention to such a tendency with regard to Darwin's theory of evolution. Prof. Smith argued that the theory was being used as a criterion in regions of thought, especially those of theology and religion, in which it could have no legitimate application whatsoever. Examples of this species of error are manifold in the field of medicine; indeed, one of the first impulses subsequent to the establishment of a generic truth is to stretch it to absurd lengths and breadths. Animal therapy is a departure just now pertinently illustrative of the point in question. It would be well constantly to remember that only secondary to the discovery of truth is the determination of the exact limits of its scope or range.

Lack of comprehensiveness of view constitutes an error to which medical workers are particularly prone. We are disposed to confine attention to one or more of the special features of a problem, thereby failing to grasp the same in its entirety, and with an adequate appreciation of the interrelationships and interconnections and interdependencies of its component elements. We think too exclusively of fever or nutrition or pathological changes or germs or something else, as the case may be. We neglect to take things all in all and all around, as the devil did the skunk.

Impracticable applications of abstract scientific principles are not infrequently attempted in medicine; and, while this error may be more properly referred to the faculty of judgment, it, nevertheless, smacks so decidedly of faulty reasoning that we need not hesitate to consider it as a fallacy of logic. From the nature of the case, the concrete can never wholly and perfectly embody and represent the abstract. Poor old practice, earth-born and earth-doomed, can never, never, never follow, in all its sublime altitudes and amplitudes the flights of pure theory, spirit-formed, pinioned for etherial soaring. Back and forth and around we move within the circle of our restrictions, like captives in a prison-pen. We may hurl ourselves against our barriers, but we cannot beat them down; we may longingly gaze beyond them, but we cannot overleap them; their compass may be enlarged, but they will never pass away. An eternity should have to lapse ere finite art could attain infinite perfection. So that it is not sufficient to establish the correctness of a theory abstractly. Discriminating judgment will yet be requisite in the selection of the cases in which the theory may be succcessfully and advantageously operated.

I would finally direct attention to the fallacy of "*post hoc, ergo propter hoc*"—the one most common and mischievous in medicine. This is the sole and altogether untrustworthy warrant for many of the tenets we hold in all the departments of our professional thought. In the province of materia medica and therapeutics such error is especially prevalent—so much so that a rigid elimination thereof would involve the repudiation of a long list of remedies, and a large proportion of therapeutic rules and measures. We are continually attributing to our doses and manipulations results which should be accredited to nature alone. She is, and must ever be, *par excellence*, the great healer. She is absolutely independent of us in cases so diversified and numerous that humility alone becomes us; upon her we are dependent in every instance. In a recent utterance Dr. Osler avers, in substance, that no one would care to risk a denial of homeopathy's claim to a death-rate as low as can be shown by the regular faculty of medicine; which fact indicates, the Doctor maintains, that the preponderance of our effort to cure people is futile; since no sane scientist, not committed to its sophistries, could concede to homeopathic therapeutics any virtue whatsoever as regards medication. If Hahnemannism could effectually teach us this, it will not have existed in vain. May the lesson be not lost. Let nature be the mistress, and medicine the handmaid. Let all natural processes be respected, aye, venerated. Let the laws of disease be esteemed as inviolable as the laws of health. Let meddling be interdicted. Let us approach the bedside, not presuming ability to cure, but hoping, instead, to promote cure. And when a time comes opportune to the delivery of a blow in support of nature as arrayed against disease, let the stroke be rendered directly, accurately; and may our weapon be the mace of a Charles Martel rather than the stuffed club of a stage clown.

SUBCUTANEOUS EMPHYSEMA FROM PERFORATION OF THE PLEURA BY EXTENSIOM OF TUBERCULAR ULCERATION FROM THE LUNG.

By STARLING LOVING, M. D.,
of Columbus, Ohio.

Semler Wallace, a mulatto, aged 33 years; a carpenter by occupation; 5 feet, 11½ inches in height; slender, but muscular. Married. Habits good. Antecedent history uneventful with the exception of an attack of pneumonia sustained five years ago, from which he recovered slowly. He has since been more disposed to bronchial attacks, but until December, 1901, suffered no illness which obliged him to remain within doors. During that month he contracted an "unusually severe cold," which obliged him to remain within doors, and later to take to his bed

The patient came under my observation on January 15, 1902. I found him in bed with a distressing cough, profuse mucopurulent expectoration, somewhat hurried respiration, temperature 102°, pulse 90, skin dry, appetite poor, bowels constipated, urine scanty. Physical examination revealed a degree of emaciation, hyperemia and swelling of the soft palate, slight dulness on percussion with prolonged expiration over the right subscapular and left infraclavicular regions; and dry and moist bronchial rales, fine and coarse, over all the regions of the chest. The sputum contained an abundance of staphylococci, but no other specific organisms. I pronounced the case one of diffuse bronchitis of probably specific origin. On February 10 the pulmonary lesions had increased, and tubercle bacilli in considerable numbers were present in the expectoration, leaving no doubt as to the nature of the patient's illness. On April 15 gurgles had replaced bronchial rales in the apical portion of the left, and the basic portion of the right lung, more numerous, coarser and more distinct on the right than on the left side. Tubercle bacilli were more abundant, expectoration much more profuse and emaciation more appreciable. On July 1 he had localized pleurisy, the pain being confined to the left subaxillary region. August 15, had pleurisy again. The pain and physical signs were limited to the right submammary and subaxillary regions. On August 20 the pain had subsided, but there was higher fever in the afternoon and profuse sweats at night. September 21, in the evening, after a prolonged paroxysm of cough, the patient noticed a swelling in the right armpit, which, by the morning of the 22d, had increased and extended inward to the right front of the chest. September 23, I found a swelling extending from the axilla and lower border of the clavicle of the right side downward to the crest of the ilium. There was no change in the respiration, no discoloration of the skin, no pain. The swelling was soft, quite prominent in the axilla, and below the clavicle, but scarcely appreciable below the costal border; easily compressible, crackled on pressure, resonant on percussion, on auscultation yielded a coarse, crepitant rale with both inspiration and expiration. On September 24 the swelling had increased somewhat and extended to the right subscapular region. There was little change, on September 25, but there was more swelling in the right side of the abdomen. Made several punctures through the skin in the right axillary, subaxillary and mammary regions, which allowed the escape of air, but did not reduce the swelling. On September 26 the swelling had extended to the right side of the neck and of the face. On September 27 the left side of the neck and face had become puffy. September 28, the right arm and forearm had become somewhat swollen to the wrist. On September 29 the swelling of the face had diminished on the right, but increased on the left side, and had extended to the left arm and the left side of the abdomen.

Diagnosis.—Subcutaneous emphysema from perforation of the pleura by extension of tubercular ulceration from the lung.

October 2. Under the influence of hyoscine hydrobromate the cough was not so distressing and the sweats had ceased, but the patient, although cheerful and hopeful, was evidently failing. On October 3 the swelling had almost disappeared. October 6. Patient died. October 8. Post mortem examination. Many small cavities found in both lungs with pleuritic adhesions, more extensive on the right side. In the upper lobe of the right lung opposite the fourth interspace, about the center, a cavity an inch in diameter was found, from which ulceration had extended through the adjacent pleura and the chest wall to the subcutaneous connective tissue. The opening was small and the passage, which was sufficiently large to admit a grooved director, somewhat tortuous.

MOUTH INFECTION, DUE TO NATURAL TEETH.

By D. D. SMITH, M. D.,
of Philadelphia.

(Concluded)

Further and seemingly indisputable proof of the infection due to the natural teeth and what they gather to themselves in the mouth, may be found in the almost universal improvement in general health conditions following the loss of all teeth. Complete recovery from ordinary diseases of the digestive tract, from many skin troubles and numerous nervous disorders, is a usual result of the extraction of all teeth. The intimate relationship of mouth infection with many morbid states and general pathological conditions seems clear, and presents conditions worthy of special emphasis, study and elaboration.

An editorial in a recent number of *American Medicine* reads in part as follows: "There are ten milions of them!—Everybody knows about them, the disease they spread, their horrors, their worse than loathsomeness! Every one endures, submits in silence, feels himself powerless to remedy. Boards of Health cannot, or think they cannot, attack the evil; or they are too busy with things they think are more important. And so the filthy country and village water-closet persists from generation to generation. The intellectual philanthropist is yet to come who shall undertake one of the greatest reforms of the world!"

The greatest sanitary reform of the world is not the abolition of the village closet, but it lies in the Herculean task of revolutionizing the unsanitary and infectious condition of the human mouth; contagion and disease from the latter is a thousandfold more subtle and dangerous than from the former, for it is found not only in country and village, *but it is also in all human mouths and in all places where humanity dwells.*

Tuberculous patients, in modern practice, are sent to the woods or open air. Waxham, with whose views there seems general agreement, says: "The best results are obtained from sleeping in a tent the year round, and this can be done by shifting patients about, allowing them to spend their summers in Colorado and their winters in Arizona or New Mexico," but there remains yet to be made the first consistent effort looking to *asepticizing the oral cavity* where the most pernicious factors of this lung and stomach infection are abidingly entrenched.

In addition to the toxins engendered amidst stagnant accumulations perpetually adherent in the mouth of consumptives, the sputum itself in appreciable quantity clings to the already infected tooth surfaces, increasing bacterial placques and multiplying bacterial cultures *in the mouth.* Can it otherwise be, than, that thus an endless chain of ever-increasing contagion revolves in foods and air to blood, thence to organs and tissues, to be deposited, it may be as initial infection or perhaps in augmentation of some pathological state already established; or it may return to the mouth in mucus or saliva, or in some inflammatory exudation, there to begin again its round of infection?

In view of this, is it matter for wonder that a recent author, Dr. Jessie Shoup, writing for *American Medicine,* says that in consumption "the system is constantly placed on the defensive and at no time is it able to change front and assume the offensive"? And, further, "We cannot eradicate this disease"? Does it not seem reasonable to infer that, while present neglected conditions of the oral cavity pertain, the "system" of the unfortunate tuberculous will neither be able to change front nor acquire strength to assume the offensive? Dr. Arthur Latham says, "the current treatment of consumption is a mere pouring in of drugs without any attempt to reach the root of the disease." Surely heroic "prophylaxis treatment" for the teeth and vigorous sanitary measures for mouth conditions in suspected cases, and not less as auxiliary treatment in the developed disease, are worthy of most careful and considerate investigation in an endeavor to benefit humanity and to free the profession from the opprobrium of this "white plague."

One or two English physicians have recently made some observations respecting the effects of mouth infection on general conditions, noticeably Dr. William Hunter, in an article in the *Lancet,* 1900, entitled, "Oral Sepsis as a Cause of Pernicious Anemia." In his hospital practice Dr. Hunter seems to have encountered most astonishing conditions of the mouth, due to ignorance, extreme neglect on the part of patients, and as he described them, to inexcusably wretched operations upon the teeth; the latter conditions unparalleled in this country, it is believed, even in the worst state of dentistry. In these extreme cases only Dr. Hunter has recognized and rather timidly asserted the effects of mouth infection. It is not to these appallingly neglected and maltreated mouths encountered chiefly in hospital practice that we are to look for typical cases of general infection due to mouth conditions, but it is to *every mouth containing unsanitarized teeth.*

The coining here of the word "unsanitarized," so aptly expressive of a condition of the teeth heretofore undescribed and unrecognized, is believed to be fully justified.

What has been said of mouth infection as excitant and promotive of tuberculous conditions, applies with equal emphasis to stomach, kidneys, the nervous system and other organs. Many forms of stomach disorders may be, and doubtless have been, awakened by this ever-present septic condition of mouth and teeth. Renal complications also, in all forms, I believe to be aggravated, if not induced, by the stagnant, septic toxins engendered in the oral cavity and perpetually adherent to the natural teeth.

Many of the milder types of nervous disorders having yielded with surprising readiness to the "prophylaxis treatment" hereinafter to be described and advocated, establishes confidence in the belief that many of the numberless cases of so-called nervous diseases—nervous prostration and kindred conditions—and, possibly, some, if not many, of that uncertain dread disease, toxic epilepsy, and, as already intimated, probably many cases of gastric and renal disease are engendered by the septic poisons irresistibly and perpetually bound to the system through this unperceived infection in the mouth.

Susceptibility to the infection of smallpox and other zymotic diseases we assume to be heightened by the favoring culture medium in present mouth conditions. The question may yet arise whether the germ of smallpox becomes infection until it develops culture in the mouth. If this should be accepted as an affirmation, as it possibly will be, maintenance of perfect mouth asepsis would render the system practically immune.

In view of the fact that every mouth, with teeth in their natural untreated state, is inevitably breathing out dangerous and infected droplets, how puerile seems the contention over the surgeon's beard. If, however, discussion shall develop a better understanding of the true source of beard infection and emphasize the special dangers attending amphitheater and all surgical operations through droplet infection, it will accomplish great good.

We are now face to face with the query: "Are these conditions remediable or must they endure?"

In 1894 I began a line of experimental investigation to determine the true source of tooth decay. Results from these experiments, carried forward on patients only, were all in harmony with the theory that caries of the teeth begins at some point on the exposed enamel surface, and that it is primarily due to the affinities of the ultimates of the teeth for the acids of the menstruum in which the tooth is perpetually enveloped. What seems indisputable proof of this theory is the fact that, if a devitalized or pulpless tooth, such a tooth as is conceded to be the subject of more rapid decay than one with a vital pulp in the same environment, be removed from a mouth in which resolution is rapidly taking place, and it be placed in water, alcohol or glycerine, or simply exposed in the air, all caries in that tooth is at once arrested.

The inevitable deduction from such an experiment is, that caries of the teeth is a result of environmental conditions; and this is in agreement with general observation and all clinical experience. Growing out of the experiments referred to and their results I have developed a system of caring for the teeth diametrically the opposite of all former conceptions, theories and methods of practice; and whenever the system has found typical exemplification, whether in childhood, youth, middle life or old age, most favorable and satisfactory results have universally followed.

The treatment consists in enforced, radical and frequent change of environment for the teeth, and perfect sanitation of all mouth conditions. Experience having demonstrated that the most careful and painstaking are unable, with the agents commonly employed, as the tooth-brush and dentifrice, toothpick and dental floss, soaps, so-called germicidal washes or other agencies, to effect this end, the plan of forcible and frequently renewed sanitation, by an experienced operator, has been instituted with results as already stated. In detail the process consists in most careful and complete removal of all concretions, all calcic deposits, semisolids, bacterial placques and inspissated secretions and excretions which gather on the surfaces of the teeth, between them, or at the gum margins; and this to be followed by thorough polishing of all tooth surfaces *by hand methods* (power polishers should never be used), not alone the more exposed labial and buccal surfaces, but the lingual, palatal and proximal surfaces as well, using for this purpose orange-wood points in suitable holders, charged with finely ground pumicestone as a polishing material. Treated in this manner the teeth are placed in the most favorable condition to prevent and repel septic accumulations and deposits, and not less to aid all efforts of the patient in the direction of sanitation and cleanliness.

In every instance in which this treatment has been instituted for the deciduous teeth, and in many cases of adults, there has been immunity from decay, and the teeth have shown a marked change in structural composition. Alveolar development in children has also apparently been stimulated and increased to meet the requirements of erupting teeth. The extreme and unnatural sensitiveness of the gums, attended with purple color, congestion and tendency to bleed, has, in every instance been fully overcome, and there has been quick return to the normal condition of low-grade sensibility, and to the natural pink tint of the gums, with typical striations and beautiful festoons. It is also apparent that the tissues of the teeth themselves, especially the dentine and enamel, probably through stimulation of the vital forces of the pulp due to this treatment, begin a surprising change for the better; a change which is first and specially noted in improved color and general appearance. Dull, opaque tooth substance, often loaded with offensive "old ivory" pigment, is transformed into clear, translucent tooth tissue, the teeth assuming the appearance of living organs, and having an impressive individuality.

For seven years the revelations and the benefits of this treatment, hitherto unknown, have been to me a constant source of surprise and delight, and with ever-increasing emphasis are demonstrating the necessity for this thorough and frequent change of environment for *all* teeth and *all* oral conditions.

To arrest or to prevent inflammatory processes in the mouth is to arrest and prevent resorption of pus exudations and other effete products of mouth inflammations, which of necessity are carried from the mouth directly into the digestive tract. The one and only method of prevention and relief from this source of infection is as stated, forcible, complete and frequent removal of the stagnant irritants and toxins which perpetually recur on and between the teeth and along the gum margins. Maintained at intervals of about a month, this treatment is followed by immediate lessening and ultimate arrest of all inflammations and all inflammatory exudations from the oral tissues and complete eradication of the stagnant accumulations otherwise perpetually adherent on and about the teeth.

Another important beneficial result of this treatment is seen in the unloading of the breath of its malodors and consequently of its often malignant infection, conditions frequently but erroneously charged to the stomach. Clinical experience adds its testimony in substantiation of all this. Of the whole number of subjects under this monthly "prophylaxis treatment," all have shown some phase or state of general health improvement.

The most common condition, malaise, expressed in an indifferent appetite, coated tongue and sallow skin, has in every instance, in from three to four months, given place to clearing of the tongue and skin, better assimilation of food and apparent increase of vitality.

Next in point of numbers are cases of so-called "nervousness," in both men and women—several in a condition approaching "nervous prostration." The rapid improvement and recovery in these cases has been a matter of astonishment and gratification. Inflammatory conditions of the throat, some of long standing and attended with tonsillitis, using topical applications only in addition to the "prophylaxis treatment," have in every instance shown marked improvement; some have been cured, and all others are improving under treatment.

One case of chronic nervous dyspepsia in an inveterate smoker, complicated with violent paroxysms of acute stomatitis, gums flabby and at times greatly swollen, even above the occlusal surfaces of the teeth, rendering mastication extremely difficult and painful; tongue furrowed and thickly and continuously coated; breath offensive in the extreme; accepted the "prophylaxis treatment" with considerable hesitation. Result, after eighteen months, complete restoration of mouth tissues, cure of the dyspepsia and return to full general health conditions.

Two notable cases of alveolar pyorrhea in men, one with pus exudations from the gum margins averaging half a teaspoonful in twenty-four hours, disagreeable inflammation of the throat, extremely offensive breath, sallow skin and complete loss of appetite. (In this case the patient stated a diagnosis of diabetes had been made and the usual restricted diet ordered.) The other case was complicated with violent stomatitis involving the whole left upper and lower jaw; patient in state of extreme nervous irritability, mastication painfully difficult, food assimilation imperfect, sallow skin, coated tongue and offensive breath. In each case the "prophylaxis treatment" was instituted at intervals of two to three days for about three weeks, when the time was gradually extended to one treatment a week, and from that to one in two weeks, until at the expiration of three months there was a treatment every third week; topical remedies were mainly used. Both of these patients made a complete recovery both as to pyorrhea and general mouth conditions and the restoration of the general health.

I may be permitted to detail a most interesting case of long-standing tonsillitis, complicated with chronic inflammation of the upper pharynx, the uvula and the half arches. The tonsils were greatly enlarged and the whole pocketed and inflamed surfaces continuously coated with a mucopurulent discharge; there was great depression of the nervous system, irregular appetite, anxiety, frequent "grippe," colds and cough. (The lady had been subject to "spray" treatment for the throat and given general tonics.) This patient has been only seven months under the "prophylaxis treatment" with topical applications to the affected surfaces, and in that time benefited to such degree as to warrant a most favorable prognosis. Three other cases, having all the symptoms of suspected beginning tuberculous decline, were noticed, and treatment instituted at the stage of beginning cough and expectoration; these have been improved with less than two years of "prophylaxis treatment" to such an extent that it is believed there will be no further development of the disease.

Five cases of gestation regardless of the oft-repeated prophetic warning have been under the monthly "prophylaxis treatment" and watched with great interest. Result: The birth of five healthy children; mothers in each case made most satisfactory recovery, and that not only without proverbial "loss of a tooth for a child," *but without injury to any tooth or teeth.* Other and varied interesting conditions and cases which it is deemed unnecessary to introduce here have been greatly benefited by this "prophylaxis treatment."

It is a matter to be recognized that relief from mouth infection is to be afforded through dentistry alone. Germicides will not, they cannot, accomplish it. There must be positive and frequent removal of all septic conditions of the teeth and all environmental states which promote toxic stagnation and germ culture in the mouth, and a general maintenance of the most perfect state of asepsis for the entire oral cavity. This can be accomplished only through the most skilful manipulation of educated, intelligent dentistry.

It may seem difficult to realize, but it is nevertheless true, that no greater good could come to humanity through the medical profession than the full recognition of the dangers from this insidious, prolific and virulent infection in the human mouth. The initiative in this reform must lie largely with the mother profession, for dentistry, with a degree stigmatized as "a badge of partial culture," and possessing but a modicum of knowledge respecting general conditions, as yet takes little cognizance of the true status of the teeth in their most important relations. Resting in past attainments in mechanics, it fails to grasp other conditions and other states of far greater importance, as witness a recent editorial in a conspicuous dental journal under the title: "The Same Old Things,"—a feeble arraignment of the dental profession for its lack of progress. In the same vein, another journal, in its editorial columns, not long ago declared: "We (the dental profession) are floating in shallow water. It is evident we have not been doing all we should have done to meet changing conditions." "We are floating in shallow water," indeed, when the main subjects before the profession for discussion are what they are to-day, "Porcelain Inlays," "Extension for Prevention," "Root Fillings" and other mechanical methods of like import.

The undisputed possessions of the dental profession include the very gateway to the human system, with all the important offices attaching thereto, and yet it has so circumscribed and limited its own field of operations that it has to do to-day, chiefly with the one disease, caries, in the crowns of teeth; and he that can the more adroitly deal with this condition is generally the most lauded. The limitations, feeble conceptions and the errors of writers and teachers have given the general public, and the great majority of the medical profession also, the impression that dentistry is what its schools have unwittingly made it, first and mainly, the filling of a decayed tooth. Its want of standing with the community is such that in every conflict the medical opinion supersedes the dental. There is practically no finality in a dentist's diagnosis or decision.

The addition of a dental mouth mirror to the pocket case of the physician would readily uncover astonishing lack in diagnostic acumen as to mouth conditions, and reveal causes of tooth decay, general mouth and breath infection and sources of disease, as unexpected as these conditions are humiliating and dangerous. The discoveries resulting from the oral prophylaxis treatment delineated, open a most important field of diagnostic research to medicine and surgery, and greatly enhance the opportunities for scientific development in dentistry. They also offer a means for greatly extending the benefits of dental service, and for making the dental profession a branch of medicine in reality; and this, in its own legitimate field, the oral cavity.

Physicians, it would seem, owe it to themselves and to the general public, in recognition of this ever present mouth infection, consistently to urge that the sphere of dental practice be enlarged to meet the constantly recurring necessities of this most momentous phase of medical and dental science.

Is it too much to hope that in the beginning of this twentieth century we shall witness, from specially instituted chairs in schools of medicine and dentistry alike, teachings which shall make plain to both professions their true relations as to kinship, homogeneity and mutual interdependence, and which shall evolve a system of Medico-Dento-Bacteriological Medicine having for its one object and aim the betterment of human teeth and the dethronement of Mouth Infection?

Health Reports.

Health Reports: The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon-General, U. S. Public Health and Marine-Hospital Service, during the week ending March 28, 1903:

			C.	D.
	SMALLPOX—United States.			
ALABAMA:	Mobile	Mar. 14-21	2	
CALIFORNIA:	Berkeley	Mar. 4-11	1	
	Los Angeles	Mar. 7-14.	4	
	San Francisco.	Mar. 8-15.	6	
COLORADO:	Denver.	Mar. 7-14.	22	
DELAWARE:	Wilmington.	Mar. 14-21.		1
FLORIDA:	Jacksonville.	Mar. 14-21	3	
ILLINOIS:	Chicago.	Mar. 14-21.	12	
INDIANA;	Elwood.	Jan. 15-22	7	
	Indianapolis.	Mar. 7-21.	29	7
IOWA:	Davenport	Mar. 14-21	3	
	Dubuque.	Mar. 14-21.	1	
KANSAS:	Witchita.	Mar. 14-21	3	
KENTUCKY:	Newport.	Mar. 14-21.	1	
LOUISIANA:	New Orleans.	Mar. 14-21	4 Imported	
MARYLAND:	Baltimore.	Mar. 14-21	2	
NEW JERSEY:	Camden.	Mar. 14-21	2	
NEW YORK:	New York.	Mar. 14-21.	1	
OHIO:	Cincinati.	Mar 13-20	17	
	Cleveland.	Mar. 14-21.	1	
	Hamilton.	Mar. 14-21.	1	
PENNSYLVANIA:	Altoona.	Mar. 14-21	2	
	Erie.	Mar. 14-21	2	
	Johnstown.	Mar 14-21 Imported	1	1
	McKeesport.	Mar. 14-21.	1	
	Philadelphia.	Mar. 14-21	26	1
	Pittsburg..	Mar. 14-21. 4 Imported, 3 cases	29	4
SOUTH CAROLINA	Charleston.	Mar. 14-21.	5	1
TENNESSEE:	Memphis.	Mar. 14-21.	1	
	Nashville.	Mar. 14-21.	1	
TEXAS:	San Antonio	Jan. 1-31.	4	
UTAH;	Salt Lake City.	Mar. 7-21.	53	
WASHINGTON:	Tacoma..	Mar. 1-16.	4	
WISCONSIN:	Green Bay	Mar. 15-22.	6	
	Milwaukee	Mar. 14-21	2	
	SMALLPOX—Foreign.			
BELGIUM:	Antwerp	Feb. 14-21.	2	1
BRAZIL:	Rio de Janeiro	Feb. 20-27		5
FRANCE:	Lyons	Feb. 21-28.		1
	Paris.	Feb. 28-Mar. 7..		1
GREAT BRITAIN:	Dublin.	Feb. 28-Mar. 7..	5	1
	London.	Feb. 28-Mar. 7..	2	
	Manchester.	Feb. 28-Mar. 7	19	
	Sunderland.	Feb. 28-Mar. 7..	1	
INDIA:	Bombay.	Feb. 17-24.		74
	Calcutta.	Feb. 14-21.		6
MEXICO:	City of Mexico.	Mar. 1-8.	9	5
STRAITS SETTLEMENTS:	Singapore.	Jan. 31-Feb. 7..		1
TURKEY:	Alexandretta	Feb. 21-28.	3	
	YELLOW FEVER.			
BRAZIL:	Rio de Janeiro.	Feb. 20-27.		40
COLOMBIA:	Panama.	Mar. 10-17.	3	1
ECUADOR:	Guayaquil.	Feb. 14-21.		8
	CHOLERA—Foreign.			
INDIA:	Calcutta.	Feb. 14-21.		68
STRAITS SETTLEMENTS:	Singapore.	Jan. 31-Feb. 7..		1
	PLAGUE—Insular.			
HAWAII:	Hilo.	Mar. 7.		2
	PLAGUE—Foreign.			
AFRICA:	Durban	To Feb. 23.	83	50
	Pietermaritzburg	Feb. 26.	1	
BRAZIL:	Rio de Janeiro	Feb. 20-27.		1
INDIA:	Bombay.	Feb. 17-24.		1.054
	Calcutta.	Feb. 14-21.		277
	Mauritius.	Feb. 12-19.	4	1
MEXICO:	Mazatlan.	To Mar. 20....	313	254

An Interesting Case of Syphilis.—Thibierge and Ravaut presented a case of syphilis in a woman of 23, contracted 18 months previous. Chancres had appeared upon the labia majora and minora. Two months later pigmented spots, like vitiligo, were first noted, with, later, some pruriginous lesions, resembling those due to pediculosis. After 3 months, following a sore throat, she noticed cervical adenitis, and mucous patches appeared on the pharynx. The pigmentation has remained upon her neck, forming a striking condition. She has also complained of a headache without nervous symptoms, resembling that of neurasthenia. Lumbar puncture showed a cerebrospinal fluid containing abundant lymphocytes. It is strange to have a lymphocytosis, denoting organic nervous changes, with such a headache, so very like a purely functional condition. (*Bulletins et Mémoires de la Société Médicale des Hôpitaux de Paris*, January 2, 1903.) [M. O.]

The Philadelphia Medical Journal

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VOL. XI. NO. 15 APRIL 11, 1903 $5.00 PER ANNUM

The Treatment of Exophthalmic Goiter.—One of the most ingenious methods of treatment ever devised by the restless imagination of a scientific therapeutist is that employed by Lanz, of Amsterdam, in the treatment of exophthalmic goiter. It can hardly be said to conform with the rigid laws of exact science. We do not know the exact pathology of exophthalmic goiter. There is still considerable dispute as to whether the lesion is located in the sympathetic nervous system, in the medulla or in the thyroid gland itself. Kocher, whose experience is quite large, inclines to believe in the medullary situation of the disease, and for this reason has advocated and employed the treatment with sodium phosphate. Moebius, who for years has prepared the article on this subject for the *Virchow-Hirsch Jahresbericht*, and who has prepared a monograph upon it for Nothnagel's System, and may, therefore, be presumed to be thoroughly familiar with the literature, and whose personal experience is very extensive, believes that it is due to an excessive activity of the thyroid gland. Jonnesco claims to have cured the disease by the extirpation of the cervical sympathetic, but surgeons who have performed the operation have reported confusingly different results. It must be confessed that to the ordinary intelligence the doctrine of Moebius appears to have more basis than any of the others, and this doctrine is the one adopted by Lanz upon which to base his method of treatment. This treatment is based upon the following proposition: If exophthalmic goiter is due to excessive action of the thyroid, and if the thyroid excretes a substance that neutralizes poisons that have accumulated in the blood which of itself may become dangerous in excess, then the excessive thyroid excretion should be neutralized by the serum from a case of myxedema. In order to obtain this serum he removed the thyroid glands of goats and then subsequently bled the animals. But it occurred to him that an accumulation of poisons might be found in some of the other fluids, and this suggested the use of the milk of these goats. The treatment is by no means new, but Lanz has recently reported the results of four additional cases, making six in all. These cases are as follows: A woman of 38 years, extremely emaciated, with edema, goiter, exophthalmus, tachycardia and all the other characteristic symptoms, improved remarkably upon the milk of a goat upon which thyroidectomy had been performed. She gained in weight, the symptoms disappeared, with the exception of the goiter and slight exophthalmus. The second, also a case in the last stages, improved very remarkably as soon as she commenced to take the milk, the nervous symptoms, in particular, almost completely disappearing. The third patient had a moderately severe attack, and she also improved promptly on the commencement of the milk treatment, the symptoms almost completely disappearing, the goiter in particular being greatly reduced in size. This patient, when finally examined, had been for months without the goat's milk. The last patient, a man of 25 years, had a moderately severe attack, and he rapidly and apparently permanently improved. Lanz expresses himself very modestly and states that the views of the father of a method regarding its value should always be received with a proper degree of scepticism. Nevertheless, he cannot help feeling that a series of results such as these, obtained upon patients presenting themselves in order, small as the number is, and not upon selected cases, should encourage others to try the same method. At least any other treatment that has hitherto been devised has proved to be of no permanent value.

The same idea that occurred to Lanz naturally also occurred to Moebius, who worked on a slightly different basis. Removing the thyroid glands from sheep, he bled the animals, obtained their serum and used this for therapeutic purposes. Having had some rather disagreeable results from the hypodermic injection of the serum, he told his patients to swallow it. Although in no case did he obtain a cure, in all he noted some improvement, and his patients were well pleased. He also attempted to use the flesh of sheep, the thyroid glands of which had been removed, but the results were too slight to be worth further progress in this direction. Moebius complains bitterly of the excessive cost of the serum, which is particularly aggravating because considerable quantities must be used, and he is afraid that, unless some improvement is made in this direction, it will not be possible to employ the treatment very extensively. Of course, if the milk of a goat is beneficial, as Lanz maintains, the serum of a sheep should also be beneficial, and the antithyroidal substances, whatever they may be, are not destroyed by the gastric secretion. Nevertheless, it seems reasonable to suppose that a better effect would be obtained by the subcutaneous inoculation of the serum than by allowing the patient to swallow it, and, as large quantities of antitoxic serums are constantly injected without the least unpleasant effect, we must assume that there is something wrong with Moebius' technique. Moreover, there is no reason why this serum should be so expensive. The sheep is a relatively large and not very expensive animal, and it should be possible to bleed it a number of times and to obtain in this manner a very considerable quantity of serum. The greatest objection, however, is the very slight result actually obtained. In one of Moebius' cases the pulse was reduced from 134 to 106; in another from 120 to 90, and in each the diameter of the neck was reduced 2.5 cm. But it will occur to every physician who has treated these cases that such a degree of improvement is by no means uncommon after rest and the administration of the drugs usually employed, so that it is not necessary to assume that the serum was the active agent. Nevertheless, it must be admitted that the methods of Lanz and Moebius, which are based upon the same theory in regard to the nature of the disease, seem to offer more prospect of benefit than any others that have hitherto been suggested, excepting perhaps the comparatively dangerous partial removal of the thyroid gland.

The Relation Between Uterine and Gastric Disease.—The association of the uterus and other pelvic viscera with the sympathetic nervous system has always been claimed by gynecologists to be a prolific cause of reflex disturbance. The best known of these pathological reflexes is the so-called clavus hystericus, or painful spot on the top of the head, but there are few neurologists who believe this to be due to uterine disease or retrodisplacement. The nervous factor in the average gynecological case is doubtless an important element to be eliminated in the treatment of the patient. Often the successful issue depends upon an arrest of the nervous breakdown that is so marked in many of these patients. The correction of an apparently trifling uterine or perineal defect will frequently be followed by an astonishing improvement in the general symptomatology, but this is often due to mere mental impression. Recently Ödön, of Budapest, has, in a most scientific article, enlarged upon the close connection between uterine diseases and disorders of the stomach. In many cases of chronic gastritis and gastroneurosis, which had long resisted the most careful treatment by stomach specialists, he had seen the symptoms entirely disappear after the replacement of a displaced uterus or the cure of a chronic metritis or endometritis. He states that the local lesion may be slight, and consist merely of a moderate deviation in either a sagittal or a horizontal direction, but however slight the lesion, the relief afforded is most marked. In his investigation Ödön has been following the suggestion made some time since by Hildebrandt, namely, that a genital examination should be made of every woman complaining of digestive disturbances. This is an extreme position. We would modify this by insisting upon the examination only after a judiciously applied course of gastro-intestinal therapeutics, continued for a reasonable period of time. The symptoms then persisting, the pelvic exploration should be made, unless the pelvic symptoms have been so marked as to indicate an earlier investigation into their cause. The direct cause of the gastric disease due to an associated uterine disease, such as retroflexion, is, according to Ödön, a pressure upon the inferior hypogastric plexus. If this pressure be long exerted there follows eventually a true motor and secretory disturbance of the stomach, so that we have an organic implanted upon a primary purely functional disorder. The whole subject is one of unusual interest and well worthy of the closest attention, not only of the pelvic specialist, but of the practitioner as well.

The Therapeutics of Insanity.—Dr. J. M. Mosher, in the *Albany Medical Annals* for April, makes a report of the year's work in the special ward of the Albany Hospital that has been set aside for the treatment of mental cases. The idea has been to assign a ward in a general hospital to promising cases of insanity, so that these patients could have the benefit of general hospital treatment without being certified insane. The ward is designated "Pavilion F," all reference to its special function thus being avoided. This, as may be seen, is a concession to the prejudice against "insane hospitals" or "asylums," and is somewhat in accord with the design of a psychopathic hospital.

On the whole, Dr. Mosher's report is encouraging. Even if a large percentage of cures was not obtained, there was, nevertheless, a sufficient number to make the experiment worth while. 174 patients were treated, of whom 57 were discharged cured, and 53 improved. Most of these favorable cases occurred, as was to be expected, in the acute psychoses, such as acute delirium, confusional insanity, mania, melancholia and acute alcoholic delirium. Only a small proportion of the delusional, degenerative and confirmed cases were treated; and Dr. Mosher properly recognizes that the design of the pavilion does not include the treatment of such cases. He also points out that some of the more confirmed and advanced cases of the psychoses, such as melancholia, require the care and treatment of the regular asylums, because these institutions are better fitted for supplying recreation and for prolonged oversight. The function of such a ward as the one in Albany properly includes also the detention of insane patients until they show that they require commitment.

The plan of treatment is not given in detail, but we judge from the good results that it was largely by rest and isolation, and by improving nutrition. The further work of "Pavilion F" will be watched with interest.

Unscientific Temperance Lessons.—The Women's Christian Temperance Union of Pennsylvania has recently directed a circular letter to the members of the Medical Society of the State of Pennsylvania dealing with the criticism of a committee of the State society appointed for the purpose of examining the various text-books on physiology and hygiene in use in the schools throughout the State. Accompanying this circular letter is a pamphlet entitled "Science, the Arbiter," which purports to be a reply to the criticism of this committee. Reading this pamphlet disinterestedly, we cannot but feel that the vast majority of criticisms of this committee were well founded. The attempts at explanation on the part of those who have in charge the so-called "scientific temperance instruction" are distinctly weak, and we detect very little in the pages of the reply reflecting any scientific spirit whatever. On the contrary, we believe that the intolerant spirit which pervades this answering monograph in no sense strengthens the cause which it sets out to support. Any one who has carefully looked over these text-books, the contents of which are drummed into the ears of children far too young to understand, must have seen that they teem with statements of the most bigoted and preposterous character. We are not among those who believe that the school-child should be taught to regard alcohol as a bugaboo. No more should they be taught in their school courses to be afraid of the dark or of the "boojums" who may seize them in their little cribs at night, if they are not good. Many of the flagrant inaccuracies in these books dealing with the question of alcohol, tobacco, etc., are explained by the advocates of such works by the statement that the young child cannot grasp the entire explanation of this or that action, and the matter is simplified for them. In our opinion the discussion of these subjects should be deferred until the age of the pupil is sufficient to permit him to understand whereof he reads, and then the statements presented to him should be calm, truthful and dispassionate.

Concerning Anesthetics.—The meeting of the Philadelphia County Medical Society, held March 25 (*Proc. Co. Med. Soc.*, March 31, 1903) was devoted to a symposium on anesthesia. Papers were read by Dr. G. G. Davis on The Choice of an Anesthetic; by Dr. J. G. Clark on The Preparation of the Patient; by Dr. Edward Martin on The Method of Administration, and by Dr. G. W. Spencer on The Treatment of the Complications of Anesthesia. The claims for different anesthetic drugs, ether, chloroform, nitrous oxide, ethyl chloride, ethyl bromide and anesthol, were discussed. Ether still holds first place in the practice of the surgeons in this country as an anesthetic. In spite of the extensive use of chloroform by British surgeons, and the work of the Hyderabad Commission several years ago, that drug is not in extensive use in this country. It could not be when the proportion of deaths from it is one in 2,000, while the proportion of ether deaths is one in 10,000. As Dr. Mordecai Price said in the discussion, the majority of our surgeons would be a good many miles away from a bottle of ether before they would use chloroform. The use of nitrous oxide gas, either alone or in combination with oxygen, is becoming popular for the production of anesthesia for short operations, and Dr. M. I. Schamberg even claimed to be able to keep a patient unconscious for a half hour by its use.

The Lesson at Ithaca.—We publish this week a very graphic but condensed account of the typhoid epidemic at Ithaca. Dr. Sudler has probably told us all there is to tell—at least all there is to tell at present. What we should like to know does not, of course, appear in his report, any more than in the more ambitious reports which one of our contemporaries has been publishing with pictures of farm-houses, barns and pig-pens. In common with the rest of the world, we should like to know where and how this dreadful infection took its origin. But Dr. Sudler does not tell us this for the very good reason that neither he nor anyone yet knows. This is the hiatus in our information that we are waiting to have the Ithaca authorities fill up..

What Dr. Sudler does tell us, however, and in very plain language, is that all the conditions existed at Ithaca for promoting an epidemic of typhoid fever. The whole situation is found to have been in an unguarded supply of surface water. It is not in barns and chicken-coops and pig-pens, however, that the active cause is to be searched for (however unattractive these bucolic shanties may look in halftones) but it is in *some antecedent case of typhoid fever.* Dr. Sudler, we believe, has pointed to a very probable source when he tells us that two cases of continued fever occurred last autumn near one of the streams that supply Ithaca.

This is the problem in a nutshell, and it is this problem, we insist, that the sanitary authorities at Ithaca ought to do their best to solve. Of course, it remains for them also to protect the town from another such visitation. But the moral of the whole story is this: As Ithaca has been living, so are hundreds of other towns in the United States still living, and as Ithaca has been punished for her sanitary shortcomings, so may some or any other town be punished on equally short notice.

The American Philosophical Society.—A recent writer* has said that "nearly everything of any antiquity in Philadelphia may be traced back to Benjamin Franklin." This is a deserved tribute, for Poor Richard was equally great whether in the founding of a library or a university, a hospital or a learned society, or even the nation itself. His organizing genius was manifested throughout a period of more than a generation in the city which was the real capital and metropolis of this country through all the colonial epoch. Not the least interesting of the institutions founded by Franklin was the American Philosophical Society.

As early as 1743 Franklin, with a small coterie of kindred spirits, founded the *Junto,* which was designed to be a society for the discussion of "philosophical" subjects. It was not until 1767, however, that this little club developed into the American Philosophical Society. The design was evidently to establish on colonial soil a learned academy which should have as its prototype the Royal Society of England.

But science in the eighteenth century, especially in America, could not number many real specialists and experts as these are known to-day, and the new society was characterized by a laudable curiosity to know what was knowable rather than by the trained faculty to prosecute the sciences in various special fields. The day for specializing, indeed, had hardly dawned, and the term "philosophy" was meant to connote all departments of human knowledge. An evidence of this is seen in the fact that statesmen and scholars were enrolled in the new society without distinction as to their special attainments. Franklin and Rush, Jefferson and Rittenhouse were types of the men who foregathered in the councils of the new academy.

The American Philosophical Society has thus about it something still of the atmosphere of the old colonial days. When it gathers its members together in its old colonial dwelling on Independence Square, it enjoys the environment of a day that has gone, and perpetuates the best traditions of the earliest awakening of the scientific spirit in America. This old hall, which adjoins Independence Hall, and is one of the most interesting buildings in Philadelphia, has just been the scene of another successful annual meeting of the Society. In the true spirit of its ancestry the Society has not yet specialized and differentiated, and we are edified with the spectacle of a body of scientists who discuss sociology and astronomy, chemistry and zoology, mathematics and medicine, in perfect harmony in the same session, though perhaps with not equal profit to all.

The American Philosophical Society is both venerable and interesting. If it has not attained to the true position of a national academy, it may still claim to be a body of the scientific élite. It has done some good work even in medicine and the allied sciences, and it deserves to be perpetuated not only for its picturesque features, but also for its inspiring example and for its distinguished past.

The Elmira Reformatory.—We have received the twenty-seventh annual report of this institution, and have read it with great interest. It is the most noteworthy volume of its kind that we are acquainted with, and reflects the interior workings of one of the most noteworthy public institutions of this country. The amount and variety of instruction given at the Elmira Reformatory are quite remarkable. We refer particularly to instruction in the various trades. When it is considered that the subjects of this instruction are all young persons from the great criminal class (undergraduate criminals, we might call them), and that these youths are educated both in letters and in trades, and returned to the community fitted to lead honest and industrious lives—when all this is considered it is easy to see what a benefit such a reformatory school is to the public. The figures given in this report tend to show that only a small proportion of these pupils revert to crime.

Of special medical interest is the reference in the physician's report to tuberculosis. As in all institutions (especially jails) where many persons are closely segregated, tubercular infection is the disease most to be dreaded. At Elmira there were 17 cases of tuberculosis in a population exceeding 1,500—not a very high rate. Dr. Christian, the senior phy-

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*Dr. E. P. Oberholzer on "Franklin's Philosophical Society" in *Popular Science Monthly,* March, 1902.

sician, points out the difficulty of properly isolating such patients at Elmira, and makes the very wise suggestion that the State should provide a special hospital for tuberculous criminals. This suggestion is fully in accord with the tendencies of the day in the treatment of the victims of this disease. It should be heeded.

We congratulate the managers and officers of the Elmira Reformatory on their good work and on the interesting annual report which reflects it.

Current Comment.

APPENDICITIS.

Brunton recommends the administration of fifteen to twenty grains of sodium salicylate every two hours, and ten to fifteen minims of tincture of belladonna, in appendicitis. They may be given together or alternately, but should not be mixed, as each drug is to be diminished or stopped when its physiological effects appear.—*Clinical Review.*

How long, oh Lord, how long are the columns of our medical journals to be burdened with such silly twaddle as the above? Attendant upon the administration of three such doses of the drugs as advised above there is as much danger and more discomfort than attends an early operation for appendicitis. The operation cures the patient certainly and secures against recurrence. Drugs cannot cure, and if they did there would remain the danger of recurrence. More than 80 per cent. of all cases of appendicitis will get well if starved and kept at rest, but of these 80 per cent. one-third will have recurrent attacks. More than 99 per cent. will be cured, and stay cured by timely operation.

—*Fort Wayne Medical Journal.*

Correspondence.

SPINAL SYMPTOMS FROM MORPHINE.

By CHARLES J. ALDRICH, M. D., of Cleveland, Ohio.

To the Editor of the **Philadelphia Medical Journal:**

The very interesting letter of Dr. Alfred Gordon, on page 497 of your issue of March 21, and also the short personal experience related by Dr. W. W. Keen on page 538 of your issue of March 28, detailing the peculiar spinal symptoms caused by morphine, recall to my memory a case of very marked cerebral and spinal symptoms produced in the same person by a medicinal dose of morphine on one occasion, and by tincture of opium on two others.

A barber, aged 36 years, ordinarily robust, was taken ill, and for relief of pain was given a hypodermic injection of one-fourth of a grain of morphine. Immediately following it he fell into a semicomatose state; tonic contractions appeared in the extremities, and were soon followed by clonic convulsions. The patient was under Dr. L. H. Wagner's care, who asked for consultation, thinking that perhaps he had to deal with some violent nervous affection. I saw the case with him. Examination revealed very markedly exaggerated knee-jerks, plus wrist-jerks and elbow-jerks, a well-developed double ankle clonus, a well-defined jaw-jerk and Babinski's symptom. The pupils were contracted but reacted to light and accommodation; there were practically no other symptoms. The patient was given potassium bromide and chloral, ice was applied to the head, and later castor oil was given in a cathartic dose. In two or three days the man appeared as well as ever, and, while morphine was suspected as a possible cause, nothing positive was known until three weeks later, when he went into a drugstore and asked the druggist for something to relieve a severe attack of colic and diarrhea. He was given twenty drops of laudanum in one half ounce of castor oil. He immediately went from the drugstore to his home, which he barely reached when he was seized with a convulsion identical with the former one experienced. I was called again to see the patient, and found his condition to be as I had previously observed. At this time we felt positive that the opiate was the cause of his seizure. Some months later he allowed a druggist again to prescribe for him, and this time it was tincture of opium, but in smaller doses, supposed to be one-fourth dram, but sufficient again to produce a slight convulsion with some of the attending spastic symptoms that he before experienced. Like Dr. Keen, I had never known that a medicinal dose of morphine would produce either spastic or paralytic symptoms. It is possible, however, that the publication of these three instances will invite the attention of other observers, and we may learn that the convulsive action of opium and morphine is not so rare as we have hitherto supposed.

THE COCAINE HABIT.

By WILLIAM LEE HOWARD, M. D., of Baltimore, Md.

To the Editor of the **Philadelphia Medical Journal:**

The valuable contribution by Doctor Simonton on the cocaine habit, which appeared in the **Journal** of March 28, should be carefully read, and then reread by every progressive physician.

The increase of the drug habit has gone on at a terrible rate; my experience showing that it has doubled during the last three years. That is, I have had twice as many cocaine habitués to treat this year as I had three years ago. Many of the patients I see are those who have found that morphine will no longer give them the relief it did when the habit first was formed; others have become fiends through the cursed "cures" (?) for morhine and alcohol habits, that are openly sold and frequently given secretly in coffee, mothers and wives in this manner ignorantly being the means of pushing the victims into the most ruinous drug habit known to us.

As an illustration of the prevalence of this drug habit we have only to study the slang of the day. "Coke," "dope," "daffy," "pipe-dreams," "bug-skin;" (in reference to the peculiar sensation of worms or bugs the "coke" fiend so acutely feels) "got a shot," and many other words demonstrating the universal knowledge of the use and effect of certain drugs, especially cocaine.

Sociologically this state of affairs was well shown last week at a vaudeville show in this city. There was a sketch played entitled "The Cocaine Fiend," in which the principal character was a "coker." The actor who played the title rôle must have had very intimate association with unfortunate cocaine victims. Even in the smallest detail he was perfect in his delineation. The sketch was well understood and always applauded when the "coker" made some slight movement or expression that could only have been appreciated by those familiar with the effect of the drug. On the last night of the play here, I went and sat in a box where I could face the audience. The news that the play was "all right" had evidently reached the "fiends" in this city, for a patient told me of many that were going to see it, and I had that night an opportunity seldom offered of seeing faces upon which will be forever stamped "death and despair."

Reviews.

Physical Chemistry for Physicians and Biologists. By Dr. Ernst Cohen. Authorized translation by Martin H. Fischer, M. D. With an introduction by Dr. Jacques Loeb. Small 8vo., 331 pages and index. New York. Henry Holt & Co.

The position of this book is best indicated by a quotation from Dr. Loeb's introduction. "The development of physiology and biology has, during the last years, been so decidedly under the influence of physical chemistry, that those who wish to follow the progress of the former sciences must be familiar with the principles of the latter." Like all modern sciences, physical chemistry finds its beginnings in researches that were but little appreciated when put forth. The data were regarded as concerning only a limited circle of inquirers: the far-reaching relations to physiology and biology were not perceived. The work of Graham and Arrhenius attracted but little attention: the law of mass-action promulgated by Guldberg and Waage, was noted only in the larger text-books. In a quiet way, investigation went on until the science was so far developed as to foreshadow its strong influence in the interpretation of phenomena. The names of Faraday, Van't Hoff, Ostwald and Raoult are among the more prominent in this field. It is obvious, therefore, that a book that will furnish students in medicine and biology with a correct and simple summary of the leading facts in the science and, possibly, also assist older persons, whose student days date from the period when physical chemistry was a mere special field, will be of much use. Such a book must make but little use of mathematics, at least, for American students. The higher algebra and still more, calculus, will be generally inapplicable to such persons. It may be that such a limitation is incompatible with a full treatment of the science, but we think that an outline sufficient for the purposes above noted could be presented without the use of much mathematics.

Judged by this standard, we do not feel satisfied with the book before us. That it is a scientific and correct presentation of the subject, we concede. It is in the form of lectures, which seem to have been given, by request, to medical students. The translation seems to be well done and avoids German idioms. The extent to which mathematics is employed will, we feel sure, greatly restrict the usefulness of the book on this side of the Atlantic. If it had been simply offered as a manual of physical chemistry, no objection would be made to the method of treatment, but as it claims to be specially adapted to the use of physicians and biologists, a criticism of it from this point of view is in order. We note, with regret, that the care which has been given to the general form of the text has not been extended to the nomenclature in all cases. We hold that in a scientific work no laxity of nomenclature is allowable. The writer should decide on a system and follow it strictly, not sacrificing it at any time as a concession to apparent simplicity or to avoid tautology or monotony. To which of these influences the translator has yielded, we do not know, but we find the terms "hydrogen arsenide" and "arseniuretted hydrogen," and "tolune" and "toluol" used in the same paragraphs respectively.

The text is divided into seventeen lectures, in which, however, the colloquial form is not prominent, a condition which we approve. Some teachers think that the conversational form is adapted for the printed page, but we do not agree with this view. More than half the book is taken up with the explanations of principles and methods of research, the remainder being devoted to the application to the explanation of vital phenomena. There is no table of contents, but a fair index, which, however, follows the absurd German custom of separating names and topics. The book is well printed and liberally illustrated. It contains a large amount of useful and interesting information, and the text is creditable to author and translator.

[H. L.]

The Practice of Surgery: A Treatise on Surgery for the Use of Practitioners and Students. By Henry R. Wharton, M. D., Clinical Professor of Surgery, Woman's Medical College of Pennsylvania; Surgeon to the Presbyterian and Children's Hospitals; Consulting Surgeon to St. Christopher's Hospital and the Bryn Mawr Hospital, etc., etc., and B. Farquhar Curtis, M. D., Professor of Clinical Surgery and Adjunct Professor of the Principles of Surgery in the University and Bellevue Medical College of New York; Surgeon to St. Luke's Hospital, Bellevue Hospital, and the Memorial Hospital, etc., etc. Third edition. Philadelphia and London: J. B. Lippincott Co. 1902.

To condense into a single comprehensive volume the principles and practice of the surgery of to day is by no means an easy task. In fact, it has become nearly impossible for one man to write a complete work on surgery, and as a result our recent text-books have been written by a number of authors, each presumably well fitted to deal with the subjects allotted to him.

Each section of this book is signed by its author, a plan which we commend. The general plan of the book is much the same as most single-volume surgeries. The illustrations are numerous, in fact too numerous, the authors having retained illustrations which may be looked upon as out-of-date. We refer to pictures of wooden-handled instruments, and of operations being done by a surgeon in ordinary clothes. Aseptic surgical technique is now old enough, we think, for these illustrations to be shelved. The illustrations of the modern operation of breast amputation for cancer are very poor, it being impossible to have removed the axillary glands through the wound here represented.

Wharton has presented a very satisfactory chapter on fractures, and we are glad to see that he has departed from the older text-books in recommending the more modern treatment of early motion and massage in fractures, particularly those of the upper extremity.

Curtis' view regarding operation in acute appendicitis may be looked upon as conservative. In cases of cholecystitis, on the contrary, he expresses the most radical advice, recommending removal of the gall-bladder in frequent circumstances. A chapter on injuries of the eye by de Schweinitz is included in this volume. The authors have also adhered to the older plan of including gynecological operations in their work.

The book aims at being a practical surgery for the student and practitioner. It is written by two men of experience both as teachers and surgeons. That they have been successful is shown by the fact that this is the third edition of their work. [J. H. G.]

Transactions of the American Surgical Association. Volume the Twentieth. Edited by Richard H. Harte, M.D., Recorder of the Association. Printed for the Association. For sale by William J. Dornan, Philadelphia. 1902.

The American Surgical Association is one of the oldest and most honorable of our national medical bodies. It was founded in 1880 by the elder Gross, and is composed to-day of about 120 of our most prominent surgeons from all parts of the country. The volume before us for review is the twentieth of its kind. It contains about 600 pages, well printed and handsomely bound. As a volume of transactions this might well be taken as a model by all societies. In the front of the book besides the contents is found an alphabetical list of the Fellows of the Association together with their residences and positions which they hold. At the close of the volume not only is found an index to the present issue but also an index to all the preceding volumes, which renders the book of particular value as a means of reference.

Among the important papers presented in this volume are several excellent articles on gunshot wounds, one of which has already created considerable discussion among both surgeons and neurologists, namely that of a case of severed spinal cord which was sutured and in which later there was a partial return of function. This patient was operated upon by Francis T. Stewart and the case was reported by Richard H. Harte and Francis T. Stewart. The teaching of surgery and also modern hospital construction are discussed in a number of papers. There is an interesting article by William J. Mayo on Complications Following Gastro-enterostomy, and one by Finney on a New Method of Pyloroplasty. The surgical treatment of Tuberculous Peritonitis is discussed by Ochsner. An extensive paper on Carcinoma of the Appendix is reported by Richard H. Harte and Robert N. Willson.

It is impossible to enumerate all of the excellent papers found in the present volume, but suffice it to say that it is filled with them. The editor of the Transactions is to be congratulated on this very complete and satisfactory yearly report of the Association. [J. H. G.]

News and Notes.

AMERICAN

PHILADELPHIA AND PENNSYLVANIA.

University of Pennsylvania.—Alarmed by the recent epidemic of typhoid fever at Ithaca, the faculty of the University of Pennsylvania has decided to protect its students from the possibility of contracting typhoid fever by installing its own filtration plant. A modern filter, of sufficient capacity to purify all the water used in the institution, is soon to be erected in the basement of the University Dormitories.

Philadelphia Hospital.—A committee, consisting of Drs. R. G. Curtin, D. W. Steinbach, C. K. Mills, F. X. Dercum and H. A. Wilson, representing the Medical Board of the Philadelphia Hospital, called upon Mayor Ashbridge, April 2, and presented to him the following resolution, as an evidence of their appreciation of the improvements made to the hospital during his administration: "At a meeting of the Medical Board of the Philadelphia Hospital, convened for the purpose, it was unanimously resolved, in view of the approaching conclusion of your Honor's official term as Mayor of the city of Philadelphia, to place upon record an expression of the Medical Board's appreciation of the great improvements that have been brought about at the Philadelphia Hospital during your administration. Among these may be cited: The erection of a children's hospital, the erection of the maternity pavilion and of the pavilion for venereal diseases, the beginning of the construction of a pavilion for consumptives, the separation of the Insane Department from the Almshouse, an end to which the efforts of the Medical Board had hitherto been fruitlessly directed for twenty years, and the greatly increased facilities for clinical teaching through which the institution is advancing into the foremost rank of teaching hospitals, thereby increasing the attractions of the city for medical students and assisting in maintaining its prestige as a medical center. In addition, the members of the Medical Board wish to thank you for the many courtesies of which they have been the recipients at your hands, and trust that when you retire from office you may enjoy pleasant memories of your services to a great institution of charity and learning."

German Hospital.—The Saturday afternoon clinics, which have been held all winter at the German Hospital by Dr. John B. Deaver, for medical students from all the Philadelphia medical schools, ended last Saturday. In all, 26 clinics were held, at which 192 capital operations were performed. During the time covered by these clinics, over 700 operations were performed in the German Hospital.

Home for Convalescent Children, Gwynedd.—This institution was formally opened April 2. The home was built and equipped by Mr. and Mrs. F. E. Bond and Mr. and Mrs. H. P. McKean, and is established for the purpose of giving proper nursing and maintenance, during convalescence, to children from 4 to 10 years of age, who have been treated in the hospitals of Philadelphia; who, though well enough to leave those institutions, have not sufficiently recovered to make it advisable for them to go back at once to their homes where, in many cases, they would receive insufficient care. The home is absolutely nonsectarian and will be open both winter and summer. The building is 2 stories high, containing 2 wards accommodating 12 children each. Although the object of the institution is not to give medical treatment, but simply careful nursing under sanitary conditions during convalescence, arrangements have been made for the medical services of Dr. Godfrey, of Ambler, in case of emergency. The home already has several patients, a matron and a nurse. When the number of patients shall exceed 12, an additional nurse is to be engaged. It will cost about $4000 a year to maintain the home at its full capacity, and the founders invite persons charitably inclined to co-operate with them in establishing a fund which will assure such maintenance.

State Appropriations for Hospitals.—Governor Pennypacker, to whom a bill, appropriating $290,000 to the Medico-Chirurgical Hospital of Philadelphia, has been sent for his signature, has suggested to the House of Representatives that the bills making appropriations to other hospitals connected with medical schools be sent to him immediately, in order that he may compare the appropriations awarded the different institutions.

The Health of Philadelphia.—During the week ending April 4, there was an increase both in cases of typhoid fever and scarlet fever reported, while those of diphtheria and smallpox both showed a slight decrease. There were 184 cases of typhoid fever, with 21 deaths reported, as compared with 154 cases, with 41 deaths, in the previous week. The only wards without cases were the sixth, ninth, tenth and thirty-fifth. The greatest number of cases occurred in the thirty-fourth ward, 21, the twenty-fourth and thirty-third wards coming next with 14 each. There were 105 cases of scarlet fever, with 8 deaths, as compared with 94 cases, with 5 deaths, reported during the week preceding. There were 48 cases of diphtheria, with 12 deaths, as compared with 54 cases, with 12 deaths, in the preceding week. There were 27 cases of smallpox, with 2 deaths, reported, as compared with 31 cases, with 2 deaths, in the week previous. A second case of smallpox has developed in the County Prison at Norristown. The patient has been isolated and the prison quarantined. A second case of smallpox reached Philadelphia on the British steamer *Tonawanda*, April 1, from Manchester. The patient was removed to the Marine-Hospital at Lewes, Del. The sailors have also been isolated at Lewes, together with those from the British steamer *Riverdale*, which arrived last week from Middleboro, also with smallpox on board. The *Riverdale* has already been released from quarantine after disinfection.

$10,000 for Medical Services.—A physician of Pittsburg recently entered suit to recover $10,000 for medical services rendered to one family. He had been the family physician for 17 years, and, 2 years ago, he accompanied his patient abroad, at the patient's request, rendering necessary and continuous services from July 8 to September 29, 1902. It is for these services that he sues to recover his fee.

Philadelphia's Death-rate as Compared with that of London.—The Health Bureau of Philadelphia states that during 1902 the death-rate for the city of Philadelphia was 17.67 per 1000, as compared with 17.7 per 1000 for London, which city has a population estimated at 3 times that of Philadelphia. The statement also shows that the birth-rate of London during the same period was 28.5 per 1000, while the birth-rate in Philadelphia was only 22.11 per 1000. Other comparisons made follow:

	Philadelphia.	London.
Population (1902)	1,349,712	4,519,110
Births	29,841	132,810
Deaths	23,847	82,540
Smallpox	231	1,314
Measles	112	2,361
Scarlet Fever	143	563
Diphtheria	*515	1,880
Whooping cough	177	1,880
Fever	**597	590
Diarrhea	***121	2,540

* Includes membranous croup.

** Includes typhoid or malarial fever.

*** Includes dysentery.

Philadelphia Polyclinic Hospital.—This institution has established a phototherapeutic department for the treatment of patients with concentrated chemical light and Röntgen rays. The new and powerful electric coil which has been installed offers increased facilities for radiography. The Finsen light treatment, the application of which is practically painless, has given better results in rebellious skin diseases, such as lupus vulgaris, than any previous method of treatment. The Röntgen rays are used upon certain cutaneous affections and more deeply seated diseases, such as epithelioma, leg ulcers, lupus, sycosis, eczema, etc. Patients with such diseases will be treated without charge, in appropriate and deserving cases. When desired, patients will be referred, from time to time, to the physicians by whom they have been sent. New patients should apply at 12.30 P. M. on Mondays, Wednesdays and Fridays. Cases for radiography will only be examined when referred by a physician. Each application should be accompanied by a statement of the nature of the case, an outline of the history of the case, and an accurate explanation of the diagnosis desired. These patients should apply at 11 A. M. on Mondays and Fridays. A graded fee will be charged according to the nature of the part examined. This department is under the supervision of Dr. J. F. Schamberg, professor of skin diseases, and his assistants, Drs. J. W. Price and M. B. Kirkbride.

Pennsylvania Osteopathic Examining Board Bill Defeated.—By a vote of 89 to 67, in the House of Representatives, Harrisburg, April 1, the bill to regulate the practice and licensing of osteopaths in the State of Pennsylvania and to establish a State Board of Osteopathic Examiners was defeated.

Society Meetings Next Week.—The following societies will meet next week, at the College of Physicians, Philadelphia, at 8.15 p. m.: Monday evening, April 13, Section on Medicine, College of Physicians; Tuesday evening, April 14, Pediatric Society; Wednesday evening, April 15, Section on Otology, College of Physicians; also the business meeting of the Philadelphia County Medical Society; and Thursday evening, April 16, Section on Gynecology, College of Physicians.

University of Pennsylvania.—Dr. John Marshall, professor of chemistry in the Medical School, who is soon to sail for Europe, has been granted leave of absence to pursue certain chemical studies, not on account of ill health, as we announced in last week's issue. We are informed that Dr. Marshall was never in better health.

NEW YORK AND NEW JERSEY.

New Jersey State Sanatorium for Consumptives.—Plans for the building of this institution, to be erected at once at Glen Gardner, Hunterdon county, at an estimated cost of about $300,000, have been received by the chairman of the building committee of the New Jersey State Tuberculosis Commission. A meeting of the commission to discuss these plans will be held next week at Jersey City.

Smallpox at New York.—A case of smallpox was discovered on the French line steamship *L'Aquitaine*, which arrived at New York from Havre, April 2. Between December 14, 1902, and March 14, 1903, 26 cases of smallpox, with 2 deaths, have been reported.

Typhoid Fever in Ithaca.—A few cases continue to appear daily, as may be expected for some little time yet. The New York State Health Department has officially declared that the typhoid fever epidemic at Ithaca is at an end. Two deaths occurred April 3. No alarm is now felt. Mr. Andrew Carnegie, who has offered to install a filtration plant at Cornell University, desires to pay all bills incurred by the students during the recent epidemic.

Camden Free from Smallpox.—Between December 14, 1902, and March 21, 1903, 38 cases of smallpox, with no deaths, occurred in Camden, N. J. The last patient in the Municipal Hospital was discharged March 30, when the institution was cleaned, fumigated and closed.

Bequests.—By the will of the late Mrs. Mary Fabbri, of New York, who died at Florence, Italy, $4000 were left to the Protestant Orphanage at Florence, Italy; $3000 to the directress of the Home for Immigrant Girls, New York City; and $1000 each to the New York Orthopedic Hospital and the Children's Aid Society.

NEW ENGLAND.

Compulsory Vaccination Constitutional.—In the cases of the Commonwealth vs. Albert M. Pear and Henning Jacobson, the full bench of the Supreme Court, April 3, held that Revised Laws, chap. 75, sec. 137, authorizing the requirement, by local boards of health, of the vaccination or revaccination of all inhabitants of a city or town, and subjecting persons over 21 years to a penalty for refusal, is constitutional. The defendants were complained of and convicted for refusing to comply with such a requirement of the Cambridge Board of Health, passed while smallpox was prevalent. It was claimed by the defendants that the act was unconstitutional, as an alleged violation of their right to personal liberty, and it was further claimed in behalf of Jacobson that vaccination had injurious effects on the human system, and that he should have been allowed to show them to support the claim that the statute was unconstitutional. The court holds that it was within the power of the Legislature to enact this law; that plainly its object, the prevention of smallpox, is worthy of the intelligent thought and earnest endeavor of legislators, and for the common good; that it comes within the police power of the Legislature, and that the application of a good law to an exceptional case may work a hardship, but there is no reason to suppose that the enforcement of the requirement in the present cases was conducted harshly. The court adds: "If a person should deem it important that vaccination should not be performed in his case, and the authorities should think otherwise, it is not in their power to vaccinate him by force, and the worst that could happen to him under the statute would be the payment of the penalty of $5. The defendants' contention that the statute works unequally in making an exception of minors and persons under guardianship is not well founded. It only limits the liability to a penalty for neglect of the requirement to persons who have a right to control their own conduct." Jacobson's offer of evidence is held to have been rightly excluded. The court says that the only "competent evidence" that could have been presented to the court to prove his propositions about vaccination was the testimony of experts, giving their opinions, and even with such expert testimony it holds the Legislature could not be held to have transcended its power in enacting this statute on its judgment of what the welfare of the people demanded.

Boston's Birth-rate. Not since 1894 have so few children been born in Boston. In 1901 the birth-rate was only 27.10. During the year there was an actual gain in population of only 4275. The proportion of native whites of native parentage is now only 36% of the whole population, and many of these are but two removed from an immigrant ancestry. It is very evident that the old American stock is dying out, and that it will inevitably be replaced by the newcomers of the end of the nineteenth century and the beginning of the twentieth. The foreign-born element constitutes about one-third of the population, but contributed about two-thirds of the births. Among the Italians there were 1411 births, among the Russians 1337 and among the Irish 3591. The highest birth-rates in the city are found in those wards in which live the poor and the foreigners. The lowest birth-rates are found in the Back Bay and in the South End, in the middle of Roxbury, in West Roxbury, and in Jamaica Plain. Three of these wards actually show an excess of deaths over births.

WESTERN STATES.

Denver Academy of Medicine.—The Denver Academy of Medicine, formed in Denver, Col., to maintain a home and meeting place for members of the medical profession and to provide for a medical library, was organized March 31. The following officers were elected for the ensuing year: President, Dr. Henry Sewall; vice-president, Dr. G. B. Packard; trustees, Drs. W. A. Jayne, W. W. Grant, T. H. Hawkins, L. E. Lemen, H. W. McLaughlin, and I. B. Perkins; secretary, Dr. C. K. Fleming; treasurer, Dr. F. E. Waxham, and librarian, Dr. C. B. Spivak.

Physicians' Union, Waukegan, Ill.—Physicians and surgeons in the city of Waukegan have formed a union, of which Dr. W. C. Bouton is president and Dr. E. F. Gavin is secretary. The purpose of the union was to make a scale of prices, which has already been published in the newspapers. All night calls will be charged at double rates. Night drives into the country will be made at the rate of $1 a mile, in addition to the charge for medical attendance. Day drives are cheaper, fifty cents a mile being the rate. Some of the provisions of the scale are: Amputation of fingers or toes, $10 to $25; amputation of forearm or leg, $25 to $60; amputation of arm, $35 to $80; amputation of shoulder joint, $50 to $120; amputation of entire shoulder, $100 to $200; amputation of thigh, $60 to $200; amputation of hip joint, $125 to $200; for contagious diseases, $2 to $3 a visit; diphtheria, scarlet fever or smallpox, $2 to $10; visits between 10 P. M. and 6 A. M., $3 to $5; remaining all night, $10. Everything else, from "slight indispositions" to great illness, is on the list.

California Cattle Quarantine.—Upon the recommendation of the State Veterinarian, Governor Pardee issued a proclamation March 30, forbidding the shipment of calves under one year of age, from Humboldt county, Cal. It is said that the cattle in that county are afflicted with what is called verminous bronchitis. The quarantine against Humboldt county will remain in force until the disease has been stamped out.

The Health of Chicago.—The report of the Health Department of Chicago, for the week ending March 28, compares the statistics for 1902 with those of London. While the death-rate for London, per 1000, was 17.7, that for Chicago was 14.53 per 1000. The death-rate for scarlet fever, diphtheria and typhoid fever was much higher in Chicago than in London, while the opposite is true for measles, pertussis and diarrheal diseases. There has been a good deal of influenza, as many as one out of every 10 persons having been affected.

SOUTHERN STATES.

Mountain Hospital for Consumptives.—The trustees of the Eudowood Sanatorium and Hospital for Consumptives at Towson, Md., are planning to establish a branch of the hospital at some place to be selected, in the Blue Ridge Mountains. The sum of $25,000 has been offered if a like sum can be raised by the trustees. The committee in charge of subscriptions has already secured $4000 and anticipates no trouble in securing the full amount. It is expected that a small farmhouse will be rented for this summer, for use as a kitchen and dining room, the patients sleeping in tents. The site as yet has not been decided upon. The trustees of this institution have induced the Quarter Club to co-operate with them. This club has already raised $3000. Among the physicians interested in this scheme are Drs. H. B. Jacobs, William Osler, G. B. Reynolds, R. T. Wilson and W. H. Welch.

U. S. Naval Medical School.—The first class of the Naval Medical School held its commencement exercises in the lecture room of the National Museum, Washington, D. C., April 4. Diplomas were awarded to the 12 graduating assistant surgeons, U. S. N.

Municipal Hospital, Baltimore.—The supervisors of city charities have decided to set aside a section of the Hardesty addition to the Bay View Insane Asylum grounds as a site for the Municipal Hospital. This location is east of the present asylum grounds, facing upon Eastern avenue. This ground is outside the city limits, and the restrictions imposed by the last legislature have no effect upon it. It is to be hoped that the $25,000 appropriated for the Condon site last year and now tied up in the courts may soon be released, to be used for the erection of the Hospital for Infectious Diseases.

Smallpox in Wilmington, Del.—Between March 15 and April 2, 4 cases of smallpox have been reported in the city of Wilmington.

Texas State Board of Medical Examiners.—Examinations will be held at Austin, April 20 to 23, next. Those desiring to take these examinations must take out applications and be present by 10 o'clock, April 20, at the examination hall in the Driskill Hotel. For further information and application blanks, address Dr. M. M. Smith, Austin, Texas, secretary of the Board of Medical Examiners for the State of Texas.

Cambridge Hospital, Cambridge, Md.—A new site has been purchased for $3,800 upon which to erect the Cambridge Hospital. The site previously purchased has not been considered the proper location for the hospital and will therefore be sold.

Wilmington's Water-Supply.—Contracts have been signed by the water commissioners of Wilmington, Del., for the construction of a modern sand filtration plant, to be erected by the Indianapolis Sand Filtration Company. This company has guaranteed that the filter-bed shall filter not less than 4,000,000 gallons per acre of actual filtering area, and that the water delivered from the filters, when properly operated, shall contain not over 40 bacteria per cc. on an average for a period of 3 months. The Brandywine water, used at present, contains from 3000 to 5000 bacteria and in bad weather often reaches 100,000. Credit for this improvement is largely due to Dr. J. P. Pyle, a member of the water commission, who by vigorous agitation and personal influence forced upon a reluctant community the conviction of the urgent necessity for this measure. The present water-supply, although filtered through a so-called filter, is nevertheless responsible for frequent epidemics of typhoid fever in Wilmington. Dr. Albert Robin, formerly bacteriologist of the Delaware State Board of Health, resigned that position at the last annual meeting, in spite of the fact that he was re-elected for the ensuing year. He has accepted the position of bacteriologist to the new filtration plant now in process of erection at Wilmington.

MISCELLANY.

Less Cholera in the Philippines.—A health report was received, April 2, from General Davis, at Manila, stating that there has been a steady improvement in the health of the troops, and that cholera has almost disappeared. Only one death from cholera occurred last week.

Bubonic Plague in Hong Kong.—A recent despatch to the *London Times* from Hong Kong, China, states that bubonic plague is steadily increasing there. It is very difficult to check the disease, on account of the Chinese practice of dumping dead bodies in the streets in unoccupied areas of the city.

Bubonic Plague at Mexico.—There have been no deaths from bubonic plague since April 2, and there is only one serious case still remaining in the hospital, at Mazatlan. One death has occurred at Sequeiros.

Bubonic Plague and Cholera in Egypt.—Latest reports from Cairo, dated April 2, state that bubonic plague has re-appeared in several parts of Egypt. Some cases of cholera are also reported at Alexandria.

Smallpox at Honolulu. The steamer *Gaelic* was quarantined upon her arrival, March 30, on account of a case of smallpox on board. She was allowed to proceed at once for San Francisco. The last case of smallpox previously reported at Honolulu, H. I., was found December 21, last, on the steamer *Solace*.

Obituary.—Dr. G. W. Bristine, at Big Sandy, Texas, March 23.—Dr. Goronwey Owen, at Mobile, Ala., March 30, aged 69 years.—Dr. Reinhard H. Weber, at Philadelphia, Pa., March 29, aged 59 years.—Dr. Brookens C. Kelsay, at Roxbury, Mass., March 30, aged 49 years.—Dr. Thomas Foster, at San Francisco, Cal., April 1, aged 85 years.—Dr. John E. Sanborn, at Melrose, Mass., April 1, aged 79 years.—Dr. James Shackelford, at Maysville, Ky., March 25.—Dr. Thomas T. Oliver, at Chicago, Ill., March 26, aged 73 years.—Dr. Henry Allan Noyes, at Asheville, N. C., March 24.—Dr. J. P. Shacklet, at Ekron, Ky., March 22.—Dr. Albert R. Erskine, at Huntsville, Ala., March 24.

FOREIGN.

CONTINENTAL EUROPE.

Osiris Prize Awarded.—The *Figaro*, of Paris, is the authority for the statement that the Institut de France has decided to award to Dr. Emile Roux, subdirector of the Pasteur Institute, the prize of $20,000 founded by Mr. Daniel Osiris for the person connected with the institute, considered most worthy to be thus awarded.

Coming to America.—Dr. Paul Garnault, who last year performed a number of inoculations upon himself, in Paris, in an effort to disprove Professor Koch's theory that tuberculosis was not communicable from animal to man, has decided, it is said, soon to visit America, to deliver lectures in the United States. He alleged, about a month after his inoculation, that symptoms of tuberculosis appeared. As he believed that the disease could be directly transmitted from a tubercular cow to a human being, he placed himself at the disposal of Dr. Koch, who, however, declined to take any responsibility for the experiments subsequently carried out. Dr. Garnault was formerly a member of the Zoological and Anatomical Faculty of the University of Bordeaux.

Victoria Hospital, Cannes, France.—Mrs. Goelet, of New York, has endowed an American bed, in memory of her daughter, who died recently in New York.

In Honor of Dr. von Esmarch.—A medal has been struck by the German Samaritan Union, in honor of Prof. von Esmarch's eightieth birthday. This medal will be awarded to those who have distinguished themselves in the service of the sick.

Professor Metchnikoff.—The *Russki Vratch* announces that Dr. Metchnikoff, director of the Pasteur Institute in Paris, who was recently elected an honorary member of the St. Petersburg Academy of Sciences, is soon to publish a book upon the philosophy of optimism, entitled "Essai d'une Philosophie Optimiste." To dabble in philosophy is a national characteristic of the Russians.

University Notes.—**Breslau:** Dr. von Lingelsheim, director of the hygienic institute, has been granted the title of professor.—It is now authoritatively announced that Dr. Strümpell, of Erlangen, has been appointed professor of internal medicine in place of the late Dr. Kast. His lectures will begin next fall.—**Budapest:** Dr. Johann Barsony has been appointed professor of obstetrics and gynecology, and Dr. Ernst Jendrassik, professor of neuropathology.—**Erlangen:** Dr. Veit, of Leyden, professor of obstetrics, has been appointed director of the obstetrical clinic, in Dr. Gessner's place.—**Hamburg:** Dr. R. O. Neumann, of Kiel, has been appointed director of the hygienic institute in Hamburg. **Jurjew:** Dr. Sergius Michow has been appointed professor of obstetrics and gynecology, succeeding Dr. Ssolowjew.—**Kiew:** Dr. Landenbach has been appointed professor of pharmacology.—**Vienna:** It is rumored that Dr. Flügge, of Breslau, has been appointed professor of hygiene, in Professor Gruber's place.

The Latest Literature.

BRITISH MEDICAL JOURNAL.

March 21, 1903.

1. The Goulstonian Lectures on Theories of Immunity and their Clinical Application. Lecture I. A. S. GRUENBAUM.
2. The Lettsomian Lectures on the Conditions which Modify the Characters of Inflammations of the Skin, and their Influence on Treatment. Lecture II. H. RADCLIFFE CROCKER.
3. Congenital Goiter. JOHN T. HEWETSON.
4. —Six Cases of Goiter. One Associated with an Attack of Acute Myxedema and Five Successfully Treated with Thyroid Extract. ED. MARTEN PAYNE.
5. The Morbid Anatomy of Erythromelalgia Based Upon the Examination of the Amputated Extremities of Three Patients. H. BATTY SHAW.
6. Prevaccinated Smallpox. J. DUNCAN HOWE.
7. Note on the Detection of Raw Milk and Formaldehyde. J. E. SAUL.

1.—See abstract of *Lancet*, this issue.

2.—See abstract of *Lancet*, this issue.

3.—Hewetson says **congenital goiters** generally assume one of 3 great types, adenomatous, parenchymatous or vascular. Many children the subject of goiter are born prematurely or are stillborn. Of those that survive birth, a considerable number die early from pressure of the growth on the esophagus, trachea or on the great nerves of the neck. The milder forms tend to disappear spontaneously or under some form of iodine treatment. The severer forms demand operative treatment and are dealt with on the same principles as are the acquired forms. Operative measures have met with little success, though Schimmelbusch has recorded a successful case. The author reports a case occurring in a child born at the end of the seventh month. There was no history of goiter either upon the paternal or maternal side of the family. The mass extended as high as the ears and filled the entire space between the jaw and the clavicle. A portion appeared to be substernal. The trachea was entirely surrounded by the tumor and was compressed laterally to a slight degree. The esophagus was so compressed that a No. 8 urethral bougie could with difficulty be passed. Microscopically the goiter was found to belong to the vascular variety. [F. T. S.]

4.—Payne reports 6 cases of **goiter**. Three of the patients presented a strumous family history; three presented a family history of goiter; 2 presented cardiac complications; one case was complicated by acute myxedema, and one was a case of acute goiter. All the patients, except one, improved on treatment with **thyroid extract**. In none were mental symptoms marked. One patient, a woman of 38 years, had carried a goiter for 35 years. [J. M. S.]

5.—In all 3 cases of **erythromelalgia** reported in this communication vascular changes were present. Such changes were mostly an increase in the intima of the arteries, and occasionally thrombosis and changes in the inner coat of the veins. The nerves were investigated even to their terminations and no degenerations were found, nor were there any suggestions of an increase of fibrous tissue in the trunks of the nerves. [F. T. S.]

6.—Howe reports the occurrence of **smallpox** in a family in which **vaccination** was done after exposure to the disease. The cases, in the author's opinion, show that **vaccinia and variola** may run their clinical courses **together.** They show the efficiency of vaccinating those who have not been vaccinated before, after they have been exposed to smallpox. None of the 4 infected members of the family died. [J. M. S.]

7.—Saul claims to be able to **detect raw milk** in a mixture supposed to have been boiled. To 9 or 10 cc. of milk 1 cc. of a recently prepared, 1% aqueous solution of **orthomethylaminophenol sulphate** is added and then one drop of commercial **hydrogen peroxide** solution. If there is any raw milk in the specimen, a red color develops. If all the specimen has been boiled, it remains uncolored or develops a faint pink color on standing. He believes that the reaction is due to the presence of an oxidizing enzyme, which is destroyed by heat, in the milk. **The presence of formaldehyde in milk** to the extent of one part in 100,000 produces a pink color on the addition of 9 or 10 volumes of the salt and allowing the mixture to stand. The reaction is not so good as the sulphuric acid test or the amidol test. [J. M. S.]

LANCET.

March 21, 1903.

1. Goulstonian Lectures on Theories of Immunity and their Clinical Application. Lecture I. A. S. F. GRUENBAUM.
2. Hunterian Lectures (Abstract of) on Some Points in the Anatomy and Pathology of the Vermiform Appendix. Lecture III. W. McAdam Eccles.
3. Lettsomian Lectures on the Conditions which Modify the Characters of Inflammations of the Skin, and their Influence on Treatment. Lecture III. H. RADCLIFFE CROCKER.
4. A Case of Acute Splenic Anemia Terminating Fatally with General Bacterial Infection. HERBERT P. HAWKINS and C. G. SELIGMANN.
5. The Height of the Diaphragm in Relation to the Position of Certain Abdominal Viscera. CHARLES T. ANDREW.
6. Angina Pectoris; a Criticism and a Hypothesis. E. H. COLBECK.
7. A Climatological Aspect of the Nauheim Treatment of Diseases of the Heart. LESLIE C. THORNE.
8. Diabetic Gangrene of the Toe; Amputation of the Toe; Recovery. CHARLES FISHER.

1.—Abstract will appear when lectures are completed.

2.—Eccles, in his third lecture relating to the **anatomy and pathology** of the **vermiform appendix**, speaks first of the association of appendicitis with joint lesions, and states that, when the 2 conditions accompany one another, the arthritis is looked upon as wholly secondary to the appendicitis in the nature somewhat of a subacute pyemia rather than that both the joint affection and the appendicitis are coincidently due to the same general infection. Appendicitis associated with pregnancy and parturition is not rare. When appendicitis occurs during the first 3 months of pregnancy, the safest course to pursue is to operate. Abortion at this period is not nearly so serious a complication as it would be later on. When there is strong reason to suspect inflammation of the appendix, it is better to explore than to temporize. When the inflammation has been allowed to progress to perforation or gangrene of the appendix, the mortality has been at least 70%. Eccles claims, therefore, that it is wiser to operate upon even the suspected cases in pregnancy at the earliest possible moment. If miscarriage does take place as the result of the operation, there is much less danger than would accompany such a circumstance if an abscess were present. The author does not approve of emptying the uterus before operating upon the appendix, because if pus should have formed it is probable that the ulceration in the position of the uterus subsequent upon its contraction might open the abscess and flood the peritoneal cavity. And, besides, by operating upon the appendix and not emptying the uterus, the life of the child may be saved. Appendicitis occurring during the puerperal state may be mistaken for sepsis situated in the uterus or its appendages, but a differential diagnosis can be made by a careful examination of the pelvic organs and of the lochia. The prognosis at this period is not so grave as when the appendicitis occurs during pregnancy. Eccles discusses appendicitis in relation to life insurance, believing that it deserves greater consideration at the hands of the medical examiner. When there has been more than one attack of appendicitis, he would not pass the proposer unless the appendix had been successfully removed. Innocent growths of the appendix are extremely rare, though numbers of undoubted cases have been reported. The author has collected 14 cases of primary carcinoma and 3 of primary sarcoma of the appendix. The lecture closes with a discussion of hernia of the vermiform appendix, showing that this is much more frequent than was formerly supposed, and that, when situated in the hernial sac, the appendix is prone to become inflamed or frequently strangulated. The diagnosis of the appendix alone in the hernial sac is extremely difficult. [J. H. G.]

4.—Hawkins and Seligmann report **a case of acute splenic anemia terminating fatally with general bacterial infection**, which occurred in a man, 37 years of age. His previous history appears to throw no light upon the illness, and the patient was in good health until January, 1902, when he suffered from an attack of pneumonia which was followed by rather marked anemia. The patient first came under the observation of the authors on February 7, 1902, when he complained of weakness, difficulty in swallowing solid food and sleeplessness. The patient was pale and emaciated. The spleen was greatly enlarged, the liver slightly so. A systolic murmur was audible over the pulmonary area, but in other respects the heart appeared normal. The patient's temperature ranged as high as 104° F., and fever existed throughout the brief illness. Toward the close of the illness the patient developed jaundice. There was a marked anemia. The number of erythrocytes ranged between 1,400,000 and 3,400,000 per cmm; the hemoglobin was markedly reduced, and the color index, except on one examination, was below the normal. Nucleated erythrocytes were not found, and alterations in the size and shape of the corpuscles were not pronounced. The number of leukocytes fluctuated between 2,200 and 10,000 per cmm. Autopsy revealed the following: The liver weighed 67 ounces, was soft and yellow, and no evidence of cirrhosis existed; throughout the liver structure there were white specks which consisted of necrosed liver cells and numerous bacteria. The spleen weighed 25 ounces; its pulp was soft and throughout it there were small white specks which proved to be areas of focal necrosis. There were no alterations in the pancreas or lymphatic glands, and the kidneys revealed granular degeneration. The heart muscle was pale, and subpericardial hemorrhagic blotches were present. The mitral and aortic valves showed vegetations of recent origin, and there was also an acute pericarditis and some bronchopneumonia. The stomach and small intestine were normal. The first 8 inches of the cecum revealed great thickening due to inflammatory exudation of a croupous character. The authors then contribute remarks on this disease. [F. J. K.]

5.—Andrews has made observations with the view to ascertain the height of the diaphragm in the 2 sexes, and to determine if there was any relation between the height of the dome, the position of the viscera and the thickness of the abdominal wall. On carefully examining 9 cadavers in the dissecting room, he found that great variation exists in the height of the diaphragm, and that this variation is especially marked in the female subjects. In 7 females the dome varied from the fourth rib to the sixth interspace in the right mammary line, whereas in the 2 males it did not extend lower down than the fifth rib. Abnormal positions of the abdominal viscera were especially striking in the female subjects. The recti muscles were found much smaller in the females than in the males. [F. J. K.]

6.—Goldbeck contributes **a criticism regarding the more important theories which have been advanced to explain angina pectoris,** and submits a hypothesis whereby the mode of this curious symptom complex is capable of explanation. He holds that the various theories which have been advanced fail to explain the production of this disease satisfactorily. He contends that disease of the coronary arteries causes an unequal distribution of blood to the degenerate myocardium. So long as the heart is acting quietly, the degenerated tissues are able to resist and overcome the intracardiac pressure, however, when more work is thrown upon the heart, the areas of muscular degeneration are unable to supply the increased demand for work and therefore undergo stretching, and herein lies the explanation of the pain. [F. J. K.]

7.—Thorn discusses **the climatological aspect of the Nauheim treatment of diseases of the heart.** In his article he makes mention of all the important points of this treatment and concludes that the Nauheim treatment is one of the most valuable therapeutic agents in the treatment of heart disease. [F. J. K.]

MEDICAL RECORD.

April 4, 1903.

1. Observations on the Plague in the Philippines and India. CHARLES B. EWING.
2. Imperative Conceptions: A Study in Differential Diagnosis. L. HARRISON METTLER.
3. Examination of Milk by the General Practitioner. HARRY LARNED KEITH SHAW.

1.—Ewing narrates his experience in the observation of some 50 cases of bubonic plague, principally in the Chinese, during the epidemic at Manila in the spring of 1901, and includes also a brief description of his journey through India and the methods of treating the plague there. He made blood examinations in the cases observed in the Philippines, and was able to detect the bacillus pestis in only about 3% of cases when the examination was made early in the disease; but growing the blood on culture media gave positive results in some 30 cases in which it was impossible to determine its presence by staining the blood smears. The percentage of cases in which organisms were found in the blood just before death was about 90, and after death each of the 20 cases noted gave a positive result. Ewing describes the Indian laboratory under the charge of Prof. Haffkine, where he witnessed the manufacture of the prophylactic serum. He describes the treatment of the disease both in India and the Philippines. [T. L. C.]

2.—Mettler states that **imperative conceptions, or ideas, are those** involuntary, unrelated, persistent notions that spring up in the minds of many victims of nervous disease. Though found in many states of mental and physical debility, they belong essentially and entirely to the psychoses. The general practitioner should be well acquainted with these symptoms of nervous debility. The diagnosis of the nature and origin of these imperative ideas may settle to a large extent the determination of sanity or insanity. In nearly all forms of insanity, impulsive conceptions and fixed ideas more or less related here to distinct hallucinations, illusions and delusions are present, hence there should always be made a sharp distinction between the imperative conceptions of the sane and insane. Probably the most striking difference between them is that in the case of the imperative conceptions of the sane the patient's judgment remains unimpaired. Insane delusions are primarily the result of a diseased cortex; imperative conceptions are the result, generally, of diseases outside of the brain, hence a more thorough examination of the patient is necessary, as a rule, to discover the cause of the latter than of the former. The cause of the latter being once discovered, the treatment of the case will be obvious enough, and it will involve a consideration of the entire field of internal medicine. [T. L. C.]

3.—Shaw presents a practical method of examining either human or cows' milk. The steps of his process are laid down systematically, and detailed explanations are given. The paper, largely technical, cannot be readily abstracted. [T. L. C.]

MEDICAL NEWS.

April 4, 1903. (Vol. 82, No. 14).

1. The Significance of Variations in the Internal Secretions. O. T. OSBORNE.
2. The Significance of Oxaluria. J. BERGEN OGDEN.
3. The Prognostic Value of the Diazo Reaction in Pulmonary Tuberculosis. FRANCIS CARTER WOOD.
4. Hyperacidity of the Urine. T. W. HASTINGS.
5. The Prognostic Significance of Albumin in the Urine. EDWARD L. LAMBERT.
6. Narcotic Abuse and the Public Weal. J. B. MATTISON.
7. The Results of Intravenous Injections of Diluted Formalin Solution in Septicemic Rabbits. WILLIAM H. PARK and WILLIAM A. PAYNE.
8. Expert Evidence; A Reply to Hon. John Woodward. WILLIAM LEE HOWARD.

2.—Ogden mentions the close relation between diabetes mellitus and oxaluria. He explains the oxaluria as probably due to gastro-intestinal fermentation which results from either the excessive carbohydrate diet or the abundant ingestion of meat. It is usually seen in 2 classes of cases: (1) Those in which the diabetic patient is allowed to take such articles of food as he likes, and who, on account of his craving for sugar and starches, subsists largely on carbohydrates. (2) Those in whom the diet is restricted almost entirely to meat. [T. M. T.]

3.—Wood concludes (1) if the urine of a case of pulmonary tuberculosis shows no diazo reaction and a kidney lesion can be excluded, the prognosis is favorable. (2) If the urine shows an occasional diazo reaction, the prognosis is not necessarily grave, as only 66% of the patients showing an occasional positive reaction die. (3) If the urine shows a continuous strong diazo reaction, the prognosis is very grave, since a large proportion of such patients die within 6 months. (4) The presence of a diazo reaction on the first examination of a patient should not debar the case from a thorough trial of climatic treatment in a proper sanatorium. [T. M. T.]

5.—Lambert believes that not enough attention is given to the daily manner of the life of any individual applying for life insurance when albumin is found in the urine. Albumin and casts do not always mean permanent disease of the kidneys, as we know that worry, excessive use of highly seasoned food, of great variety and containing too much nitrogen; the abuse of alcohol and tobacco, the excessive yielding to the animal appetites, all have a tendency to produce these 2 important symptoms. It is a good deal better to reject all cases with casts and albumin, although we harm a few; the majority of cases will terminate in kidney disease. [T. M. T.]

6.—Mattison warns the profession against the many nostrums in which **morphine** and **cocaine** play the largest part for harm. He thinks a law should be passed compelling the maker of every nostrum to print the formula on the wrapper, and on those containing morphine and cocaine the amount of the drug in each dose. [T. M. T.]

7.—Park and Payne's experiments go to show that intravenous injections of plain water plus sodium chloride may prove better than water plus formalin. They state that the fatal outcome of septicemia in man after diluted formalin injections should cause us to be guarded in using formalin, and make it necessary to weigh each patient injected, not only to determine when improvement ensues whether recovery has been promoted, but also when death occurs as to whether harm has been done. [T. M. T.]

NEW YORK MEDICAL JOURNAL.

April 4, 1903.

1. Terminal Coma in Diabetes. ARTHUR R. ELLIOTT.
2. Syphilitic Pseudotabes. Report of a Case; the Differential Diagnosis of Tabes. JOSEPH COLLINS.
3. Practical Points on Intubation of the Larynx for Croup, with a Report of Thirty-six Cases. FIELDING LEWIS TAYLOR.
4. The Practical Recognition of the Tubercle Bacillus in the Sputum. CHARLES B. FITZPATRICK.
5. The Jews as Immigrants—from a Medical Standpoint. MAURICE FISHBERG.

1.—Elliott reports 4 histories of unusual cases showing the **terminal coma in diabetes**. The author thinks that the symptom, glycosuria, has fascinated the attention of clinicians entirely too much, and, therefore, they have become unmindful of the fact that this is only one manifestation of the disease; the depraved nutrition which precedes and causes the glycosuria is, in the author's opinion, the threatening element. The sugar itself is powerless to produce coma or other grave toxemic symptoms; the real danger of the disease, however, exists in the presence in the blood of acid toxins, such as free fatty acids, acetone, diacetic and oxybutyric acids. Elliott contributes these histories in order to illustrate some of the different varieties of terminal coma that may occur in grave forms of diabetes. The first history pictures a well-marked case of diabetic collapse due to myocardial degeneration; the second illustrates a form of coma that may occur in glycosuria associated with granular nephritis; the third demonstrates a typical death from uremia; the diabetic toxemia having cleared up during the progress of the uremic condition; the fourth shows an instance of coma induced in a diabetic from cranial traumatism, the patient subsequently developing a left hemiplegia, with death following. In discussing the treatment, the writer emphasizes the importance of prophylaxis, for it is far easier to anticipate coma than to cure it when once it has arisen. In conclusion, the writer lays special stress on the methods employed for detecting oncoming coma, and these should invariably comprise a part of every analysis. [P. B. B.]

2.—Collins concludes his paper on **syphilitic pseudotabes** with a lengthy discussion on the **differential diagnosis of tabes**; to the author's mind one of the most difficult problems in diagnosis. The history of the case reported demonstrates that it is not always possible to distinguish the 2 conditions, and that not every case exhibiting characteristic tabetic phenomena can be considered a genuine instance of the disease. However, a diagnosis can be made with reasonable certainty if the ordinary symptoms of tabes, plus **muscular weakness, paresis, spasticity and pupillary inequality** and **immobility** on exposure to light and on accommodation are present. Other affections with which tabes may be confounded are: **Multiple neuritis, flatfoot, multiple sclerosis and paresis.** However, the differentiation of this condition from other diseases than pseudotabes seems to offer very little difficulty, unless the tabes is atypical in its development and manifestations, particularly if the differentiation is based upon a thorough physical examination. [P. B. B.]

3.—Taylor contributes several valuable **points on intubation of the larynx for croup**, and reports 36 case-histories. The indications for the employment of this procedure are: Embarrassed respiration; beginning circulatory fatigue; impending exhaustion and asphyxia. The author advises the early introduction of the tube, before cyanosis develops, if possible. He who waits for this to become a general manifestation, will often find that he has delayed too long. As to the size of the tube, this, in the author's judgment, should be that number next above the age of the child; and the introduction is best accomplished with the child in the supine position. The dangers to be avoided are: Asphyxia from prolonged attempts at introduction; the infliction of a false passage, and the dislodgment of false membrane. To those who apprehend difficulty in extubation the Dillon modification of the O'Dwyer instrument will offer advantages. As regards feeding, the method of Casselberry is, in the writer's opinion, the best. Taylor would advise the hard rubber tubes in preference to the metal, from the fact that they do not favor the deposition of salts and, therefore, are not prone to cause ulceration. This latter condition should also be prevented by the employment of tubes of proper size. Thirty-six case-histories are reported in this paper; 34 of the patients having laryngeal diphtheria. Ten of this number died, a mortality of 29.4%. The paper is to be continued. [P. B. B.]

4.—Fitzpatrick's method for the **practical recognition of the tubercle bacillus in sputum** is based on the researches of Koch, Ehrlich and Günther, with 2 original modifications. These additions consist in the use of a 3 or 5% hydrochloric acid solution, or 70% alcoholic solution as decolorizing agents, and the use of an alkali methylene blue contrast stain. The faulty staining sometimes seen (manifested by the appearance of bead-like bodies), the author believes, is due to excessive heating. Therefore, to overcome this fallacy, the spread is not subjected to the heating process, but kept at ordinary room temperature for a period of 24 hours. The advantages claimed for the original features of this method are as follows: (1) The alkali contrast stain neutralizes the acid that may remain after immersion in the decolorizing agent, thus preventing its further action and, besides, it insures permanent preparation; (2) the 70% alcohol appears to decolorize better than alcohol of other percentages. [P. B. B.]

5.—Fishberg presents a paper on **the Jews as immigrants from a medical standpoint.** The function of this contribution is apparently to refute some of the statements of H. L. Shively contained in the *New York Medical Journal* of February 7, 1903. The author cannot see how, from the facts at hand, Shively can logically accuse the Jews of disseminating tuberculosis in New York City. In support of his argument, Fishberg quotes statistics indicative of the fact that the mortality from tuberculosis is decidedly less in these people (98.25 per 100,000) than in the so-called "sturdy" inhabitants (645.7 per 100,000) of the metropolis. [P. B. B.]

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

April 2, 1903. (Vol. CXLVIII, No. 14).

1. The Clinical Significance of Arteriosclerosis. REGINALD H. FITZ.
2. Cesarean Section of Placenta Prævia, with Report of a Case. P. E. TRUESDALE.
3. Further Remarks on the Treatment of Placenta Prævia. FRANK A. HIGGINS.
4. Notes on X-Light. WILLIAM ROLLINS.

1.—Fitz gives 3 principal varieties of arteriosclerosis which concern the practitioner: (1) Cerebral, with symptoms of headache, vertigo, wakefulness, loss of memory, convulsions and focal lesions due to arterial rupture, thrombosis or embolism. (2) Cardiac, with symptoms of weak heart; and palpitation, bradycardia or tachycardia, arrhythmia; angina, dysprosia, cardiac asthma, Cheyne-Stokes breathing, epileptiform attacks, unconsciousness, passive congestion of the various organs and dropsy. (3) Renal, with signs and symptoms of chronic fibrous nephritis. As to treatment, after diagnosis is made, very little is to be done in the way of remedies. Perhaps the chief benefit of early discovery is the opportunity to give warning to the patient of the necessity of a change of habits, of avoiding mental, moral and physical strain upon the bloodvessels which already show signs of weakness. [T. M. T.]

2.—Truesdale concludes his article with the following statement: Cesarean operation would seem to be the best treatment for placenta prævia, complete or partial, when the child is visible, and when the diameters of the pelvis or the conditions of the soft parts render the operation of dilatation and version, performed with sufficient rapidity to save the child, a dangerous procedure for the mother. [T. M. T.]

3.—Higgins says he has yet to see a case in which he thinks it would be advisable or justifiable to perform a Cesarean section for the treatment of placenta prævia. He thinks the only occasion for this operation is in complete placenta prævia with the mother and child both in good condition, before the occurrence of severe hemorrhage, and with the os uteri undilated. The author's method is to perforate the placenta, do version, which is easy, causing no maternal hemorrhage and very little to the fetus. The under-surface of the placenta is divided into lobules with sulci running between, and the placenta is easily separated and perforated at the sulci. In his experience he has found that this is better than trying to separate the placenta and going to one side of it. [T. M. T.]

4.—Rollins' statements that the eyes of persons working with the X-light have been found to grow prematurely old during investigation is very important. A few points to those who are working in this line will be useful: (1) No X-light should strike a patient except the smallest beam that will cover the area to be examined, treated or photographed. (2) No X-light should strike the observed. [T. M. T.]

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

April 4, 1903.

1. Fractures Into and About the Elbow. J. HENRY BARBAT.
2. A Case of Successful Removal of an Enlarged Spleen, With Twisted Pedicle Adherent to the Right Side of the Pelvis, in a Woman Presenting Multiple Nodulation and Pigmentation of the Skin. J. CLARENCE WEBSTER and THEODORE TIEKEN.
3. A Few Practical Points in the Technique of Nephrorrhaphy and Herniotomy, and a New Modification of Alexander's Operation. F. P. CANAC-MARQUIS.
4. The Mosquito as a Carrier of Disease. J. STEBBINS KING.
5. The Bacteriology of Cystitis. R. C. LONGFELLOW.
6. Gastro-intestinal Perforations and Their Diagnosis. F. GREGORY CONNELL.
7. Primary Endothelioma of the Gall-Bladder. WILHELM BECKER.
8. The Operative Treatment of Cystocele and Procidentia Uteri. E. C. DUDLEY.
9. Progressive Bulbar Paralysis. ALFRED C. COTTON.
10. The Typhoid Epidemic at Ithaca. (By our Special Correspondent).

1.—Barbat reports an interesting case of **fracture of the epicondyle** which became displaced and blocked the elbow joint. He opened the joint, replaced the epicondyle, fixing it with 2 wire nails, and obtained a very excellent functional result. The condition and position of the bones was accurately determined by means of the X-rays prior to operation. Barbat urges the careful use of the X-rays in determining the location of fractures about the elbow joint, but is careful to state that more than one skiagraph should be made and should be compared with the healthy normal joint. [J. H. G.]

2.—Webster reports an unusual case of **enlarged spleen with twisted pedicle,** which was **adherent to the right side of the pelvis,** and which was **successfully removed.** An unusual complication of the condition was a multiple nodulation and pigmentation of the skin. The medical aspects of the case are discussed by Tieken. The diagnosis of this condition was not made prior to operation, due to the peculiar situation of the tumor. The kidney was suspected more seriously of being the seat of disease than any other organ. Webster states that this is the only case on record, so far as he has been able to ascertain, in which an enlarged spleen has become fixed in the right side of the pelvis. The history of the condition extended over a period of 17 years. [J. H. G.]

3.—Canac-Marquis suggests some improvement in the operations of **nephrorrhaphy, herniotomy** and **Alexander's operation.** These consist in the method of introducing sutures in the various operations, and can only be understood by consulting the illustrations accompanying the article. [J. H. G.]

4.—King contributes an article **on the mosquito as a carrier of disease.** The author is opposed to the views adopted by many of the profession that the mosquito is the only factor in the transmission of yellow and malarial fevers. He contends that many of the experiments and conclusions of the commission appointed by the United States Government to investigate the infectious diseases prevailing on the Island of Cuba, are inadequate; particularly their eighth conclusion that yellow fever is not conveyed by fomites, and hence disinfection of articles of clothing, bedding or merchandise, supposedly contaminated by contact with those sick with the disease, is unnecessary. He holds that the experiments performed to demonstrate this were inadequate on the ground that the individuals may have been immune and that, if others had been employed, the results might have been entirely different. He writes that many people living in malarial districts can be, and are, exposed year after year to every possible means of contracting malarial fever—through the atmosphere, the water and the mosquito—and yet remain in perfect health; and that healthy persons from nonmalarial districts can spend months where malarial fevers are prevailing—mingling with the sick and being exposed to every possible means of contracting the disease—and not have a symptom of malarial trouble. [F. J. K.]

5.—Longfellow contributes an article **on the bacteriology of cystitis.** He points out that the urine in cystitis, as a rule, contains both cocci and bacilli. He enumerates the list of bacteria which are encountered in cystitic urine which includes the staphylococcus aureus, albus or citreus, the micrococcus aureæ, sarcina urinæ, the urobacillus liquefaciens septicus, the streptococcus pyogenes, zoogleic masses, the gonococcus, colon bacillus, the bacillus typhosus, proteus vulgaris, bacillus tuberculosis and the bacillus dysentericus of Shiga. The causative factors of cystitis in most cases are the colon bacillus, the different varieties of the staphylococcus, the streptococcus, the tubercle bacillus and the gonococcus. [F. J. K.]

6.—Connell, after discussing at great length **gastro-intestinal perforations and their diagnosis,** reaches the following conclusions: (1) The previous attempts at an early and accurate diagnosis of perforation of the gastro-intestinal tract without opening the abdominal wall have not been adopted. (2) There has been practically no improvement in the method of diagnosing such conditions during the past century. (3) The treatment of the perforation *per se* during the last century has progressed to a state bordering on perfection when compared with the older methods. (4) The diagnosis of gastro-intestinal perforations is one of the most important unsolved questions in the domain of abdominal surgery. (5) There is no pathognomonic sign or symptom or group of signs or symptoms of perforation. (6) The only positive method of arriving at a diagnosis to-day is either to perform an exploratory laparotomy or to await the development of a peritonitis. (7) To await the development of a peritonitis will reveal the diagnosis too late for the most effectual treatment. (8) Exploratory laparotomy as a routine measure will of necessity result in some patients being needlessly exposed to the many dangers of a major operation. (9) Exploratory laparotomy is not a harmless procedure. (10) The consensus of opinion is in favor of exploratory laparotomy as a choice between two evils. (11) The fact that even the most expert clinicians fail to diagnose perforation in all cases and even diagnose such a condition when it does not exist, shows the great need of improvement in diagnostic methods. (12) The diagnosis should be arrived at before the treatment of the perforation is complicated by the presence of a peritonitis. (13) The injection of air or normal salt solution into the peritoneal cavity and withdrawal of the same for examination will do no harm. (14) Such a procedure will, in many instances, reveal a perforation before any sign or symptom of peritonitis exists. (15) The treatment of the perforation *per se* is simple and satisfactory. (16) The treatment of the complicating peritonitis is multiple and unsatisfactory. The best treatment is prophylactic, *i. e.*, early diagnosis and repair of perforation before peritonitis has become established.

7.—Becker gives a report of a case of **primary endothelioma of the gall-bladder**, which occurred in a married woman, 65 years of age. The clinical diagnosis in this case was carcinoma of the gall-bladder, kinking of the duodenum and enormous dilatation of the stomach. The autopsy, which was performed 6 hours after death, revealed a moderate degree of gastroptosis, dilated stomach and adhesions between the duodenum and pylorus to the dorsum of the liver. Gastric adhesions also involved the pancreas. In the situation of the gall-bladder there was found a firm, slightly elastic hardening in the liver substance. Serial incision into the liver revealed an ovoid tumor of a white color, which was distinctly continuous with the serosa of the stomach and duodenum and also with the pancreas. Histological examination showed that the tumor was an endothelioma of the gall-bladder. There was no metastasis. The author points out that endotheliomata are only relatively malignant, and that many of the reported cases of these tumors are essentially inflammatory. [F. T. K.]

8.—Dudley remarks that the usual method of operative treatment for **cystocele and procidentia uteri** have failed so often that the more radical alternative of hysterectomy has been advocated by many surgeons. A successful plastic operation, however, is possible if it be remembered that 2 fixed points of attachment of the anterior vaginal wall are necessary; the first, at its lower extremity to the inner surface of the pubes, and the second, at its upper extremity to the fascial structures on either side of the uterus. He proposes an operation which consists in a crescentic denudation and suturing in the vaginal wall on each side of the cervix uteri, with the removal of a portion of the anterior vaginal wall and suturing together of the wound thus made. [W. A. N. D.]

9.—See **Philadelphia Medical Journal**, June 21, 1902, page 1112.

10.—In a special article on **the typhoid fever epidemic at Ithaca**, the cause of the epidemic is said to be undoubtedly due to infected drinking-water. Two hypotheses have been advanced to explain the source of the infection: the first is based on the fact that a band of Italian workmen were employed in the neighborhood of the Ithaca water works, and that a case of typhoid fever existed in this group of men, possibly in a mild and unrecognized form. The other is that a case of typhoid fever existed somewhere along the watershed during the month of January, 1903, and, finally, that it is quite possible that material from an infected privy may have been spread as manure on the surface of a field bordering on the stream itself or on one of its rapidly flowing tributaries, from which the water is taken. This epidemic in many respects is similar to the famous Plymouth, Pa., epidemic in 1885. The total number of cases in Ithaca up to March 30 was 784, of which 124 were students and 660 citizens; 128 cases occurred outside of Ithaca, of which 102 were students and 22 citizens. The total number of deaths up to March 30 was 58; 26 of this number were students in Cornell University. [F. J. K.]

AMERICAN MEDICINE.

April 4, 1903.

1. The Use of Compressed Air to Enhance and Prolong the Action of Remedies Upon the Cerebrospinal Axis: Synopsis of Experiences in Applying the Method Over Six Thousand Times. J. LEONARD CORNING.
2. Hernial Complications. JOHN BRUCE.
3. A Case of Bubonic Plague, With Exhibition of the Bacillus. JUDSON DALAND.
4. Amyotrophic Lateral Sclerosis in a Boy of 15 With a History of Acute Anterior Poliomyelitis in Infancy. ALFRED GORDON.
5. The Influence of Altitude on the Mortality of Pneumonia. HENRY W. HOAGLAND.
6. The Present-day Mortality of Pneumonia. ALEXANDER G. BROWN, JR.
7. Tetanus. ISAAC R. TRIMBLE.
8. Lobar Pneumonia and Its Treatment. G. WEHRLE.

1.—Corning describes the use of **compressed air to increase the action of remedial agents upon the cerebrospinal axis**. His apparatus consists of a cylindrical steel chamber, 6 feet in diameter and something over that measurement in length. To this access is had by a heavy door of the same material, hinged at the center and opening inward. A packing of rubber, carried around the edge of this door insures an air-tight enclosure, an accurate coapatation being made easy by means of a cross-bar and screw. Two port-holes, protected by thick glass, give a view of the interior, which is brilliantly lighted by electric lamps. By the aid of a gauge it is possible to be at all times informed of the amount of pressure in the chamber; while an adjustable valve, opening at the predetermined pressure, removes the possibility of accident from carelessness. The walls of the chamber are hung with light drapery to remove the sense of confinement; and a semicircular couch comfortably cushioned enables the occupant to lie at ease. Into the chamber the air is driven by a large pump, actuated by an electric motor (two horse-power). Both pump and motor are installed in the cellar, and the air is led up by a stout iron pipe. To start or stop the motor, the turn of a switch, located near the chamber, is sufficient. (The details of the paper are vague as to the precise manner in which the chamber is used—how long patients are subjected in the increased pressure, etc.) This plan of treatment is of no use whatever in the management of inflammatory and degenerative conditions of the cerebrospinal axis. Cerebral and cerebrospinal affections of a functional character, in which pain, exhaustion, insomnia or depression are prominent features, are the most amenable to this plan of treatment. Compressed air by increasing the pressure in the renal bloodvessels gives rise to diuresis, and the effect is increased if a diuretic is given even in insignificant doses. [T. L. C.]

5.—Hoagland has collected statistics of 6,116 cases of pneumonia in cities approximately at sea-level. In this number there was a death-rate of 26.8%. A series of 709 cases collected from cities at an average altitude of 6,580 feet showed 22.1% mortality. He states that there is no doubt that a line of demarcation exists as we ascend in altitude at which pneumonia is certainly more fatal than at sea-level, but statistics must be obtained from other countries and at an altitude greater than 7,000 feet to reach any definite conclusions. [T. L. C.]

DEUTSCHE MEDICINISCHE WOCHENSCHRIFT.

February 12, 1903.

1. The Priority of the Discovery of the Dysentery Bacillus and of Serum-Therapy in Dysentery. H. SHIGA.
2. Are Boric Acid and Borax Indifferent Substances in the Organism, and Without Danger? H. ROST.
3. Late Disease of the Brain Following Trauma of the Skull. (Conclusion). E. STADELMANN.
4. Experimental Contribution Concerning Subconjunctival Injections. K. WESSELY.
5. An Epidemic of Ulcerative Stomatitis Occurring During the South African War. J. C. J. BIERENS DE HAAN.

1.—Shiga justly criticises Kruse for his attitude regarding his own work on the **dysentery bacillus,** and for his recent article concerning the **serum treatment of dysentery,** Shiga refers to the literature to demonstrate that his work preceded that of Kruse, and that the latter did not develop any new methods. [D. L. E.]

2.—Rost discusses some of the literature concerning the effects of boric acid and of borax, and insists that these **do not belong to the class of substances that are inactive and without danger.** They cause diuresis, which may produce **damage of the kidneys;** they may cause **skin eruptions,** which indicate nutritive disturbances: they may produce **diarrhea;** they **interfere with the normal absorption of the food;** and they **may also produce vomiting.** The fact that they may cause diarrhea has been demonstrated with the utmost certainty by using these substances subcutaneously in animals that are not readily susceptible to purgatives. (To be concluded.) [D. L. E.]

3.—Stadelmann reports in particular detail 2 cases, one of which occurred in a man of 29, who had suffered a severe blow on the right side of the head about the motor area. He was unconscious at the time, but he rapidly recovered and remained well for 4 weeks. No local lesion of the bone was discovered. **At the end of 4 weeks he was suddenly taken with Jacksonian epilepsy** on the left side, indicating injury of the brain at about the point at which he had originally been struck. He became unconscious. Operation was undertaken, and the brain was explored, but nothing was found. The patient died on the second day after the operation. The post mortem examination showed **local areas of softening and hemorrhage.** Because of their age, these could hardly have been due to the operation and exploration; and it was decided that they might have been the result of the previous trauma. The second case was that of a man of 45 who had received a **slight fracture of the skull 7 weeks before his admission.** He was unconscious at the time, and remained in bed for several days thereafter. He then went back to work, but he constantly complained of his head. Two days before admission he was suddenly taken ill with chill, fever, vomiting and severe headache and delirium. Lumbar puncture showed excessive pressure and cloudy fluid containing pus and diplococci. Cultures were obtained from this fluid. The patient died 2 days after admission. The **post mortem examination showed meningitis** that had apparently taken origin from the point of the original injury. In this case it was believed that the **injury had produced a locus minoris resistentiæ;** and the bacteria, entering the circulation from some unknown source, had lodged there and produced meningitis. [D. L. E.]

5.—The epidemic occurred among the Boer troops, and also among a number of noncombatants who came in contact with these troops. **The disease was apparently contagious;** for it wandered throughout entire commandoes and was transferred from one commando to another, and also to the families that came in contact with the infected troops; while it **did not occur among the Kaffirs, who practically had not come in contact with the Boers.** The opportunity for infection had been given by the custom that prevailed among the Boers of eating from one vessel containing food. A predisposing cause of the condition was probably to be found in the damage constantly being done to the mucous membrane of the mouth by the coarse meal eaten by the Boers: but, more particularly, there seemed to be a **direct relation between the lack of salt and the cause of the epidemic.** Indeed, the epidemic disappeared after a renewed supply of salt had been obtained. One of the interesting points in the epidemic is the fact that the **hard and the soft palate and the pillars of the pharynx were most frequently affected;** less commonly, the jaws and the cheeks. The gums were often swollen. There were no cases of necrosis of the jaw or of noma. Carious teeth seemed to have no influence. The general symptoms were comparatively slight, as a rule; but sometimes they became severe. There was **no evidence of scurvy,** and the condition was **not associated with anemia.** It was also unassociated with dysentery. A cure was rapidly obtained by keeping the mouth cleaned with mild antiseptics, 1:4000 potassium permanganate being particularly useful. Similar epidemics are quite uncommon. [D. L. E.]

February 19, 1903.

1. On the Cauterizing Effects of Soap. A. MOST.
2. The Diagnostic Value of Tuberculin in Parenchymatous Keratitis. ENSLIN.
3. Myosarcoma of the Stomach. MOSER.
4. A New Apparatus for the After-Treatment of Congenital Luxation of the Hip. L. HEUSNER.
5. Experimental Investigations Concerning Subconjunctival Injections. (Conclusion.) K. WESSELY.
6. Are Boric Acid and Borax Indifferent Substances That Are Not Dangerous to the Organism? (Conclusion.) E. ROST.

1.—The case reported is that of a woman with eczema, who, by the advice of a friend, smeared soap over the eczematous patches. The result was the production of a **localized necrosis, which in some areas was gangrenous.** The soap that this patient had used was tried upon the skin of other patients and upon that of the author himself, but it produced no unfavorable effects. It was believed that the reason that it had caused damage to the skin of the first patient was that she had **had many superficial lesions from scratching.** Most scratched his arm and then applied soap to the scratched regions, with the result that localized necroses were produced. He directs particular attention to the fact that soap may cause severe local damage, and that one should be especially careful about using ordinary impure soaps. [D. L. E.]

2.—To be abstracted when concluded.

3.—Moser describes in detail a case of myosarcoma of the stomach successfully operated upon, and he also reports the pathological examination of a specimen of myosarcoma that had been for years in the collection at Greifswald. (To be continued.) [D. L. E.]

4.—The apparatus described is chiefly interesting in that spiral springs are used down the legs, for the purpose of maintaining the legs and the feet in the proper position. [D. L. E.]

6.—Rost insists that investigations have positively shown that the use of borax and of boric acid **interferes with the absorption of food and causes the excretion of an abnormally large amount of nitrogen.** As to the effect upon the body weight, he believes it also to have been demonstrated that large doses of boric acid **reduce the body weight,** probably as the result of the loss of water and of fat. The author also believes that it has been demonstrated that the excretion of these substances from the body is so slow that **their accumulation in the body appears probable.** [D.L.E.]

MUENCHENER MEDICINISCHE WOCHENSCHRIFT.

February 17, 1903.

1. The Education and Treatment of Intellectual Defects, in the House and School. H. PFISTER.
2. Hysterical Tachypnea in Organic Disease of the Heart. H. CURSCHMANN, JR.
3. A New Support for Flatfoot, Made of Celluloid and Steel Wire. F. LANGE.
4. A Case of Horn-Blower's Paralysis. E. STADLER.
5. A School Epidemic of Conjunctivitis, With General Remarks Upon the Medical Control of School Epidemics. H. ZIA.
6. The Etiology of High Position of the Shoulderblade. O. BENDER.
7. The Casuistry of Familial Amaurotic Idiocy. C. GESSNER.
8. A Case of Traumatic Hysteria Produced by an Accident for Which No Damages Could be Obtained; Rapid Recovery Under Psychical Treatment. R. TRAUGOTT.
9. Does Placenta Prævia Occur Without Hemorrhage? BURGER.
10. Report of the Royal Surgical University Polyclinic in Munich for the Year 1902. F. KLAUSSNER.

1.—Pfister calls attention to the **inheritance of various**

defects, such as absence of the ability to distinguish musical notes, color-blindness, etc., and various forms of intellectual insufficiency. He thinks that there is such a thing as a psychopathic disturbance that may be congenital. **All such children should be very carefully protected from unfavorable psychical influences.** The summation of small irritations, or even a single severe profound disturbance, may suffice to develop these latent tendencies. Such children, therefore, should not be severely punished; they should not be frightened; they should not be treated with alternations of severity and indulgence. When, as often occurs, they have paroxysms of rage, they should be placed in bed, preferably after a brief warm bath or even cold affusions of water. Such children, moreover, should be sent to bed early, allowed to lie in bed late, and obliged to take naps in the afternoons. At the same time, they should gradually be accustomed to certain privations. As they grow older they should be carefully instructed in the proper methods of life: should be given systematic gymnastics, and particularly should not be encouraged in intellectual school work even although they may apparently show a precocious intellectual development. After any severe illness the period of convalescence should be prolonged as much as possible. (The paper is still unfinished). [J. S.]

2.—Curschmann reports 2 interesting cases of **organic heart disease associated with hysterical manifestations.** The first patient, a girl of 20 years, had mitral insufficiency with signs of moderate loss of compensation. After prolonged rest she resumed work, and the failure of compensation became acute. Whilst in the hospital the dyspnea became more severe, the respiratory frequency varying between 40 and 60 per minute and finally exceeding 100. The heart steadily improved, although these attacks of rapid respiration continued. Finally the patient was given valerian, and she rapidly recovered. A careful examination showed active tendon reflex, loss or the pharyngeal reflexes, diminution of the corneal and ovarian reflexes on both sides. A diagnosis of hysteria was made and faradization applied to the cardiac region. The patient recovered at once. The second attack occurred while the patient was in the clinic and was cured in the same manner. A third attack occurred after the patient was discharged from the hospital, and the respirations reached 140 per minute. The characteristics of hysterical tachypnea are absence of any sign of insufficient oxygenation of the blood, and usually no relative increase in the rapidity of the cardiac action. The second patient was a man of 47, whose heart-sounds were faint, although clear, and interrupted. From the time of an injury received some time before his admission to the hospital he had suffered from attacks of dyspnea in which the respiration became very rapid. Whilst in the hospital, whenever excited by any cause, his respirations were increased 50 to 60 per minute. Examination of the nervous system showed active reflexes and diminution of sensation in the left half of the body. The tachypnea appeared, therefore, to be the result of a traumatic hysteria, although the patient unquestionably had emphysema. It is characteristic of hysterical tachypnea that it occurs in paroxysms, that usually the lower portion of the chest only is involved during these paroxysms, the pulse may not be altered unless there is actual myocardial degeneration. The prognosis must be cautious. [J. S.

3.—Believing that the pain in **flatfoot** is due to the altered relation of the bones, and that, instead of large surfaces, small surfaces press one another, Lange has devised a support for the arch of the foot consisting of steel wire and celluloid, which is modelled in the following manner. Pressure is placed upon the sole of the foot, and at the same time the arch raised as high as possible. The foot is then enveloped in plaster bandages and a cast obtained, according to which the support is modelled. The details of the preparation of this support cannot well be given in an abstract. The advantages of it are that it is so small that it does not interfere with the wearing of the regular shoes, and at the same time is strong and wears well. The results of carrying it are that, if the patient is not more than 20 years old, and can carry the support for 2 or 4 years, anatomical recovery may occur. In patients older than this, even up to 50 years of age, improvement in the shape of the foot may occur, and there is relief from the pains. In one year Lange treated over 400 cases, and in only 2% did he fail to obtain relief. He believes it essential in the treatment that the patient should be constantly under the observation of a physician for at least 8 days; that the physician should make the plaster-cast and the model; and that the patient should wear the support for a long time. He mentions some of the injurious results of flatfoot, and particularly a patient who had severe hysteria which was cured by the support. [J. S.]

4.—Stadler reports a case of a musician, 39 years of age, who developed paresis of the lower lip so that it was impossible for him to produce notes upon the bass-tuba. Examination of the lip showed slight hyperesthesia in the mucous membranes of the lower lip limited to the portion which was pressed against the mouthpiece of the trumpet. The muscular reactions were entirely normal. Elsewhere the nervous system was perfectly normal. Treatment did not seem to benefit, and the patient was obliged to play the bass viol for a living. The case is one of occupation neurosis. [J. S.]

5.—Zia reports an interesting **epidemic of conjunctivitis** that occurred in the public school of Mauberg. A patient with follicular conjunctivitis was visiting the clinic, and, shortly afterward, a neighbor came, claiming that she had been infected, although the physician in the clinic declared that this was impossible. In a short time several others came, and very soon nearly the whole class. The disease then spread to the friends of these children and to the scholars in the boys' gymnasium. In view of the apparent epidemic character of a disease that was not contagious, it was resolved not to keep the children from school but to treat them with unusual severity. The epidemic immediately ceased. There can be no doubt that in the majority of cases the symptoms of the disease were **merely psychical.** [J. S.]

6.—Bender has studied 2 cases of **high position of the scapula**, and found that all the muscles were present, that the cucullaris was slightly atrophied, evidently as a result of disuse. In another case of high position of the scapula this was evidently due to early ankylosis of the shoulder joint. It therefore appears that this condition is due to a variety of pathological conditions. [J. S.]

7.—Gessner reports a case of **familial amaurotic idiocy.** The patient, a Jewess of 15 months, had been healthy until her eleventh month, when she began to grow weak, lost the power of movement in the legs, and gradually of the rest of the body so that she could not even sit up. There was spastic paralysis of the body, loss of interest, blindness and vomiting. An examination of the eyegrounds showed atrophy of the optic nerves and symmetrical white spots with red centers in the macular region. The child died 2 weeks after observation. Most of these cases have occurred in New York and in England. In practically all cases hearing remains intact, and nearly all cases have occurred in Jews. [J. S.]

8.—Traugott reports the case of a school-boy of 16 years who was injured, while working in his father's store, by having a heavy chest fall on his shoulder. He was frightened, but at first showed no symptoms. Later the arm began to grow weak and finally became completely paralyzed. There was an area of complete anesthesia for touch, pain and temperature on the left side, beginning at the level of the eye and extending to 2 cm. above the crest of the ilium. The electrocutaneous sensation was retained. In the region corresponding to the position of the ovary in women there was a sensitive point. Vigorous suggestion without hypnosis enabled the patient to move his arm. This was repeated several times, and gradually both the motor and sensory paralyses disappeared. [J. S.]

9.—Burger has seen 2 cases of **placenta prævia** in which there were adhesions between the membranes and the lower segment of the uterus, so that the os could not readily dilate. In one of these cases, when he was called, there was edema of the feet and labia, and hydramnios. The placenta lay in the os, the membranes were tense and protruding. Version was performed with some difficulty, and a large living child was extracted. The placenta was found to contain white glistening bands. [J. S.]

10.—In the Surgical Polyclinic of the University of Munich 15,170 patients were treated in the year 1902. Klaussner gives a list of the operations, both major and minor. This includes the departments for diseases of the ear and nose. [J. S.]

BERLINER KLINISCHE WOCHENSCHRIFT.

March 2, 1903. (40. Jahrgang, No. 9.)

1. The Clinical and Pathological Significance of Autolysis. F. UMBER.
2. Scopolamine and Morphine Anesthesia. LUDWIG WILD.
3. The Rôle of the Sternal Angle in Respiration. D. ROTHSCHILD.
4. Some Causes of Cough and Coryza. G. ROSENFELD.

1.—After reviewing the literature on the **autolytic ferments,** Umber states that cells secrete substances which may destroy their own protoplasm, step by step, by hydrolysis. But their quantitative action upon the organism should not be overestimated. It seems probable, also, that ferment-like substances will be found which build up the cells synthetically, an opposite effect. [M. O.]

2.—Wild reports the use of **scopolamine and morphine for narcosis** in 8 operations. Anesthesia follows at varying intervals and lasts from 7 to 14 hours. In 7 cases the effect was good. But there is danger of morphine intoxication, as the bad results in the last case show. Therefore Wild sounds a note of warning against the general employment of this method. The dosage is minutely described. [M. O.]

3.—Rothschild says that **the mobility of the sternal angle** increases the length of the anteroposterior diameter of the chest and perhaps causes inspiratory sucking of venous blood into the right auricle. The changes in the angle occurring in different conditions are described. He found that flattening and immobility of the sternal angle with respiration was **present in many patients hereditarily predisposed to phthisis,** noticeable before any signs appeared in the lungs. [M. O.]

4.—Rosenfeld mentions a number of plants, **pollen** from which may produce attacks of **hay fever.** He notes the accumulation of pollen and **other dust** on the feathers of pet birds, hairs of animals, etc. [M. O.]

WIENER KLINISCHE WOCHENSCHRIFT.

February 26, 1903. (XVI. Jahrgang, No. 9.)

1. Post Mortem Examination of the Liver. J. SEEGEN.
2. Herpes. LUDWIG MERK.
3. Iodomercuric Cacodylate in the Treatment of Severe Syphilis. GEORG LOEWENBACH.

1.—In **examining the liver at autopsy,** one of 3 conditions was found by Lacassagne and Martin; absence of both sugar and glycogen; presence of both sugar and glycogen; or presence of sugar and absence of glycogen. They concluded that definite conclusions could be drawn from these findings; from the first, slow death after long illness; the second, death without previous illness; and the third, sudden death. The **technique of the test,** which they claim is of value medicolegally, is described in full. Several post mortem findings and experiments are given, which show the conclusions drawn by Lascassagne and Martin to be wrong; so wrong that the test is truly unreliable. [M. O.]

2.—Merk shows that lymphangitis attacking sensory nerves generally causes **herpes,** though when motor nerves are affected herpes may also occur. The condition does not depend upon lesions of the trophic nerves, as was formerly supposed. Herpes is rather the result in the skin of the destruction of a neuron. From the same cause, reflexly, changes occur in the nearby bloodvessels. The literature is cited. [M. O.]

3.—After describing **iodomercuric cacodylate,** Löwenbach reports 40 cases of serious syphilitic affections in which it proved effective, given in injections. This treatment is advised in cachectic, anemic subjects, with ulcerative and gummatous forms of syphilis in late or early stages, even after other mercurial and iodide treatments. The lesion heals, and the general condition improves. It is also of value in early polymorphous eruptions, in later papulosquamous eruptions, with lichen or psoriasis, both conditions being benefited. It is of no use in syphilis affecting well-nourished individuals. [M. O.]

BOLNITCHNAJA GAZETA BOTKINA.

December 25, 1902. (Vol. XIII, No. 52.)

1. On the Question of the Changes in the Physical Properties of Some Woolen Material and Uniforms Under the Influence of Steam Disinfection. L. K. MORDBERG.
2. On the Question of the Passage of Agglutinins Into Transudates (Under Normal Conditions and in Experimental Uremia). N. K. ROSENBERG.

1.—Mordberg investigated **the effect of steam disinfection on several kinds of cloth.** The following are his conclusions: (1) Under the influence of live steam, under a pressure of 4.5 to 7.2 pounds (104-111° C.) for one hour, the thickness of the material is always increased. (2) The thickness is still more increased after wetting the material in water and then boiling. (3) The specific gravity of the material is decreased, and much more so on boiling, this being due to the solution of the coloring matter and other soluble material with which the cloth is impregnated. (4) The size of the pores is increased: this, in connection with the increased thickness and loss in specific gravity, indicates that the cloth is lighter and more porous. (5) Under the influence of steam at a high temperature all fabrics shrink, the shrinkage, however, is less than when the material is wetted in water or boiled. (6) The minimum absorbability of the fabric after being subjected to live steam is, as a rule, diminished. (7) In the condition of minimum absorbability the fabrics investigated contained a considerable number of pores filled with air. (8) Under the influence of steam the fabrics undergo changes in color. The light-colored, especially the light-gray materials, take up a yellow-brown shade. The effect of hot water is less marked in this respect. (9) On immersing the cloth in water, and especially on boiling, some of the fabrics give up a considerable amount of soluble coloring matter. [A. R.]

2.—Rosenberg reviews the literature on **the distribution of agglutinins in the body** and then describes his own experiments on animals, from which he draws the following conclusions: (1) Agglutinins are capable of passing from the blood into physiological as well as pathological transudates. (2) Under the influence of vascular disturbances this passage is still greater. (3) The degree of the passage of the agglutinins in the normal organism depends, on the one hand, on the individuality and, on the other, on the saturation of the blood with agglutinins. (4) The degree of passage in the pathological or uremic organism depends largely on the intensity of the agglutination; on the extent of disturbance of the vessel walls and to a lesser degree on individuality. (5) The greatest amount of agglutinins passes into such physiological and pathological transudates which contain the greatest amount of albumin (globulin) (pericardial, pleural, ascitic fluids). (6) The minimum passage of agglutinins is observed in normal transudates (watery fluids, cerebrospinal fluid), containing but little albumin under physiological as well as pathological conditions. (7) Experimental uremia largely decreases and even inhibits entirely the production of agglutinins. (8) The lowering of the agglutinating reaction of the blood, when large transudates are formed, depends on the passage of the agglutinins from the blood into the transudates, under conditions of the cessation of their production. (9) The passage of agglutinins into the urine depends not only on the intensity of the agglutinating reaction of the blood and individual peculiarities, but also on certain changes in the agglutinating blood taking place in the kidneys. (10) The distribution of the agglutinins in the peripheral veins, in the right heart and in the inferior vena cava is the same. (11) Agglutinins are capable of passing through dead capillary walls. [A. R.]

RUSSKY VRATCH.

January 4, 1903. (Vol. II, No. 1.)

1. On the Technique of Abdominal Section (Laparoceliotomy). V. S. GRUZDEFF.
2. On the Seating of Scholars According to Vision. R. A. KATZ.
3. On the Question of Gastric Digestion in Jaundice. S. S. ZIMNITZKY.
4. The Treatment of Cicatricial Contraction of the Esophagus with Electricity. JA. B. ZELJDOVITCH.
5. On the Therapeutic Effect of White Electric Light (Incandescent Lamp) on Some Inflammatory Diseases of the Uterus and Adnexa. A. I. ORLOFF.
6. On Compulsory Treatment in the Army. V. PH. BUSCHUEFF.
7. Potassium Permanganate as a Specific in Acute Morphine and Opium Poisoning. C. A. FINKELSTEIN.

1.—Will be abstracted when concluded.

2.—Katz urges that the **distribution of the scholars in** the school room should be made according to the vision of the individual pupils. The vision should be carefully examined before a seat is assigned, or the seat changed as soon as it is found that the scholar's vision is not adapted to that particular distance. In the examination of the vision the following points should be determined: (1) Does the student see without effort what is written on the black-board? (2) Can he or she use his or her eyes for prolonged reading without fatigue? The first point can be readily determined without recourse to any special appliances, while for the second a smoke-colored glass, especially devised for that purpose by the author, should be used. Should some abnormality of vision be found, which cannot be remedied by mere changing of the seat, it should be referred to a specialist. [A. R.]

3.—Will be abstracted when concluded.

4.—Zeljdovitch calls attention to **the use of electricity in the treatment of cicatricial stricture of the esophagus.** He has employed an electric sound in 3 cases of stricture of the esophagus with splendid results. In these cases the strictures were the result of ingestion of corrosive substances with suicidal intent and did not readily yield to the usual methods of dilatation. By means of the electric sound, however, considerable and fairly permanent dilatation was accomplished in 2-3 sittings. The author explains the beneficial effect of electricity by the destructive action the latter exerts on tissues. [A. R.]

5.—Orloff employed **electric light of 5-16 candle-power in the treatment of various inflammatory conditions of the uterus and appendages** in 50 patients. Preliminary to a detailed account of his observations, he presents the following conclusions: (1) Phototherapy is indicated in a considerable number of inflammatory diseases of the uterus and adnexa, such as metritis, parametritis, perimetritis, salpingitis, oophritis, etc., both in their chronic and, especially, acute forms. (2) The chief and most pronounced action of the light is seen in the amelioration or entire cessation of pain. (3) Under the influence of phototherapy exudates as well as accumulations of pus become diminished or disappear entirely. (4) The pains during menstruation (dysmenorrhea), especially those of a spasmodic character, become considerably diminished. (5) The pains accompanying posterior flexions of the uterus and nervous affections of the ovaries (neuralgia) are markedly diminished, and after the first application of the treatment it may be possible to restore the uterus to the normal position without any pain. (6) Apparently, erosions of the cervix also yield to this treatment. (7) The amount of leukorrhea in the uterine cavity and cervix becomes lessened, especially in affections of gonorrheal origin. (8) Menstruation as well as uterine hemorrhage contra-indicate the application of light. (9) Pregnancy should also serve as a contra-indication in view of our lack of knowledge as to the action of light on that condition. (10) No opportunity was afforded to employ the treatment in cases of tumors. (11) As untoward effects of the treatment may be mentioned the appearance in some patients, after 3-4 applications, of general malaise and a feeling of numbness in the extremities, this condition disappearing in 2-3 days. (12) The number of treatments required before any improvement in the patient's condition is noticed depends on the character and the stage of the disease. In the author's experience it varied from 8 to 40, each treatment consuming 10-20 minutes, repeated daily or every other day. No other form of treatment was employed. [A. R.]

6.—Buschueff criticises the decree of the **Military Medical Department ordering compulsory treatment** of the lower ranks (soldiers) in case they refuse to be treated, as, for instance, in the case of scabies, when epilation is objected to on account of pain. The author shows how such a course is inhuman, irrational and not in accord with the office of a physician. [A. R.]

7.—Finkelstein calls attention to the **specific antidotal action of potassium permanganate in morphine and opium poisoning,** and reports the case of a girl whose life was saved by an hypodermic injection of this antidote. [A. R.]

ZEITSCHRIFT FUER KLINISCHE MEDICIN.

Band XLVII, Hefte 5 and 6.

1. Cryoscopy of the Urine in the Diagnosis of Bilateral Disease of the Kidney. H. STRAUSS.
2. The Intracellular Globulin Reaction of the Leukocytes. S. KAMINER.
3. Minimal Albuminuria and Cyclic Albuminuria. L. KUTTNER.
4. The Question of the Mechanism of Absorption. L. HOFBAUER.
5. Experimental Investigations Concerning the Effect of the Kidney on the Electric Conductivity of the Blood. A. BICKEL.
6. The Production and Excretion of Glycuronic Acid. M. BIAL.
7. Contribution Concerning Pentosuria and the Reaction of the Pentoses. H. BRAT.
8. Gangrene of the Left Leg Due to Thrombosis of the Femoral Artery (Probably of Grippal Nature) in a Diabetic. M. LOEB.

1.—Strauss gives an interesting review of the work that has previously been done on the subject of cryoscopy of the urine in the diagnosis of disease of the kidneys, and he then reports some very extensive investigations of his own. **He criticises all the work previously done, including** some of his own, and all the methods heretofore employed, as being unsatisfactory. This was chiefly because investigations did not take account of **the food, which causes the conditions in cryoscopy to vary enormously; or of the variations in the individual at different times.** The most satisfactory way of overcoming these troubles would seem to make a regular metabolism experiment; but the results from metabolism-work are unsatisfactory in nephritis, and the time required is enormous. The author's present method is to **study the effect of the ingestion of certain substances, given under closely regulated and almost constant conditions.** He tests the effect of 500 cc. of water alone, of 10 gm. of sodium chloride in that quantity of water and of 50 gm. of gluton in the same amount of water. The test-substance is always given on an empty stomach: the patient having been instructed to take, at six o'clock the evening before, ½ a liter of unsalted milk soup and to pass urine at ten o'clock in the evening and at five in the morning. At 6 A. M. the test is given, the bladder being again emptied at this time. From six to eleven o'clock the urine is collected in hourly portions, and the freezing-point and the sodium chloride content of these various portions are studied. **Even this trying method of study has not given very satisfactory results, but they have been** more satisfactory than those obtained with the previous methods. Of the different tests, that with plain water seems to be the most satisfactory. Strauss believes that his work shows that **polyuria in chronic nephritis is a compensatory symptom** that has the purpose of causing purification of the blood and of the tissues. The **edema also seems to be compensatory.** In his opinion there is good reason for thinking that the differences in the response of the organism to the administration of large quantities of sodium chloride may be due, not only to changes in the condition of the kidney, but also to changes in other tissues [D. L. E.]

2.—Kaminer gives a brief general discussion of the iodophile reaction of the leukocytes, making the statement that this reaction may be found both intracellular and extracellular, and that these 2 forms may be found separately in different individuals. Hence, the intracellular and extracellular reactions do not necessarily have a common cause. The **extracellular reaction is probably due to artificial causes,** and it is not impossible that the extracellular reaction is, at times, due to bloodplates. The intracellular **reaction occurs in connection with fever, leukocytosis and bacterial intoxications.** The author has made an **experimental study of the effect of various bacterial infections** and has decided that the toxins of the streptococcus, the staphylococcus, the bacillus pyocyaneus, the bacillus of Friedländer, the pneumococcus, the typhoid bacillus, the bacterium coli, ricine, abrine and diphtheria toxin, cause the development of the iodophile reaction. Chronic infections, such as tuberculosis, may also produce the reaction; but then the reaction occurs later and chiefly when there is general infection. The reaction is apparently not seen in rabbits. The hen cholera bacillus and tetanus toxin, as well as the bacillus prodigiosus, do not produce the reaction. It probably has some importance in **typhoid fever and in the diagnosis of secondary infections** with staphylococci and streptococci. Apparently the presence of a bacterial toxin in the blood is not alone sufficient to produce the reaction, for some bacterial toxins do not cause it. It is probable that the bone marrow reacts to the presence of the toxin. Kaminer has found that the iodophile cells are much more numerous in the bone marrow than in the circulating blood. They constitute, therefore, a pathological appearance and, in his belief, a degenerative reaction. He also injected substances sensitive to iodine, such as certain oils and silver nitrate. At times he found the iodophile granules after this, but not always. As a rule, they are found in cases in which abscesses develop, but they often precede the abscesses, and, on the other hand, abscesses may be present for a long time before the granules develop. The iodophile granules are seen in cases with leukocytosis, because leukocytosis is an accompaniment of certain infections. [D. L. E.]

3.—Kuttner gives an extremely interesting and extensive discussion of minimal albuminuria and cyclic albuminuria, first directing attention to nucleo-albumin and to the importance of distinguishing this from serum-albumin and serum-globulin. He believes that nucleo-albuminuria is a pathological condition. He has, in all, observed 62 cases of cyclic albuminuria in the last 10 years. Only 6 of these were pure nucleo-albuminuria; but there were many instances of a combination of nucleo-albumin with real albumin, and there were 8 cases of isolated pure albuminuria. In a general discussion of cyclic albuminuria, with free reference to the literature, the author notes that it has not been at all definitely shown that the presence of hyaline or slightly granular casts indicates any actual disease of the kidney; although, on the other hand, the contrary has not been proved. It has also not yet been determined whether cyclic albuminuria itself is a condition that is always associatd with lesions of the kidneys, or whether this is not always the case. He has studied his patients carefully in a search for other indications of renal changes, many of his patients being observed for a long time. He has seen cyclic albuminuria transformed into a persistent, continuous albuminuria. He has also seen cyclic albuminuria persist in the periods between attacks of acute hemorrhagic nephritis; and attacks of paroxysmal hemoglobinuria and of cyclic albuminuria not infrequently occur in cases in which there are actual distinct evidences of organic disease of the kidney. In a considerable number of cases, therefore, there is strong evidence that an organic lesion is at the base of the condition, but in a large number of other cases he has been unable to find any signs of organic renal disease. He contents himself with the statement that we are not, as yet, justified in stating that cyclic albuminuria is ever an entirely harmless condition. The chief difficulty is that the condition has not yet been properly studied, and we have very little knowledge of the conditions present at autopsy. [D. L. E.]

4.—Hofbauer's article is chiefly a restatement of his previous views and a reply to the criticisms of Pflüger. Hofbauer has shown that, after staining fat with alcanna red, the dyed fat may be followed into the chylevessels. The dye is insoluble in water and cannot be absorbed; and, if the fat should be digested, the dye would be set free in a fluid of alkaline reaction and would turn blue. Hence, the author believes that it is necessary that the fat should have been in part absorbed as such, without digestion; for, if all the fat had been digested, none of it would have still been colored. Pflüger believes that the dye is soluble to some extent in bile, glycerine and soaps. This, however, Hofbauer says is true only of the red dye; and that, when it has become blue, it is not so soluble. Even when dissolved in such solutions, if fats are present, they will take up the dye out of these solutions. The author decides from his work that it has been demonstrated that fats and other substances that are foreign to the organism may be absorbed through the intestinal wall, without change in digestion. [D. L. E.]

5.—Bickel decides from his experimental work that extirpation of the kidney causes an increase in the molecular concentration of the blood, due chiefly to an increase in the nonelectrolytes, which are mostly organic substances produced in katabolism. The amount of salts, acids and bases in the blood is not largely altered by extirpating the kidney. These observations coincide to a considerabe extent with those of Viola, who found no constant relation, in chronic nephritis, between the electric conductivity and either the freezing-point or the sodium chloride content of the blood; but who did find that the electric conductivity was increased. [D. L. E.]

6.—Bial considers that it has been established that glycuronic acid is a product of sugar in metabolism, but that the exact method in which this is produced is questionable. He believes that it may be possible that increase of glycuronic acid in the urine is due to its absorption in large amounts from the digestive tract. He found that glycuronic acid is present in the normal feces, that after giving menthol the amount largely increases; and he was able readily to find at least as much in the feces, under these circumstances, as has been isolated from the urine. He believes, therefore, that he has demonstrated that it is wholly probable that the increase of this substance in the urine is often due to its increased formation in and absorption from the digestive tract. This would rob glycuronic acid of any importance as an indicator of disturbed sugar metabolism. Further, the author severely criticises Mayer's statement that an orcin reaction for glycuronic acid in the urine, when persistent, is sufficient to indicate the possibility of the development of diabetes and to demonstrate the existence of imperfect oxidative processes. He calls attention to the fact that various paired glycuronic compounds show great differences in the readiness with which they may be broken up. If certain of these compounds are present in the urine, no orcin reaction will be obtained after boiling with weak acid; while, if others are present in equal amount, a marked reaction will be obtained. This, he believes, shows that such reactions with the urine are of little value in indicating the quantity of glycuronic acid present. The only rational method of studying glycuronic acid excretion is to determine the amount excreted, but there is no satisfactory means of doing this at present. [D. L. E.]

7.—Brat reports a case of pentosuria and refers to the few other cases of pure pentosuria as yet on record. The condition is, however, probably more common than the literature indicates, because the cases are likely to be mistaken for diabetes and not properly studied. This patient did not react with either glycosuria or an increase in her pentosuria when 100 gm. of grape sugar were administered to the empty stomach. The case had been mistaken for one of diabetes. The author contributes a study of the reactions of the urine in the presence of pentoses and of glycuronic compounds, and reaches the conclusion that the best temperature for the orcin-HCl reaction for pentoses is between 90° and 95° C. When carried out at this temperature, the test is distinctive for pentoses. This excludes a body that, at higher temperatures, gives a reaction that is characteristic of methyl pentose, and it also excludes glycuronic compounds. Bial's iron-chloride-orcin-HCl reaction is indicative of the presence of pentoses only when it is very marked. It is also given by urines that contain no pentoses; and by an excess of glycuronic acid. Brat insists upon the importance of carefully determining whether pentoses are present or not, as a pentosuria has a wholly different prognosis from a diabetic glycosuria. [D. L. E.]

8.—The chief points in the case are indicated by the title. Since there had been, some months before, a tendency to swelling about the ankles, particularly on the left, and pain in the left leg; and since the patient had diabetes and some indications of arteriosclerosis, it is probable that the gangrene was due chiefly to the presence of marked arteriosclerosis of the vessels of the left leg. The condition ended fatally. The patient had all the indications of an influenzal infection. The main question was whether the gangrene was actually diabetic or was due to another cause and merely appeared in a diabetic person. Loeb believes that the influenzal infection increased the tendency to thrombosis in a patient that already had marked arteriosclerosis, and that the two factors worked together. It was, therefore, not a typical diabetic gangrene. [D. L. E.]

ARCHIV FUER EXPERIMENTELLE PATHOLOGIE UND PHARMAKOLOGIE.

Band XLVIII. Hefte 5 u. 6.

1. On the Synthesis of Albumins in the Animal Body. O. LOEWI.
2. The Course of the Excretion of Potassium Iodide in the Human Urine. ANTON.
3. The Cause of the Paralysis of Respiration in Poisoning With Coniin and Hydrocyanic Acid. HAYASHI and MUTO.
4. The Excretion of Allantoin in Intoxications. POHL.

5. The Influence of Analgetics upon the Intracranial Blood-Circulation. WIECHOWSKI.
6. Investigations concerning the Physiology and Pharmacology of the Function of the Kidneys. LOEWI.
7. The Absorption of Watery Saline Solutions from the Human Stomach. PFEIFFER.
8. On the Pharmacology of the Camphor Group. HILDEBRANDT.

1.—Considered editorially.

2.—The conclusions reached by Anton concerning the excretion of potassium iodide are as follows: After one dose of a half gram, the **freest excretion usually occurs within 2 hours.** After such a dose, there is, on an average, 75% excreted in the urine, and sometimes more. The duration of the excretion after such a dose is about 40 hours. If 2 doses are given within 5 hours, the excretion persists for 56 hours. Three doses within 10 hours cause the excretion to persist for 77 hours. **When the drug is given in a mucilaginous mixture, the excretion is delayed, apparently as the result of imperfect absorption.** Potassium nitrate and sodium chloride cause an increase in the excretion. Sodium bicarbonate has no influence upon the excretion or upon the production of an iodide rhinitis. Claude Bernard was apparently wrong in stating that the excretion persists much longer in the saliva than in the urine, as the author has regularly found the contrary to be true. The secretion of the nasal mucous membrane in iodide rhinitis contains iodine in from 0.9 to 1.5% of the amount administered. [D. L. E.]

3.—The studies of **coniin** show that it causes **paralysis of the phrenic nerve,** and the motor nerves of the accessory muscles of respiration probably become paralyzed later. Very large doses cause general paralysis. Potassium cyanide, in doses of 15 gm. per kilo body-weight, causes paralysis of all the respiratory movements without loss of irritability in the motor nerves. Evidently, then, the paralysis of respiration is due to **paralysis of the respiratory center.** [D. L. E.]

4.—Pohl refers to the fact that **hydrazin poisoning in animals causes the excretion of an abnormal amount of allantoin.** He has sought the source of the allantoin by performing some experiments; and has found that the excretion of allantoin is apparently not the result of mere oxidation of uric acid, but that it is due to an alteration in the tissues. Examination of the organs showed that **allantoin is not present under normal circumstances,** but that it is found in considerable amount in the liver in hydrazin poisoning, and in minute quantity elsewhere. Even the liver shows typical changes in this intoxication; hence it seems proper to believe that the liver is the seat of formation of allantoin. Pohl thinks that **its formation is due to the action of an autolytic ferment.** He reports his results in a series of investigations. These seem to show that autolysis of the liver produces allantoin. It is an interesting fact that this was not the case when other poisons, particularly phosphorus, were used. The ferment that produces allantoin apparently has no physiological importance; but it undoubtedly has, the author believes, a decided pathological importance. [D. L. E.]

5.—Wiechowski has studied the **influence upon the cerebral circulation exerted by those drugs that have a peculiarly marked effect upon headache.** He describes at length his method of studying this, and then gives the results obtained with salicylic acid, caffeine, phenocoll, antifebrine, phenacetine, antipyrine and pyramidon. He decides that the **analgetics have a marked and, to a considerable extent, selective influence upon the intracranial bloodvessels,** even in relatively small doses; and that frequently no other vasomotor effect can be discovered. Narcotics, on the contrary, cause dilatation of the intracranial vessels only when narcosis has been produced, and there is, at the same time, a dilatation of the vessels of the trunk. The intracranial circulation is not influenced by all drugs that have vasomotor effects. No changes could be noted in the vessels of the meninges. The author believes that the analgetic action of these drugs is an antagonistic one, and that this action is chiefly to produce dilatation of the vessels. [D. L. E.]

6.—Loewi contributes an article that is full of interest in its various details, but that can be given only in summary. He states that diuresis increases the excretion of urea and sodium chloride, of sugar when there is hyperglykemia, and when phosphates are present in excessive amount, they are increased (i e., when phosphates have been injected into the circulation). Diuresis does not influence the phosphoric acid produced in metabolism or the sugar excretion in phlorizin diabetes, and the excretion of these last-mentioned substances is not influenced by pilocarpine. When animals are overloaded with sodium chloride, the percentage of this in the urine increases as the diuresis is disappearing. The contrary is true in animals poor in sodium chloride. After injecting sodium iodide, the percentage of this in the urine increases as the diuresis is passing off, just after injecting sodium chloride. From his studies Loewi decides that **filtration occurs in the kidneys, particularly in the glomeruli, and carries out the water and the crystalloids that are present in the blood in free solution. There also occurs a secretion in the kidneys, probably in the epithelium of the tubules, which carries out the excretory substances that are present in the blood in colloidal combination.** This combination is broken up by the kidneys. The substances then become practically in free solution and are excreted by the kidney. This secretion is not analogous to that in true glands. There is also a re-absorption of water and of substances in solution in the tubules. The re-absorption is dependent upon the diffusibility of the substances absorbed and upon the immediate condition of the kidney epithelium. The kidney cells absorb in a different manner from the other cells of the body, and particularly the intestinal epithelium. The author believes that his experiments have shown that the **kidney secretion is not influenced by diuretics; that, therefore, diuretics do not accomplish their effects by increasing the glandular activity of the kidney.** He makes the interesting claim that he has demonstrated that the reason glycosuria occurs in all forms and under any circumstances, except in phlorizin diabetes, is as follows: Under normal circumstances the sugar is in colloidal combination in the blood, and such combinations cannot pass the kidneys. When, however, hyperglykemia occurs, there is not sufficient of the "combining substance" in the blood. A considerable portion of the sugar, therefore, circulates in free solution, and is in a condition to pass the kidneys. Hence glycosuria occurs. [D. L. E.]

7.—Pfeiffer's conclusions from his study of the influence of various substances upon the freezing-point of the gastric contents are, in the first place, that numerous facts, particularly the absorption and re-excretion of water within the stomach, indicate that the **theory of simple diffusion as the cause of absorption from the stomach is wholly unsatisfactory.** Nevertheless, there is a relation between the concentration of the gastric contents and that of the serum, and the gastric contents always tend to become a definite concentration. This indicates that physical factors are at work. It is probable, therefore, that **absorption from the stomach is not a simple process; various factors are probably at work.** The author particularly suggests that a study of the effect of nervous influence upon the course of absorption from the stomach would be valuable. [D. L. E.]

8.—The studies that Hildebrandt presents indicate that the administration of camphor causes the pulse-wave to become higher without much increase in the bloodpressure. **Camphor, therefore, has a stimulating action upon the heartmuscle,** the systole becoming stronger. This effect is much more marked upon the normal than upon the damaged heart. [D. L. E.]

VIRCHOW'S ARCHIV.

Band 169. Heft 2.

7. Contribution to the Casuistry of Pneumonomycosis. K. HOCHHEIM.
8. The Source of Cysts of the Female Adnexa, the Formations Attached to Them, and to the Adenomata of the Lateral Section of the Tube. G. SCHICKELE.
9. The Patho- and Histogenesis of the So-called Angioplastic Sarcomata. K. WLASSOW.
10. The Elastic Tissue of the Uterus During Pregnancy. N. IWANOFF.
11. Destruction and New Formation of Elastic Tissue in the Lung in Various Diseases. K. SAWADA.
12. Relation of the Elastic Tissue in Carcinoma of the Stomach. T. INOUYE.
13. Heterotopia of the Gray Substance of the Brain in an Epileptic Idiot. A. TEDESCHI.
14. The Physiological Foundation of the Knowledge of the Stigmata of Degeneration. G. WOLFF.
15. Brief Communications: Notes Upon a Chemical Method for the Differential Diagnosis of Hypernephroma of the Kidney from Other Forms of Kidney Tumor. A. CROFTAN.

7.—Hochheim reports an interesting case of **pneumonomycosis** occurring in a man, 43 years of age, who had a septic infection of the right arm which subsequently extended to the left arm and caused death. Peculiar nodules were found in the lungs, resembling cheesy pneumonia, which upon microscopical examination were found to be filled with the aspergillus fumigatus. Cultures were made from this and injections made into rabbits. In one case in which an intravenous injection was made the animal died in 60 hours, and numerous nodules were found in various parts of the body. In these nodules giant cells were occasionally found. By producing local injury to the lungs and then injecting the cultures intravenously, a disease was produced not dissimilar to that observed in the man, although, curiously enough, the changes in the injured lung were not more severe than those in the sound lung. In these animals the kidneys were also seriously involved. When the rabbits were fed with the aspergillus, no bad effect was observed. Neither were any results produced by the intraperitoneal injection. On the other hand, inhalation produced positive results in several cases, the lesions being chiefly in the lungs. In some cases there was evidence that the mold was undergoing degeneration in the organs. This was particularly found in a rabbit that lived for 9 days after the injection. [J. S.]

8.—Schickele continues his article upon the origin of **cysts of the adnexa of the female genitalia.** He discusses adenomata and adenomyomata of the lateral portion of the tube, reporting 3 cases in which he found small millet-seed tumors, and 4 in which there was some proliferation of the glandular tubules. These cases are reported in some detail, and afterward a brief account is given of the opinions of various authorities upon the origin of such growths. He concludes that some of the other tumor forms that he has discussed furnish additional evidence that portions of the embryonal structure can sometimes be dislocated into the walls of the tubes. He then takes up the pedunculated growths which he divides into 3 groups: (1) The cystic attachments arising from the epo-ophoron canals; (2) the cystic attachments arising from the cranial end of the Wolffian duct and (3) attachments which are to be ascribed to supernumerary celian epithelial structures attached to the fimbriated extremity. Of the first group he reports 4 cases, which proved his contention that they may arise from the epo-ophoron tubules. Of the second group he also reports 4 cases exhibiting different stages of the process and, therefore, giving a clear idea of its development. Finally, after a study of several cases of the third group, he reaches the conclusion that these tumors are derived from the broad ligament where they are first found as small button-like structures, and later the peduncle is formed. As a general conclusion he calls attention to the interesting and complicated nature of these often microscopical structures. [J. S.]

9.—Wlassow has had the opportunity of studying 3 cases of **sarcome angioplastique** of tne testicle. These tumors consisted of mononuclear cells and of polymorphonuclear giant cells. There was no new formation of connective tissue and no congestion or reactive inflammation. The mononuclear cells appeared to be flat polyhedral and the nucleus was round or oval. The giant cells appeared to be composed of mononuclear cells that had united. In all patients there were metastases to tne liver and other structures, and in these metastases a similar tumor formation was found. The testicle was atrophied. The cells of the epithelium showed gradual loss of the glandular type and conversion into the alveolar type of cancer, and, therefore, Wlassow reaches the conclusion that the so-called sarcome angioplastique of Malassez and Monod is not a sarcoma but a tumor of epithelial origin. He concludes, therefore, that it is an **epithelioma of the testicle** developing from the not fully differentiated epithelium of the embryonal glandular canals. It differs from other cancers because there is no proliferation of connective tissue found where it originates, but is developed from some embryonal mesodermal cells. The metastatic nodules show neither new-formed stroma nor alveolar structure. He calls attention to certain points of resemblance with the chorion epithelioma and suggests the name "**epithelioma syncytiomatodes testiculi.**" [J. S.]

10.—Iwanoff has studied the **elastic tissue of the uterus during pregnancy.** The nonpregnant uterus is vascular, and elastic fibers are found around the bloodvessels and muscles, usually arranged in a parallel manner. During gravidity there is decided proliferation of the perimesium. The elastic tissue becomes more pronounced and somtimes appears in clumps. This proliferation of the elastic tissue is first manifested by the appearance of some granules that apparently are formed from the protoplasm. By the third month these granules become less numerous and the masses of elastic tissue grow more pronounced. The muscle bundles at this stage appear to be surrounded by a network of the fibers. Sometimes irregularities and fractures in the muscle-cells can be observed, which Iwanoff ascribes to a possible contraction. At the beginning of the second half of pregnancy there is distinct stretching of the uterine tissue. Toward the end of pregnancy the elastic tissues become less distinct. Some fibers stain faintly, others not at all, others still stain well, but have the appearance of having been stretched and broken, that is to say, there is every evidence of destruction of elastic tissue. In the uterus of a woman who has had children there is always more elastic tissue than in the nonparturient uterus. The function of the elastic tissue seems to be to support the wall of the uterus in the early part of pregnancy when it is soft, in the latter part when it is thin, and at the same time subjected to considerable continuous effort. [J. S.]

11.—Sawada has studied **elastic fibers in a variety of pulmonary conditions** and reaches the general conclusion that in inflammation, according to its nature, they show various changes, and if for some time they have not been functionally active there may be a retrogressive metamorphosis. In chronic proliferation of connective tissue in the lung and in pleuritic adhesions there is always a new formation of elastic fibers. These develop entirely independently of the previously existing elastic fibers, but they show a close relation to connective tissue cells. [J. S.]

12.—Inouye has studied 20 cases of **carcinoma of the stomach with reference to the existence of elastic fibers.** The elastic fibers are found in the walls of the bloodvessels and in new formations found in the neighborhood of the bloodvessels. Therefore, Inouye is inclined to the belief that the new formation of elastic fibers in carcinoma of the stomach proceeds from the old fibers in the walls of the bloodvessels. Such new formation, however, is rare, and the destruction of elastic fibers is relatively common. [J. S.]

13.—Redeschi reports the case of a girl, 8½ years old, who developed convulsive attacks at the age of one year, after which the child failed to develop intellectually and became a chronic epileptic. In spite of bromides, she gradually passed into the status epilepticus and died. Nothing abnormal was found macroscopically in the brain excepting slight dilatation of the lateral ventricles and some injection of the bloodvessels; there appeared to be some irregularity in the distribution of the gray substance of the cortex. Microscopically it was found that this represented an extreme heterotopia of the gray substance of the brain, which replaced to a large extent the white substance of the corona radiata. This substance consisted of ganglion and neuroglia cells and nerve fibers irregularly arranged and bearing no relation to the arrangement of the cerebral cortex. There was also a chronic inflammatory process of the pia and diminution of the number of nerve fibers in the cortex. Certain other abnormalities were observed. There was only one artery to the corpus callosum, and the uterus showed 2 horns. [J. S.]

14.—With reference to the **stigmata of degeneration** there are 3 possibilities: The stigmata and the anomalies found in the nervous system of these subjects may be the expression of a common cause: the stigmata may be the cause of the nervous defects: or the nervous defects may be the cause of the stigmata. There appears to be little reason to believe that the third postulate is true. After a discussion of the literature of the subject Wolff has undertaken to determine whether in the regenerative development of injured animals structural anomalies occur. He employed the adult form of the triton cristatis, amputating one leg and at the same time cutting off the supply from the nervous system; if the leg regenerated normally he would have concluded that the nervous system had little influence over morphology, if it regenerated abnormally, that it would represent, in a way, an analogy to the stigmata of degeneration. In order to prevent too rapid regeneration of the amputated extremity he removed the lower portion of the spinal cord above the amputation. He found that the regenerated foot rarely had more than 4 toes, although the normal foot has five. This, however, was also the case when the spinal cord was intact. Nerves were found in the regenerated extremity. These, however, might have developed from the spinal ganglia. In the second series not only was the spinal cord removed, but also the lower portion of the spinal column. Usually, however, in the course of 3 weeks the animals developed a general edema and died. In 6 animals, who survived the operation, regeneration ultimately occurred, although instead of having 5 toes the foot had only 2 or 3. The conclusion seems to be inevitable that the nervous system has some morphogenetic function, and, therefore, there is physiological foundation for the stigmata of degeneration. [J. S.]

15.—Croftan has injected extract of hypernephroma into rabbits and found that it produced glycosuria. The same extract mixed with starch solution gave rise to the formation of dextrose and decolorized an iodine starch solution. He suggests that these reactions may be of value in the diagnosis of these tumors. Hypernephromata preserved in formalin gave an iodine reaction but failed to give rise to sugar formation or to produce glycosuria. [J. S.]

NORDISKT MEDICINSKT ARKIV.

1902. (Afd. I, No. 4.)

18. Progressive Cavernoma of the Liver. C. A. LJUNGGREN.
19. Volvulus of the Cecum. R. FALTIN.
20. The Etiology and Pathogenesis of Chronic Renal Tuberculosis. P. N. HANSEN.
21. The Various Methods of Circular Sutures for Uniting Large Arteries and Veins. WILHELM REINSHOLM.

18.—Ljunggren reports a case of **progressive cavernoma of the liver** in a woman of 31, removed by operation, with recovery following. Only 4 similar cases have ever been published. The condition is so rare that the diagnosis was not made before operation in any case. Details of the operative technique are given. [M. O.]

19.—Will be abstracted when concluded.

20.—Will be abstracted when concluded.

21.—Will be abstracted when concluded.

1902. (Afd. 2, No. 4.)

18. Renal Localization After Intravenous Injection. GUNNAR FORSSNER.
19. The Weight and Length of Newborn Infants. H. ADSERSEN.
20. The Nervous Sequelæ of Acute Carbonic Oxide Poisoning. GUNNAR HEDREN.

18.—Forssner reports a great number of experiments showing the effect of cultures of **streptococci, grown upon kidney extract, introduced into animals by intravenous injection. The result was renal localization of the infection**, though the streptococci had not been especially pathogenic before cultivation upon renal tissues. Streptococci were frequently found in the urine, due evidently to local bacterial vegetation in the kidneys. Forssner considers it probable that streptococci from the angina of scarlet fever, passed through renal extract experimentally, develop pathogenic peculiarities for the kidney especially. [M. O.]

19.—Adsersen has collected rather interesting statistics upon **the weight and length of infants** born in some European cities. In Stockholm and St. Petersburg the heaviest boy babies are born in September; in Helsingfors in November. But the heaviest girls are born in October in Stockholm, in September in Helsingfors, and in February in St. Petersburg. The tallest boy infants are born in Stockholm in April; in St. Petersburg in January; girls, in Stockholm in April and July, in St. Petersburg in January, March, July and October. Conclusions are hardly justifiable. [M. O.]

20.—Hedrén reports in full the case-history of a man who died 3 weeks after having been **poisoned by illuminating gas**. The autopsy showed chronic fibrous leptomeningitis, myocardial degeneration, emphysema, bronchopneumonia and arteriosclerosis. There were hemorrhages in the white matter of the brain and cord, in the gray matter of the cord, causing large areas of softening, thrombi in the vessels of the left optic thalamus, fatty degeneration of the endothelium of the vessels of the central nervous system, chromatolytic and atrophic changes in the spinal ganglia, partial thickening of the pia of the brain and degeneration of the central and peripheral nerves. After reviewing the literature, Hedrén notes the occurrence of various **nervous conditions after acute carbonic oxide poisoning**. [M. O.]

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February, 1903. (Vol. XIII, No. 2.)

1. On Affections of the Tricuspid Valve of the Heart, with a Note on a Pedunculated Thrombus Occurring in the Right Auricle. T. WARDROP GRIFFITH.
2. A Contribution to the Study of the Post Mortem Appearances in the Drowned. HARVEY LITTLEJOHN.
3. A Series of Cases of "Nonseptic" Puerperal Pyrexia. J. LAMOND LACKIE.

1.—Griffith, in his paper on **affections of the tricuspid valve of the heart**, considers that the main observations that should lead to a diagnosis of tricuspid stenosis are the following: (*a*) The presence of a presystolic bruit in a patient with mitral stenosis, audible not only at the apex, but also toward the lower part of the sternum, especially if, as Haldane pointed out, there should be points of maximum intensity. one at the apex and the other in the tricuspid area. (*b*) The development of such a bruit in a patient who hitherto had presented the ordinary bruit of mitral stenosis. (*c*) Marked extension of cardiac dulness to the right of the sternum, indicating right auricular enlargement, without much epigastric pulsation or other signs of considerable right ventricular enlargement. This might especially be expected in instances of great tricuspid stenosis, with little or no regurgitation; but the existence of a great right ventricular enlargement must not be accepted as strong evidence against tricuspid narrowing. (*d*) Marked fulness of the veins of the neck without much pulsation in them will strengthen our suspicions: here again the less the pulsation is in such distended veins, the narrower we may assume the tricuspid orifice to be, for the auricle will be less relieved by its contraction, and there will be less regurgitation during the succeeding ventricular systole. (*e*) The supervention of dropsy and albuminuria in a patient suffering from apparently simple mitral stenosis. This may arouse our suspicions, for these affections are not common unless there is considerable regurgitation associated with the stenosis, but it should not do more than this, for dropsy and albuminuria may result from right-sided failure in mitral narrowing without tricuspid stenosis. [T. M. T.]

2.—In Littlejohn's experience with **dead bodies found in sea-water the most striking point** is the rapidity with which the soft parts or exposed portions of the body, such as the head, etc., may be destroyed. At the same time the body as a whole shows a much slower progress of the putrefactive changes than that found in the bodies of persons drowned in fresh water. The destruction of the flesh on the head, hands and feet is not due, as a rule, to putrefaction, although, no doubt, it may be assisted to some extent by the decomposition producing a softening of the tissue. There is no doubt, however, that the chief cause is due to fish attacking the body. It has been found that, when the body is covered with clothes, there is very little change with the exception of bleaching the cuticle. Very slight covering seems to protect the flesh—a fact which was exceptionally noticeable in the case of the hands, in which the thick palmar cuticle, in contradistinction to that on the dorsal aspects, is sufficient for a long time to withstand any attack made upon it. [T. M. T.]

3.—Lackie reports a number of cases which illustrate a few of the causes of puerperal fever other than ordinary septic infection. He believes that it is often difficult to distinguish at first these intercurrent acute illnesses from septicemia, but it is a good rule to suspect and treat all such as of septic origin until symptoms develop which make the diagnosis clear. [T. M. T.]

THE SCOTTISH MEDICAL AND SURGICAL JOURNAL.

February, 1903. (Vol. XII, No. 2.)

1. Notes on the Treatment of Diseases of the Nervous System. GRAHAM BROWN.
2. On Certain Forms of Menstrual Suffering, and the Action of Potassium Permanganate Therein. STEPHENSON.

1.—Brown, in his treatment of **trigeminal neuralgia**, advises: (1) **Quinine** in 10-grain doses, which may be repeated 2 or 3 times until the pain subsides. (2) **Sodium salicylate**, though not so powerful or so immediate as quinine, has given relief. It may be combined with phenacetine or antipyrine. A powder containing 5 grains each of quinine, sodium salicylate and phenacetine. (3) Another preparation is **aspirin** in 5- to 10- or even 15-grain doses. (4) **Exalgin** gives good results, but its action must be watched lest it produces collapse. Begin with a small dose, 2 grains, which may be gradually increased. Another remedy of the same class is pyramidon. (5) **Butylchloral hydrate** is another remedy for relieving pain. It may be given in doses of 5 to 10 grains or even more, and is best administered in solution with glycerine or syrup. (6) **Gelsemium sempervirens**, in 5- to 15-minim doses of the tincture, while gelsemine chloride may be given in doses of 1/200 to 1/100 grain. (7) **Aconite** has been used with good results. (8) **Potassium iodide** with bromide salts may be useful. (9) **Morphine** is only to be used when all else fails. [T. M. T.]

THE GLASGOW MEDICAL JOURNAL.

February, 1903. (Vol. LIX, No. 2.)

1. Snake Venoms: Their Physiological Action and Antidote. GEORGE LAMB.
2. The Histological Appearances of the Nervous System in Krait and Cobra Poisoning. WALTER K. HUNTER.
3. Amblyopia from Nonuse. LESLIE BUCHANAN.

1.—Lamb says that daboia poison acts mainly, if not entirely, on the circulatory apparatus, as follows: (1) It affects the coagulability of the blood. Injected directly into the bloodstream, or in large doses under the skin, it so increases the coagulability as to cause extensive intravascular thrombosis. In small doses it comes, no doubt, after a short-lived phase of increased coagulability, a marked and prolonged phase of diminished coagulability, so that in some instances the author has noticed the blood remain absolutely unclotted even after 24 hours' exposure. (2) It has a destructive action on the red bloodcells, breaking them up, and setting free the hemoglobin contained in them. (3) It has a destructive action on the capillary walls, rendering them more permeable to their fluid contents. (4) It has a marked depressing action on the heart, so marked, indeed, as sometimes to lead to a fatal termination from this action alone. As to treatment, nothing should be done with the exception, perhaps, of applying a tight ligature above the bite. This delays the absorption of the poison and gives the serum time to be absorbed into the blood and to neutralize the poison circulating there. Cutting open, sucking, cauterizing with the actual cautery or with strong acids are not advised. [T. M. T.]

2.—Buchanan quotes from high authorities the statement that no improvement can be hoped for in cases of **amblyopia from nonuse**. Berlin considered that, if the vision is below 1-30 of the normal amount, no improvement can be looked for, while Leber states that in these extreme cases even the complete loss of the hitherto useful eye is not followed by any amelioration. Steffan says after the strabismus is corrected, the eye remains just as amblyopic as before; all attempts directed at the improvement of the vision of the amblyopic eye have proved disappointing. The treatment by education has been tried in patients who had marked amblyopia, and a considerable amount of vision has been acquired. [T. M. T.]

THE DUBLIN JOURNAL OF MEDICAL SCIENCE.

February, 1903. (Third Series, No. 374.)

1. On Some Remote Effects of Dental Disease. ROBERT H. WOODS.
2. On an Outbreak of Typhus Fever. SIR CHARLES A. CAMERON.
3. A Case of Amenorrhea. JOHN KNOTT.

1.—Woods is convinced that, when chronic throat disorders, nasal polypi or any other of the numerous secondary effects are present, the necessity for dental hygiene is increased and the removal of anything that stands in its way is imperative. [T. M. T.]

2.—Cameron reports an epidemic of typhus fever in which the cause was probably due to overcrowding of rooms and the location of too many families in an ill-ventilated house. [T. M. T.]

3.—Knott reports the case-history of a patient in whom, after an attack of typhoid fever, menstruation had not appeared for five years. The surprising features were the perfect health and the utter absence of menstrual molimina which had continued throughout the whole period. [T. M. T.]

REVISTA DE MEDICINA Y CIRUGIA DE LA HABANA.

January 25, 1903.

1. Diplococcus Phlogogenus Pleuropulmonaris. L. PLASENCIA.

1.—Plasencia calls attention to a micro-organism which he has found quite constantly in the sputum of a class of patients exhibiting initial symptoms similar to those of grip, and developing later congested areas in the lungs accompanied with, or followed by, pleurisy with or without effusion. To this organism he gives the name of diplococcus phlogogenus pleuropulmonaris. The sputum in such cases is blood-streaked, mucopurulent or purulent; from which Plasencia concludes that suppuration and, in some instances, actual abscess formation develop in the congested areas; the pus being evacuated through the expectoration. Such sputum shows numerous white cells under the microscope—polymorphonuclear leukocytes preponderating—alveolar epithelium, red cells, mucus and fibrin; but no elastic fibers are seen, neither are crystals of any kind present. The organisms are described by the author as hemispherical cocci occurring in pairs, their flat suraces facing and separated by a minute space. Though these diplococci resemble in size and disposition the gonococci, they differ materially from them in shape, and they exhibit a slight and deliberate motility. The basic aniline stains are taken well by them when alcoholic solutions are used; but they do not color satisfactorily in aqueous solutions. Their cultures develop well in the usual media, but they are aërobic; stab cultures in solid media especially requiring free access to the air. Experimental inoculations of such cultures were found to be pathogenic to animals, and, from the lesions seen after such inoculations and the clinical cases in which these diplococci were found, the author concludes that they are phlogogenous, and that their influence is exerted in the production of pleuropulmonary affections in man. [R. L. F.]

Special Article.

THE RECENT EPIDEMIC OF TYPHOID FEVER IN ITHACA, NEW YORK.

By MERVIN T. SUDLER, Ph. D., M. D.,
of Ithaca.
Instructor in Anatomy in Cornell University.

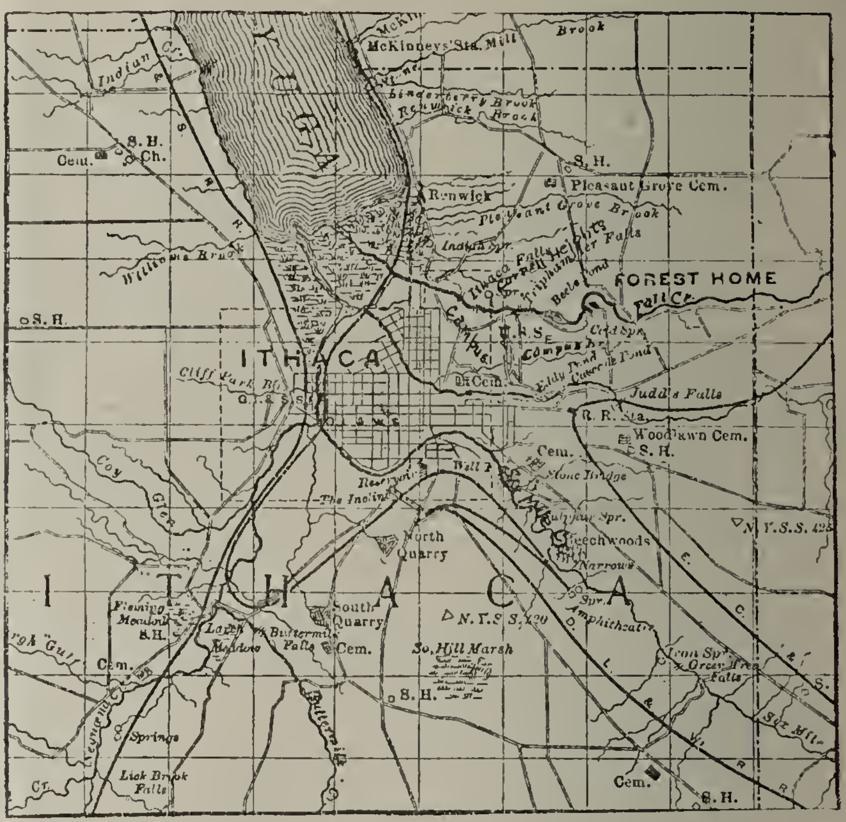
The city of Ithaca, which has attracted the attention of the public because of its recent epidemic of typhoid fever, contains according to the twelfth census a population of 13,136 inhabitants. About 1,500 more live just outside the corporate limits, and during the university year it also contains 3,000 students of Cornell University, making a total population of about 17,000 inhabitants.

The town is situated at the southern end of Lake Cayuga. Part of it is on the level ground, but a large part, including the campus, is situated on the hills to the east. Near the lake these hills are intersected with deep gorges through which the creeks that arise in the surrounding country, flow on their way to the lake.

Three of these creeks furnish the public water-supply. The campus, containing the university buildings, fraternity houses, homes of professors and women's dormitories (Sage College and annex) is supplied with water derived from Fall Creek (see map), and is under the management of the university. The town is supplied by a private corporation known as the Ithaca Water Works Company. The water is taken from Buttermilk and Six-Mile Creeks (see map). The eastern end of the town is supplied with mixed water from both creeks, although there is a section in the center of the town that can be supplied with water derived from Buttermilk Creek exclusively. Many of the places on South Hill and some on East Hill are supplied by wells. Certain districts on the "flats" and on West Hill are supplied by wells also. With these exceptions the whole town has been supplied with surface water.

The character of the water-sheds from which this water is taken varies somewhat for the different creeks. Buttermilk Creek, by the configuration of the country, is less liable to contamination than Fall Creek or Six-Mile Creek. A study of the distribution of the cases shows that in all probability Six-Mile Creek alone furnished the infectious material. (An examination of the mills' supply has shown that that is free from suspicion.) This creek drains an area of about eighty square miles of thickly populated agricultural land; in addition to this it also receives the drainage from three small villages located upon it.

The water from this creek taken from the city taps has been subjected to a careful bacteriological and chemical analysis by Prof. Chamot, of Cornell University. During the spring of 1902 monthly analyses were made for the City Board of Health, and a part of the results published in full in the city newspapers. He has found the bacterial count to vary at different times from 125 to over 28,000 per cc. The bacillus coli communis and bacillus lactis ærogenes were present. The reaction for indol in instances was strongly positive. In a chemical analysis made of water taken January 27 and February 11, the following is a part of the results obtained:



Map of Ithaca and adjoining country, showing water-supply.

	Jan. 27	Feb. 11
Free ammonia	0.008	0.033
Albuminoid ammonia	0.025	0.035
Nitrogen as nitrates	0.580	1.127
Chlorine as chlorides	2.500	1.700

In these published reports Prof. Chamot showed conclusively the fact that the water was polluted and that it was unwise to use it unless boiled.

The water-supply to Ithaca has been viewed with suspicion for some time. A few families have used boiled water or spring water for a few years. On my arrival in Ithaca last fall I was warned against it, and told of an outbreak of so-called "Ithaca fever" or "Six-Mile Creek colitis." The principal symptoms of this seemed to be fever continued for a longer or shorter time, accompanied with enteric disturbances. Newcomers were said to be especially liable to contract it. In only a few of these cases was the blood subjected to the Widal test for typhoid, and in only one or two instances did this give a positive reaction. However, some cases of typhoid have always been present in the autumn. There were always a few cases in the city hospital, and a record of fourteen cases occurring the past fall was obtained from various sources in the city.

As to the exact source of the contamination, definite information is lacking. During November of 1902 a force of sixty laborers was employed to build a dam on Six-Mile Creek for the Water Company, and it is generally presumed that the contamination occurred at that time. These laborers came from a distance, and it has been impossible to get information concerning the condition of their health at the time they were here. Two cases with a continued fever were said to have occurred last fall along the creek near one of the villages. However, the conditions were such that a single case of typhoid fever along the water-shed could easily have polluted the water. That this has not occurred before, or that it was the water of Six-Mile Creek alone that was polluted in this instance, is simply a piece of good fortune.

When the cases are dotted over the different parts of the town, they run evenly over the part of the town supplied by water from Six-Mile Creek and to almost as great an extent over that supplied by the mixed water. There is a striking decrease in the areas supplied partly by wells, and practically an absence of the disease in the parts supplied entirely by well water and from Fall Creek. In the houses in which boiled water had been used there were no cases, and these usually stood out in contrast to the condition in the adjoining houses.

The beginning of the present epidemic dates from January 15, when eight cases were reported. From this date the number rapidly increased until on February 2 thirty-eight cases were reported. From January 15 to February 14 three hundred and ten cases were diagnosed as typhoid fever. It is impossible to get accurate information as to the exact number of cases. Many students went to their homes on the development of the first symptoms; many left for other universities or their homes when it was evident that they were in the midst of an epidemic. In the early part of the epidemic physicians were not required to report cases of typhoid fever. The most trustworthy figures that have been obtainable, tabulated from the records of the Board of Health, give the total number to March 30 as 681 cases, with a mortality of 51. Fifty-four new cases were reported in March These figures will, in all probability, be revised later.

At first the seriousness of the outbreak was not recognized. This was in part due to the mild nature of the previous outbreak and isolated cases of fever. However, when the gravity of the situation was realized, steps were taken for controlling it. A force of men was employed to distribute chlorinated lime and give instructions how to use it as a disinfectant. A general order for all vaults and privies to be cleaned, was issued. It was made a punishable offence to use unboiled Ithaca water in any way that would bring it in contact with the stomach. The wording of the statute is as follows: "Resolved that all persons be and are hereby prohibited from using or dispensing to any other person, for domestic purposes such as drinking, cooking, cleaning of vegetables, dishes or in any other manner in which such water may come in contact with the stomach, any water obtained from the system of the Ithaca Water Works Company unless such water is boiled before being used or dispensed. Any violation of the ordinance shall be a misdemeanor." No house is allowed to keep boarders in which there is a case of typhoid fever. The sale of fish caught in the lake has been prohibited, and thorough inspection of all dairies furnishing milk to the city was undertaken. To aid the health department in keeping their record of the cases, physicians were required to report all cases diagnosed as typhoid fever.

To guard against further outbreaks, the university has installed a filtration plant in its own water-works for the supply derived from Fall Creek. The city, after several attempts, has at last voted to own its own water works, the vote being 1,335 for it to 30 votes against it. The general feeling seems to be in favor of a supply derived from artesian wells, and, if a supply of the proper quality and amount can be obtained, the problem as far as the source is concerned is solved. In the meanwhile it has been suggested that a filtration plant be installed by the Water Works Company, and that the mains and pipes shall be cleansed by the use of large quantities of potassium permanganate. Public opinion is very strong at present in favor of a pure water-supply, and for the most part determined to test thoroughly the question of obtaining it from artesian wells. Whether the feeling will die out before the question is fully solved, it is difficult to say.

That there was sufficient warning given of the danger, and that the warning was not heeded, there can be no doubt. Both the chemical analysis and bacterial analysis had shown the water unfit for consumption. The results were published in the local papers, and the statement was distinctly made that the water was unfit for use. It was understood by some at least with what ease the entire source could be contaminated. The outbreak of a mild fever was still more of a decided warning, but this was insufficient to arouse the public to action. It is sad to think that the suffering and loss of life could have been prevented if reasonable precautions had been taken. That the experience that has been gained will be used in the future defence of the city is certain, but to what extent it is impossible to tell. It is to be hoped that this experience will be put on record in such a way that it will be of distinct use to other towns the water-supply of which is not above suspicion. The value of chemical and bacteriological analyses in determining the fitness of water for drinking purposes is emphasized by this outbreak, and if this knowledge can be used to save life and prevent suffering, then the results of the epidemic will have been well used.

JOURNAL DES PRATICIENS.

February 7, 1903. (17me. Année, No. 6.)

1. The Dosage of Mercury in the Intense Mercurial Treatment of Syphilis. LEREDDE.
2. Collargol in Therapeutics. FIESSINGER.
3. Rachitis and Dispensaries. VARIOT.

1.—Leredde found that the effect produced by mercury depends upon the amount of mercury introduced, not upon the use of any special salt of mercury. When employing mercurial ointment the dose is undetermined, since all used is not necessarily absorbed. Subcutaneous injections alone permit high doses, exact intense mercurial treatment. Leredde injects ¼ to ½ grain daily, as much as 1½ grains a week. He has used the biniodide, benzoate or the phenyldisulphonate (hermophenyl). His technique is fully described. The mouth should be kept scrupulously clean, to prevent stomatitis. If no immediate improvement follows the injections, the dose is probably too low and should be increased. [M. O.]

2.—Fiessinger reviews the remarkable results achieved by the use of collargol in all the infectious diseases, either in ointment or intravenous injection. It reduces temperature and causes immediate improvement. The cause of these results is as yet unexplained. [M. O.]

3.—Variot calls attention to the prevalence of rachitis and inanition among the infants of the dispensary class. He finds 22% with rachitic deformity; 12% with infantile atrophy. Both diseases are the probable results of hygienic errors. [M. O.]

Original Articles.

SOME REMARKS ON THE TREATMENT OF CROUPOUS PNEUMONIA.

By C. S. BRADFUTE, M. D.,
of Baltimore Md.

In an ordinary uncomplicated case of pneumonia the practitioner needs to keep in mind several facts in connection with its appearance and course that are of cardinal importance, and which have a direct relation to the efficacy of any therapeutic plan he may see fit to inaugurate:

I. Pneumonia is a self-limited disease and tends to recovery without medication. That is, the pathogenic germ upon which it is dependent has a definite cycle of life and continues to multiply and ravage the pulmonary structure until it reaches the end of its animate purpose, or is destroyed by certain toxic substances produced by its own vital activity, or its destructive influence upon the nidus in which it grows. Disregard of this interesting feature of bacterial life is responsible for many enthusiastic recommendations of special lines of treatment, and likewise of much disappointment over failures in the action of presumably effective methods of therapeusis; for there is no remedial agent known at present that will destroy the vitality of the pneumococcus in its host.

II. It has been observed, in common with other infectious diseases, that the virulence of the pneumococcus appears to vary at different times and under different circumstances; hence it is often extremely difficult to judge intelligently of the gravity of the invasion, or of the effectiveness of the treatment. The greatest caution is, therefore, necessary in estimating the severity of the attack and the efficacy or inutility of the therapeutic measures employed.

III. Pneumonia is rare in normal individuals. After a careful study of the literature accessible and the information I have gleaned from my personal observation, I cannot postulate any other conclusion. In the standard works I have consulted there is a monotonous uniformity in referring to its occurrence in robust and healthy individuals, without definite evidence as to the accuracy of the statement. Osler remarks: "Robust, healthy men are, however, often attacked." I confess to considerable diffidence in disagreeing with so eminent an authority. During the past 15 years I have made brief notes of 6,372 male persons disabled by sickness of various kinds, and out of this number there were only 22 cases of pneumonia occurring in individuals in whom a clinical examination failed to detect some concomitant morbid condition, some morbific influence, hereditary or otherwise. I may go further and say that of the 22 cases excepted I obtained a complete post mortem examination in only one, and, while in that instance there was no lesion discovered not due to the specific poison, the freedom from other morbid changes in the remaining 21 was dependent for demonstration upon clinical examination alone. It is also pertinent to say that, in the case examined post mortem, no personal history was obtained, owing to the patient's condition when first seen and his inability to speak the English language.

Some years ago I had the opportunity of witnessing an instructive instance of immunity—if such it may be called—to pneumonia under exceptionally exposed circumstances in a body of collectively healthy men who resided in a town in which the disease was at the time endemic. These men, several hundred in number, habitually worked in heated shops and were, therefore, unaccustomed to outdoor work. They were taken to a nearby point on a mountain range for the purpose of clearing the tracks of a trunk-line railway that had become blocked with drifted snow. They were obliged to work there for several days in weather that was intensely cold, and 60% were subsequently disabled in consequence of the exposure. Only two cases of acute pneumonia developed, and these occurred in men predisposed to bronchial inflammation and gastric catarrh. The majority of the disablements were due to coryza, pharyngitis, bronchitis, neuralgia, acute dyspepsia, enteritis, hepatic and renal congestion, muscular rheumatism, etc.

I am, of course, conscious of the insufficiency of such evidence in support of the opinion I have expressed—an opinion in which I am not alone, by the way, and I do not overlook the significance of the evidence in rebuttal obtainable in healthy individuals now living, who have had the disease and recovered; though, for that matter, they may have not only recovered from the pneumonia, but from the accompanying morbid burden also; but I admit a weakness in favor of personal experience, and, in the absence of equally impressive testimony to the contrary, I feel that I am justified in the statement I have made. The instance of the men engaged in shoveling snow is certainly strong evidence against the influence of cold as a factor in the development of pneumonia.

Without further discussion of this phase of the subject, I do not hesitate to reiterate my belief that the pneumococcus, which is found so frequently in the human mouth as to be almost considered a normal parasite, seldom or never attacks an organism in standard physical condition. There must be some pre-existing disease, functional or organic, some dyscrasia, hereditary taint or some injurious habit of mind or body, or a lowered physical type, to invite the germ before it will "be fruitful and multiply." It follows, therefore, that, whenever pneumonia occurs, a careful examination, apart from the disease itself, is called for in order to detect the accompanying pathological condition or impulse that serves to promote the growth of the pneumococcus.

IV. Inflammation of the pulmonary structure, answering to the clinical condition of pneumonia, is not always produced by the pneumococcus alone. Cases have been reported in which only the bacillus of influenza was found. Secondary infection with the streptococcus, the staphylococcus and other pathogenic micro-organisms may also occur, in which event the duration of the disease is prolonged, its course modified and empyema, with secondary inflammatory deposits in other parts of the body, is liable to develop. It has been noted, however, that 50% of the cases of empyema are due solely to the pneumococcus, an observation which impresses me as the result of faulty bacteriological technique.

V. Pneumonia is not a systemic disease, distinguished by a prominent localized manifestation, but a localized infection, characterized by secondary systemic disturbances, the general systemic involvement being due, primarily, to exaggerated reflex influences and, secondarily, to toxemia. The latter, in turn, by its destructive action on cellular life and its general interference with the physiochemical changes, produces a concomitant physiological toxemia, which serves to reinforce with fatal rapidity the devitalizing assaults from the disease process going on in the lung. Hence, *a priori*, in the absence of a specific agent, the object to be attained therapeutically is to assist and sustain nature in her efforts to limit the inflammatory process, and to withstand and rectify its destructive secondary effects.

VI. While the morbid condition to be met is simple and free from obscurity, the indications for therapeutic measures are complex. They are, succinctly, the shock produced by the inflammatory process, the disturbance of the circulatory functions, the toxemic irritation, the derangement of the physiochemical changes, the depression of reflex action and the carbon dioxide poisoning—due to interference with the oxygenation of the blood in the congested and inflamed pulmonary tissue. This division of the morbid complexus is, of course, less actually distinctive than arbitrary. The segregation into definite entities is for symptomatic illustration only, as the various pathological disturbances are more or less interdependent, and mutually contributory to the entire morbid exhibit.

VII. In the present state of our knowledge the therapy of pneumonia is purely symptomatic, but not in the old sense. This method of therapeusis formerly meant the treatment of an ill-understood morbid condition by the analogical employment of remedies against symptoms as they arose. It now means the intelligent management of a well-known pathogenic state, in which the symptoms serve only as a guide to the administration of remedial agents —more distinctively, the absence of a specific treatment.

There is an abortive treatment advocated in some quarters, but it is yet in the theoretical stage and need not be considered. Of it a prominent writer recently remarked: "I have seen veratrum viride abort an attack that promised to be one of pneumonia, although no proof can be brought forward to confirm this statement." Naturally not, for "an attack that promised to be one of pneumonia" must necessarily have been obscure. I am at a loss to imagine what it could have been, unless it had a diaphragmatic pleurisy or a fulminant intercostal neuralgia as a basis for expansion.

The serum treatment is still in the experimental stage. So far the results obtained by its use are not satisfactory.

VIII. When a case runs a regular course, not complicated by the appearance of emergent conditions, nor seriously modified by accompanying disease states, demanding special imperative medication, no drug or therapeutic measure should be employed that would interfere with the law of Wysakovitsch, that is, weaken the vital resistance of the epithelial cells to bacterial invasion, which might occur, for instance, if a drastic purgative were given at the onset, or an agent administered like opium, which lessens secretion and demoralizes digestion; nor should any remedy, such as phenacetine, acetanilid, antipyrine, phenol, salicylate, etc., be given that would interfere with the law of Metschnikoff, that is, lessen the power of the leukocytes to destroy the invading pathogenic micro-organisms. In fact, no treatment should be employed, excepting, of course, a possible specific one, that would in any way hamper the belligerent action of nature, and no drug should be administered for the sole purpose of combating a mere symptom, as is done by the disciples of the visionary principles of Hahnemann. The use of the various coal-tar products, for instance, for the reduction of temperature, is a most unscientific procedure. To reduce a pneumonia temperature with an agent that accomplishes the purpose by destroying the life-giving functions of the blood is an instance of misapplied therapeutics for which there can be no excuse, and to point out that patients have recovered under their use means nothing more convincing than to cite individuals who have survived to a ripe age the destructive effects of a life-long use of alcohol and tobacco.

In this connection I cannot refrain from entering an earnest protest against the use of digitalis. In the words of the late Dr. J. M. DaCosta, of Philadelphia, for so many years the leader of medical thought in this country, "Digitalis is not the remedy." This drug contracts the peripheral vessels and increases the force and pumping capacity of the heart, an action which lessens the circulatory area without a compensatory rapidity of movement. Obviously the effect is purely mechanical and, therefore, to surcharge a lung already congested and loaded with an inflammatory exudate is a peculiar therapeutical performance that passes understanding, to say nothing of the "squeezing" process to which the secretory apparatus of the kidney is subjected by this powerful contraction and overaction of the circulatory system. The cardiac condition, which tempts the practitioner to administer digitalis, is not due to a weak heart *per se*. The so-called "heart failure" is the result of profound toxemia, which is not local, but systemic. To stimulate the heart itself and tetanize the vasomotor system under such circumstances can only make the condition worse. The indication is to eliminate the toxic substances as quickly as possible, when the heart will at once resume it normal functions. This can be promptly and efficiently accomplished by the subcutaneous introduction of the normal salt solution. This dilutes the toxins, promotes their elimination and gives cellular function a chance to react. I may say, parenthetically, that in pneumonia hypodermoclysis should always be practised under the sphygmograph. Any marked co-existent tension or increase in the bloodpressure calls for venesection until the equilibrium is restored.

Having in mind the principles outlined above, the medical attendant is in a position to inaugurate a plan of treatment. What is the first thing to be done? He must act promptly and not await the development of symptoms, for, as already stated, the disease is self-limited and will run its course. Since we know precisely what is going to happen, there is no need to delay, and the more expeditiously we get the organism in hand, as it were, the greater are the chances of success. This is especially necessary in individuals weakened by disease or other deteriorating influences.

There is a class of cases, however, occasionally met with, more frequently in some localities than in others, in which medication preliminary to the major treatment is required. I refer to those instances in which the onset appears with explosive violence, due either to an invasion of the specific germs in unusual amount, or to some unusual systemic susceptibility. In these cases the patient is restless, the subjective sensation of discomfort is extreme and pain may be intense, the face is flushed, countenance anxious and the heart's action wild and bounding, owing to tumultuous reflex activity. Here it is necessary to control the abnormal circulatory movement as quickly as possible, else the rapidly accumulating pulmonary congestion and the general demoralization of the vasomotor nervous system will subsequently prove fatal. These are the cases in which the older practitioners employed venesection, and the procedure is still in good repute, though it is a dangerous therapeutic measure. We have a better means of combating this condition in the physiological action of aconite. This drug is stable, always of definite strength, acts quickly, and its effect disappears in about 3 hours. Physiologically, it obtunds the sensibility of the sensory end-plates, interferes with the conducting power of the nerve trunk and inhibits the reflex activity of the spinal centers and the accelerator functions of the cardiac ganglia. In other words, it neutralizes the morbid stimulant that is inciting to riotous action the various nerve centers involved. By relieving the general nerve spasm it permits the dilation of the peripheral vessels, enabling the blood to flow quickly and easily into the venous system, thus equalizing the bloodpressure and restoring the circulatory equilibrium. Great care, however, is necessary in the use of this agent. It is a powerful drug, and its usefulness is directly dependent upon its cautious and intelligent administration. If given in too great quantity it will do irremediable damage, and if not administered in sufficient amount it will fail to accomplish the desired purpose. As to the proper amount to be given, it is obviously out of place to be dogmatic. The dosage—one to two drops, usually—depends upon the indications and the administrator's familiarity with the drug. But I may state positively that it should not be given to the extent of reducing the cardiac beats to the normal rate. In the face of the morbid storm going on in the pulmonary area the rate of cardiac movement that obtains in a healthy individual becomes subnormal. Due allowance must be made for nature's effort to combat the morbid insult. It is her unrestrained anger, figuratively speaking, that requires attention; not her righteous indignation. When the pulse falls to 90, with a less resistant impact, the drug should be discontinued; if it drops to the normal rate, a hypodermic injection of 1-30 grain of strychnine sulphate should be administered and repeated at proper intervals until there is a response—indicating that the action of the depressant is under control. The peculiar influence exercised by aconite over the functions of the sensory nerve-endings must seriously interfere with the normal chemical changes in the tissues; hence, it is doubly important that its action be checked and eliminated at the crucial moment. To accomplish this, no hesitancy should obtain in the free administration of strychnine—1-20 grain doses, if necessary. At the beginning of the treatment the bowels should be opened, irrespective of any previous movement other than diarrhea, but not forcibly; 1-6 grain hydrargyri chloridi mitis rubbed up with 3 grains sodium bicarbonate, given every two hours until there is a movement is the best agent for this purpose. If the calomel fails to induce an intestinal discharge after 2 grains have been administered, a glycerine suppository or a Seidlitz powder will prove efficient.

When the systemic condition described above occurs, it seldom persists longer than a few hours. At its close the main treatment should be at once instituted.

The principal drugs to be employed that meet the indications are cocaine, strychnine, ammonium and alcohol, medicaments that are particularly advantageous, owing to their ease of administration, their prompt and efficient action, their rapid elimination, and their amenability to control—a most important property and a necessary requisite in the action of any drug that is used in a disease the phases of development of which change so rapidly.

Cocaine is a general nerve stimulant of peculiar efficacy. It reaches the circulation with facility, and its physiological influence is quickly exercised. A medicinal dose is usually eliminated within 4 hours, by way of the kidneys and without irritating those organs. It quickens the cardiac movement by suspending the inhibitory influence of the vagus; but its chief therapeutic value obtains in its stimulant action upon the cerebrum, its increase of reflex sensitiveness, its influence in lessening the acuteness of sensory function, and its action upon the respiration. These effects tone up the circulatory apparatus, incite to renewed activity the centers of conscious cerebration, and induce a sense of well-being, which is both psychical and physical, and which tends to remove the feeling of malaise and anxiety that constitutes so prominent a feature of pneumonia prior to the stage of toxemic stupor. Care should be exercised, however, that not too much of the drug is given. One-sixth of a grain is a sufficient dose. A larger amount is apt to be followed by reactionary depression and irregular heart action. The possibility of an idiosyncrasy should also be kept in mind, for, while as much as 18 grains of the hydrochlorate have been taken without serious results, 1-8 grain has been known to produce alarming symptoms. Considerable skill is required in the administration of the drug, and I would not advise its employment in the absence of a thorough familiarity with its systemic action.

In strychnine we have a powerful agent with which to promote the general activity of the spinal nerve centers and sustain the physiological function of the end-organs. Under its influence the interference with the conduction of reflex impulses is removed, the elimination of the waste products of tissue change is facilitated, and the toxemic destruction of cellular life is prevented. By its action on the sympathetic nervous system it stimulates the secretory functions of the various organs of the body and counteracts the deleterious effects of the high temperature. As a heart stimulant it preserves and continues the effect of the more fleeting cocaine, and by its steadiness of action maintains the regularity and forcefulness of the cardiac movements without inciting the organ to overwork, a result which it accomplishes by a combined impression upon the pneumogastric, vasomotor centers and the cardiac ganglia. The contraction of the arterioles maintains a conservative bloodpressure, restrains inflammatory invasion of the pulmonary tissue and prevents irregularity in the circulatory movement. Care must be exercised in its administration if the kidneys are diseased, but otherwise it may be pushed to its full physiological limit without danger. In the event of a co-existent nephritis it must not be given in doses larger than 1-60 of a grain. The treatment of a nephritic pneumonia, however, requires such radically different remedial measures that it does not come within the scope of this paper.

The ammonium should be given in the form of the carbonate—preferably in the aromatic spirits. Its action is threefold, it stimulates the heart, maintains the fluidity of the blood and alkalinizes the fluids of the body, thus strengthening the action of the cocaine and strychnine and promoting the activity of the nutritive processes. The latter is, without doubt, its chief therapeutic rôle, and the beneficent results that follow the alkalinization of the system are so marked that its prompt administration is thereby rendered doubly important. While the *modus operandi* of its action in this respect is not clearly understood, it is, nevertheless, a fact that the efficiency of the accompanying therapeutic measures is enhanced and the vital efforts of nature are promoted under its influence, as I have a number of times tested by withdrawing it and noting the cessation of improvement in the symptomatic manifestations. Probably its power of maintaining the fibrin of the blood in solution is the secret of its therapeutic beneficence, as it is well known that any increase above the normal in the consistency of the blood is a most deleterious condition. Its action upon the heart is so fleeting that it can be exhibited in the presence of aconite without nullifying the effects of that agent, and it is usually the first drug I prescribe.

The control of the temperature in pneumonia is imperative, for, if it runs high and is not quickly reduced, disastrous results surely follow. The best means of accomplishing reduction obtains in the use of cold compresses after the method of Dr. Baruch, of New York. This method is applied as follows: A rubber sheet to protect the bedding and reaching from the shoulder to the buttock is spread beneath the patient, and over this a blanket. A piece of heavy flannel, folded to several thicknesses, long enough to encircle the trunk, with about 6 inches to lap over and of sufficient width to reach from the axilla to the waist line, is wrung out in cold water, applied snugly to the circumference of the thorax and fastened with safety pins. This is then covered with a piece of dry flannel or part of a blanket and allowed to remain *in situ* from 15 to 30 minutes, according to the frequency of application. When the compress is removed the front and sides of the chest should be rubbed briskly with a soft towel for a few seconds and the thorax enveloped in dry flannel. By careful manipulation the whole procedure may be carried out with little disturbance to the patient. If the temperature is very high and intractable—above 104° F.—these compresses should be wrung out in ice water and applied every half hour until there is a fall. Under no circumstances should they be employed when the rectal temperature is 103° F., or less, for chilling of the body is to be avoided, and it must always be kept in mind that the temperature in pneumonia sometimes falls with alarming rapidity and most unexpectedly.

This method of applying hydrotherapy in pulmonary inflammation is superior to general surface sponging, packing or the bath, in that the reflex effect is localized and the excessive reaction from a general reflex impression is avoided. This is a distinct advantage, because the profound systemic depression that sometimes follows universal heat radiation after stimulation of the body surface by the impact of cold induces rapid extension of the inflammatory process in the lung, with a corresponding reactive elevation of temperature of a fatal character. The fall in temperature that so often follows this method of applying cold to the thorax indicates prompt contraction of the pulmonary arterioles through the impression made upon the vasomotor nerves, a result that limits the area of inflammation and checks the further operation of the prime cause of the abnormal heat production. It is thus seen how important it is to control active congestion in fulminant cases, and passive congestion in adynamic cases. The integrity of the muscular fiber of the arteriole must be preserved, else paralysis and mechanical obstruction will signalize the uselessness of therapeutic measures.

In the matter of nourishment I cannot insist too strongly upon its constant and frequent administration. Fortunately, gastro-intestinal disturbances of serious moment are comparatively rare in pneumonia, and the physician seldom has his general plan of therapeusis disarranged by stomachal or intestinal crises due to the disease itself. Even in cases accompanied with acute delirium and semiconsciousness the gastric functions are maintained with astonishing persistence. I remember upon one occasion to have treated a case of double pneumonia, characterized by delirium so violent as to necessitate forcible retention in bed and a temperature of

107° F. that refused to yield to ice-packing, in which I found the stomach post mortem practically empty, although I had given the patient through a naso-stomachal tube his internal medication and 6 ounces of milk every 2 hours for 2½ days previous to death. This case was an instructive one to me from the standpoint of feeding, and leads me to say that the ease with which nourishment can be administered through the nose by means of an ordinary rubber catheter and a Davidson syringe renders it inexcusable to allow a patient to die of inanition or lack of medication on account of delirious refusal to take food or medicine, or unconsciousness.

From the first onset to the establishment of convalescence, that is several days after the temperature has become normal, only liquid food is permissible. Milk is the best form in which to give it; 6 ounces every two hours should be the standard rule, not to be deviated from except for good reasons. Some patients, particularly women, have imaginary objections to milk which they always assert are quite insurmountable, but the physician should be firm and unyielding in his requirement that it be taken. Usually pneumonia patients are too sick to exploit pet ideas about milk. The amount may be increased according to circumstances, but seldom is it necessary or safe to diminish it. The source of the milk should be known, its freedom from pathogenic organisms reasonably assured, and its quality frequently tested by means of the lactometer. In the absence of this instrument milk should not be given that does not show a "rise" of cream of at least 2½ inches on standing in a quart bottle such as is ordinarily used for retail delivery. It is important that the alimentary tract be kept free from decomposing food. Five grains of naphthalin twice daily from time to time will prevent intestinal fermentation, and the bowels should be kept open with calomel or sodium phosphate.

Alcohol, of course, is employed as a food and not as a stimulant. By virtue of its quick absorption, its diffusibility and its rapid physiochemical conversion into force and energy, thereby preventing proteid waste, it stands at the front among nutritive agents. Every pneumonia patient should receive an ample supply. A half-ounce of whiskey every 2 hours is usually sufficient, in conjunction with the other drugs, but many patients will utilize a larger quantity. The guide is the appearance of the odor in the breath; when that occurs the dosage should be diminished. On account of the danger of establishing, or re-establishing, an alcohol habit, the drug should be withdrawn at the earliest possible moment after the critical period. If possible, this should be done before the patient has so far progressed toward convalescence as to become cognizant of the alcoholic sensation of well-being.

This treatment of pneumonia that I have outlined I have found more effective than any other that I have tried, and in its employment I assume charge of a case with a confidence that I feel is fully justified. The conditions to be met being clearly understood, the practitioner is in a position to vary the treatment as his judgment may dictate, but the underlying principles I have pointed out should be kept constantly in mind.

CASE 1.—Cashier. Aged 42. Unmarried. Addicted to alcoholic indulgence the greater part of his life, with occasional debauches. Attack of malarial fever 8 years ago. Chronic bronchitis of 10 years' standing and marked arteriosclerosis. History otherwise negative. Urine free from albumin and casts. Taken sick 6 P. M., with severe chill, followed by fever and profound sense of illness; no localized pain, but considerable discomfort in back and limbs. When seen, at 8 P. M., temperature, 103°; pulse, 100, rather feeble: respiration, 24; patient restless and uneasy, but no pain: small inflammatory patch at base of left lung; bronchial tubes full of mucus. As stomach was empty, gave 6 ounces of milk and ℥ ss of whisky, followed by 1/30 gr. strychnine sulphate hypodermically. One hour later patient was placed in ambulance and driven 4 miles to hospital. Ordered 1/6 gr. cocaine hydrochlorate and 1/60 gr. strychnine sulphate every 4 hours, given alternately every 2 hours: also ʒ i of aromatic spirits of ammonia, ℥ ss of whiskey, and ℥ vi of milk every 2 hours with directions for cold sponging to reduce temperature. Next morning temperature was 105°, half of the left lung was involved, and patient was delirious. Treatment was unchanged, except to increase the strychnine sulphate to 1/30 gr. and the whiskey to ℥ i. Third day, temperature, 105½°; pulse, 130; respiration, 36; delirious and cyanosed; lung condition apparently stationary. Ordered ice-compresses to thorax every half-hour until temperature should fall. On the morning of the fourth day temperature was 102°: pulse, 90; respiration, 24; patient's mind clear. Recovery uneventful. Is still alive and still enjoys alcoholic beverages.

CASE 2.—Business manager. Married. Aged 50. Chronic cystitis of some years standing, for which he had been treated by a number of physicians. Urethral examination revealed an undetected stricture of large caliber. Patient admitted gonorrhea 22 years before. Was nervous, melancholic and inclined to dwell upon his physical ailments. Has had chronic dyspepsia for years and suffers from time to time from insomnia. Was taken suddenly ill two weeks after he came under observation and when seen was suffering intensely from pain at the lower border of the left ribs. Onset was marked by chilly sensations, which quickly disappeared, to be followed by fever and localized pain. Examination of the lungs revealed no sign of inflammation whatever. The existence of pneumonia was assumed, and the patient was at once placed on the treatment employed in the preceding case. The next day nearly one-half of the left lung was found consolidated, but the inflammation did not extend. With the exception of some grave symptoms caused by the septic condition of the patient's bladder, he made a good recovery. Subsequently the stricture was dilated, the cystitis cured and the patient is now well and healthy.

These two cases belong to a class that usually die. I at first had no hope for either one, and the recovery of the alcoholic patient was a profound surprise. That they did not die I attribute entirely to the treatment, principally the strychnine sulphate and the cold compresses. In neither case was there any gastro-intestinal disturbance.

THE DIAGNOSIS AND TREATMENT OF INCIPIENT PULMONARY TUBERCULOSIS.*

By H. EDWIN LEWIS, M. D.,
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Of all the facts determined by the recent widespread study and discussion of tuberculosis, none is more certain than that the chief hope of the consumptive rests on the early recognition of his disease. The importance of early diagnosis and treatment cannot be questioned, and a large share of the lives that have been sacrificed each year to tuberculosis must be laid to the lamentable fact that proper treatment has too seldom been inaugurated in the first stages. Undoubtedly the principal cause for this has been carelessness on the part of the patient in presenting himself for treatment. But there certainly have been enough other patients in whom the true condition was not recognized by their attending physician until too late, to warrant the statement that the medical profession has not been entirely free from responsibility in the high death-rate from this disease. Every painstaking physician who has given any special attention to pulmonary tuberculosis is aware of many an advanced case that has come into his hands from other medical men, but whose true condition none the less has apparently never been recognized. Too many patients have been treated for bronchitis and catarrh, in whom a careful physical examination and sputum analysis would have demonstrated a much more serious state of affairs. Such cases (and the comparative frequency of their occurrence is my excuse for this protest) are not only a disgrace to our profession, but too often an evidence of neglect. A surgeon who mistakes a dislocation for a fracture is amenable to the law and is often called upon to answer for his lack of skill or care. Why not, then, the physician who neither recognizes the condition of a tuberculous patient nor avails himself of accepted methods of diagnosis until too late? The incompetence of the surgeon seldom means more than permanent inconvenience, but that of the physician is not only disastrous to his patient, but dangerous to countless others. Failure to recognize and warn a patient of the danger from a careless disposal of his sputum is, in most instances, a greater wrong to the public than to the individual.

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With the facilities of modern methods of diagnosis, especially the aid given us by the microscope, there is, therefore, less excuse than ever before for failure to recognize tuberculosis, and one writer has gone so far as to suggest that the time will come when a tuberculous patient, as well as the State, will have an action at law against a physician who fails to diagnosticate the disease within a given time. While we can hardly expect this, a physician who neglects to use due care and vigilance in determining tuberculosis should be liable for his negligence.

The diagnosis of incipient pulmonary tuberculosis can never be absolutely made from one symptom alone. A number of facts, only derived oftentimes from observations extending over a period of several days, must be taken into consideration in forming an accurate conclusion. Of these facts the principal ones are those obtained from careful inquiry in regard to the temperature, pulse, cough, weight, digestion, physical condition of the chest and the repeated examinations of the sputum.

Interrogation of the temperature is one of the most valuable aids to diagnosis. Not that its absence precludes tuberculosis, but that an unaccountable rise of one to three degrees some time during each twenty-four hours is pretty certain to indicate the presence of a tuberculous process.

I am convinced from cases that I have been able to study in the early stages that the earliest and most positive symptom of tuberculous infection is variation in the temperature range. The presence of one degree above normal during any time within twenty-four hours without evident cause is most significant and should always excite suspicion of incipient phthisis, as well as prompt, careful search for other symptoms.

It is useless to form an opinion from the perfunctory night and morning record. The elevation of temperature may vary in the time of its appearance in different individuals, or even in the same individual, showing itself at different hours of the day, and in some cases only on the second and third day; but if a tuberculous infection is present, a careful two- or four-hour record of the temperature from six A. M. to ten P. M., covering one week's time, is quite certain to demonstrate a slight rise some time during the period, with an occasional fall to subnormal. I am in the habit of loaning an accurate thermometer to intelligent patients with directions to keep a careful two- or four-hour record of the temperature while awake. The results are often very significant, as I have many times determined the presence of fever by this method when a simple examination at my office would have been valueless.

In one hundred and six cases that I have been able to observe, or from which I was in a position to obtain accurate data during the early stages, ninety showed a rise of temperature during the twenty-four hours of each day; seven showed a rise on alternate days, and in nine a record of increased temperature was not obtained at all, though a drop to subnormal was frequently observed. Subnormal temperature some time during the twenty-four hours of each day was noticed in seventy-three of one hundred and five cases. The time of day at which the highest temperature was recorded was between two and six o'clock, P. M., in eighty-two cases. The lowest or subnormal temperature was between five and nine o'clock, A. M., in sixty-four cases.

The pulse may give another significant symptom of incipient tuberculosis. It is, as a rule, increased in frequency, but decreased in force and tension. A pulse-rate of eighty-eight, ninety-six or even one hundred and twenty, out of all proportion to the temperature, is not uncommon. In fifty-nine out of sixty-four cases a pulse-rate of eighty-eight or over was observed.

The most valuable symptom, next to rise of temperature and an increased pulse-rate, is cough. It may be slight, indeed so slight as to escape the patient's attention, but careful inquiry from other members of the family will almost invariably elicit the information that there is a little cough in the morning and occasionally during the night. The cough may be dry and just a little hacking, but it is quite constant early in the disease. The patient's testimony should not be taken as final in regard to cough, for I frequently have them come into my office and assert that they are not coughing at all when it has been sufficient to attract my attention. It is not necessary that the cough should be paroxysmal, indeed the characteristic cough in the incipient state is free from spasm, being simply an effort to relieve a slight though persistent bronchial irritation. Expectoration is rarely an accompaniment of cough until the lung or bronchial tissue begins to break down, or when considerable catarrh of the air passages is present. It may, therefore, show itself early or late, depending upon the condition of the respiratory organs and the extent of the process.

Gradual but progressive loss of weight is another important symptom taken in connection with the foregoing, and is usually proportionate to the digestive and assimilative disturbances which are so constant and important factors in the etiology and course of pulmonary phthisis.

Hemoptysis is a symptom which may prove of the utmost importance, but it has been by no means of common occurrence in the incipient stages of cases that I have been able to observe. Real hemorrhage from the lungs has occurred during the early stages of only twenty-three per cent. of one hundred and ninety-four cases that I have been able to collect reliable data from. It would seem that hemorrhage is rather more of an indication of the extent and location of the process in the later and ulcerative stages than during incipiency. Blood-streaked sputum is common in the early stages, however, and of considerable significance.

In regard to the physical signs I shall say little, for it must be confessed that they are neither constant nor well marked in the early stages of pulmonary tuberculosis. A careful examination of a patient on several successive days and in different postures, however, will usually give a careful diagnostician considerable information. A prolonged expiratory murmur on auscultation and slight percussion dulness at either or both apices just over or above the clavicles with some increase in vocal fremitus are the earliest and most important of the physical signs of incipient phthisis. Often crackling rales at either apex are very significant. They occur at the end of inspiration and many times can be with difficulty distinguished from the normal crepitant rale. Having the patient lie on his back will frequently accentuate them, and they can usually be caused to disappear by coughing. The rhythm of respiration is frequently changed, and the rate may be quickened to twenty or more per minute.

Of the further symptoms of pulmonary phthisis, notably the anemia, night-sweats, debility, shortness of breath, sinking spells and the alternate constipation and diarrhea of the average case, which all go to make the symptom complex, I shall say nothing. They are too well known to require attention.

I would like to refer, however, to two other minor symptoms that I have frequently observed in incipient stages of tuberculosis, but which are seldom mentioned. One is a more or less marked and extreme dilatation of the pupil. The ciliary and pupillary reflexes are nearly, if not quite, normal, but on the least excitement or fatigue the dilatation becomes unusually noticeable. The other is a tendency to hoarseness without apparent cause, ranging from slight huskiness to complete aphonia. Neither of these symptoms taken alone is of diagnostic importance, but considered with others they become more or less confirmatory.

Finally, careful and repeated examinations of the sputum should always be made as a routine aid to diagnosis. Since the detection of Koch's bacillus is of such positive value in the presence of certain pathological conditions, a search for it is justifiable on the slightest suspicion. Many times the bacilli are not found in the sputum on the first examination, but it should be remembered that clinical experience has demonstrated that negative examinations cannot be considered final as long as a single suspicious symptom remains. In rare cases the tubercle bacilli may be present, but from some chemical change or tinctorial peculiarity they may not stain by any of the known methods of staining. I have seen several patients who have never shown tubercle bacilli in their sputum even to the day of death. But that the disease was tubercular was demonstrated not only by its course and outcome, but by post mortem examination and inoculation experiments on lower animals. Therefore, while the microscopical examination of the sputum is highly important and a valuable aid to diagnosis, the clinical symptoms and physical signs of the disease should be given due weight in every instance. I feel certain, moreover, and my convictions have been justified by my own cases, that repeated microscopical examinations covering a period of one or two months will, with rare exceptions, almost invariably demonstrate tubercle bacilli if present and the patient is not improving.

In regard to the use of tuberculin as a diagnostic procedure, while I cannot question nor criticize those who recommend it so highly, I do feel that its use is fraught with more or less danger and inconvenience to the patient, to say the least. I cannot help but believe from my experience with it, both for diagnosis and treatment, that there are other safer methods for both purposes. A tuberculous condition obscure enough to require its use can safely be treated on general principles or let alone until the disease is more apparent.

In regard to the treatment of tuberculosis, not alone in the incipient but in any stage, it must be said that it is the stumbling block of most practitioners of medicine. The fault lies not in incompetence, but largely in a lack of confidence and interest in the subject, and in an erroneous idea that there is a routine treatment for tuberculosis. The men who accomplish the most in restoring tuberculous patients to health realize that there is no treatment for tuberculosis. They do, however, treat the tuberculous patient, and to the extent to which they study each case and adapt treatment to each individual patient, just to that extent do they obtain any measure of success.

The limitations of this paper prevent any extensive consideration of a subject which must obviously be open to so great modification and variation. What I may say, therefore, on the treatment of patients with tuberculosis will be of a general character and in no wise deal with details or special conditions.

The rôle, however, of failing metabolism in the etiology and progress of tuberculosis and the arresting influence of its re-establishment give us our most valuable suggestion for treatment. Restore the nutritional balance of the tuberculous patient (which means the establishment of digestive and assimilative equilibrium in not only the alimentary canal, but in the circulation and fixed cells of the body), and the tuberculous process need cause little apprehension. Our means for doing this are an abundance of good air, in other words, ample oxygenation, good, easily digested food, rest or intelligent exercise depending upon the individual case, and wise medical treatment.

In regard to fresh air, too much stress cannot be laid on out-door living. Every patient afflicted with phthisis should spend at least ten hours a day in the open air. Purity of the atmosphere is the one great requisite of any climate suitable for tuberculous patients, and, since an excessively humid atmosphere is never a pure one, we should choose a location with a view of obtaining a minimum of humidity. Temperature, if not liable to sudden and extreme changes, is not a factor, but sunshine is, because of its purifying effect on the air and its stimulating influence on all vital functions.

A country residence is more suitable for consumptive patients than one in the city, from purer conditions of the atmosphere. In the country it is a simple matter and entails little expense to have a covered porch or veranda built with two sides completely open. Here the tuberculous patient should live day in and day out, and even sleep when the weather will permit. If conditions are not favorable for sleeping outdoors, the consumptive should spend his nights in a high, spacious room occupied only by himself, and with one window always wide open. With plenty of clothes to keep him warm, he will sleep better, perspire less and never run the slightest danger of "catching cold."

The question of rest or exercise is one on which authorities differ. Some recommend absolute rest, while others do not hesitate to advise a variable amount of exercise both systematic and otherwise.

On general principles the temperature range should be the index for rest or exercise. If the fever is high or continuous, absolute rest, preferably in the open air, should be enjoined. The rationale of this must be apparent. In the presence of an acute febrile process physical exercise means an extra tax on the vitality of the body, an extravagance the consumptive can ill afford, and it almost invariably results in an aggravation of the symptoms and an extension of the disease. It is sound wisdom, therefore, to recommend a zealous economy of force as long as a single symptom of an acute process remains. But, when neither the fever nor other symptoms point to an acute progressive process and the vitality of the patient is not noticeably low, a certain amount of moderate exercise in the open air may prove beneficial. Especially valuable are systematic breathing exercises calculated to increase the lung capacity. Almost without exception the chest expansion of the average consumptive falls below three and one-half or four inches. If this can be increased to six or more inches, the benefits are usually marked and lasting.

Proper feeding is of next importance in the treatment of the tuberculous patient. The problem is not how much food can we get a patient to take, but how much can we get his body to digest and appropriate. A moderate amount of food properly digested and assimilated exerts a far more beneficial influence than the ingestion of quantities so large that the vital forces of a strong person would be overtaxed, to say nothing of one already weak and debilitated. Then again, the oxygenating powers of the average consumptive are markedly lessened, and to attempt to force a greater amount of food combustion than is physically or chemically possible cannot mean anything else but harm to the whole organism. In every instance the digestive apparatus and assimilative powers of each patient should be carefully interrogated. The degree and character of the indigestion, whether of the proteids, of the fats, of the carbohydrates, or of all should be determined. If the proteids are not well digested, it is ridiculous to put a patient on an excessive diet of beefsteak, raw eggs, etc., and expect him to gain in weight and strength. Or, if the fats are not digested, it is quite as ridiculous to give a patient excessive amounts of cream, cod-liver oil and the like. The resources of his digestive tract alone should regulate his diet. If he cannot digest proteids, he should be helped in this direction by the administration of those predigested foods which are largely composed of peptones. If he cannot digest fats, what he does take should either be thoroughly pre-emulsified and predigested by the use of pancreatic extract, or their internal use should be completely interdicted, and the necessary amount supplied by inunctions of cocoabutter, cocoanut oil or cod-liver oil.

Careful study of every case of tuberculosis shows the importance of promoting the digestion and absorption of food as the one great object of all hygienic, dietetic or therapeutic measures, and there is a world of truth in a recent statement by William Henry Porter that "tuberculosis can be fed into or out of the human species."

The variety of drugs recommended for pulmonary tuberculosis tells eloquently how disappointing medicines have been in the treatment of the disease. Of all the drugs that have been found of some value, strychnine easily stands at the head. The dosage should be larger than commonly administered, and to admit of this it can well be given in increasing doses. Following is an excellent prescription:

Strychnine sulphate	1½ gr.
Aquæ	1 oz.

S.: Begin with five drops in water, three times a day, and increase a drop each day until a dose of thirty-two drops three times a day is taken.

When the maximum dose is reached, which is equivalent to one-tenth grain, three times a day, the patient is advised to go back to the initial dose and increase again.

With very rare exceptions this manner of administering strychnine is followed by improvement in the cough, pulse-rate, appetite, digestion and, in fact, the whole condition. The patient sleeps better, and the exhaustive night-sweats are stopped or greatly reduced.

Arsenic is, next to strychnine, the most potent drug which we possess for improving the condition of the tuberculous patient. Its well-known tonic effect and stimulating influence on the function of nutrition make it a very valuable remedy in all forms of tuberculosis. Fowler's solution is an excellent form for administration, but a maximum dose is not needed, three to five minims, three times a day, giving just as good an effect as larger quantities. Recently I have been using sodium cacodylate with very gratifying results. This preparation of arsenic, the di-methyl arsenate of soda, is by all means the safest and most efficient of the arsenic salts. The dose is one-quarter to one grain, three times a day. A peculiar garlic-like odor is given to the breath, but otherwise the drug is free from disagreeable influence.

Sodium cinnamate and cinnamic acid have proven worthless in my hands.

In a certain number of cases the administration of iron in a readily assimilable form is followed by marked improvement, while in certain other cases it is more harmful than beneficial, so its administration must always be tentative.

In the majority of cases, when a patient's nutrition begins to improve, the cough will begin to lessen. But when in the beginning of treatment the cough is so severe as really to require some amelioration, guaiacol carbonate combined with codeine or heroin is very efficient:

Guaiacol carbonate	1 dr.
Heroin	2 gr.

M. et ft. capsula No. 24.
S.: A capsule every three or four hours.

Creosote as commonly administered has no place in the therapy of tuberculosis and is not nowadays seriously considered by leading therapeutists. It is extremely liable to derange the digestion and is, moreover, exceedingly disgusting to the sensitive taste and smell of the average patient. In small doses creosote may prevent fermentation and putrefactive changes in the digestive tract, but I have never seen its administration exert any lasting influence on the tuberculous process.

Atropine, agaricin and picrotoxin are each efficient in relieving night-sweats of phthisis, but the average patient is markedly improved by an alcohol bath and rub-down at bed time. Flannel soaked in alcohol and laid over the chest is a simple but effective means of relieving troublesome chest pains, as also is oil and turpentine, equal parts. Alcoholic stimulants are of little value internally, except in an emergency.

Inhalations are not as highly esteemed nowadays as they have been in the past. When there is much catarrh of the air-passages, soothing antiseptic vapors may be applied by means of a good nebulizer with more or less benefit. Numerous remedies are recommended, but an especially eligible combination is one of iodine, tincture of benzoin, oil of cinnamon, oil of eucalyptus and albolene.

In conclusion, let me emphasize this all-important fact that to-day the cure of incipient pulmonary tuberculosis is not the elusive phantom that it was ten years ago. We know that the intelligent coöperation of patient and physician offers considerably more than even chances in a conflict with early tuberculosis, and this is a message which the medical profession should preach at every opportunity.

But with all the hope that we can honestly give the consumptive early in his disease, it should be remembered that his complete and permanent recovery can only be purchased at the price of from one to five years' patient perseverance and discretion on his part, and a like period of vigilance on the part of his medical adviser. The single efforts of either alone may accomplish a measure of success, but they must be united to win back with any degree of certainty that *summum bonum* of all life—good health.

A PLEA FOR THE USE OF LESS DRUGS IN THE TREATMENT OF TYPHOID FEVER.

By J. K. P. BOWEN, M. D.,
of Howe, Texas.

I will preface my paper by a few explanatory notes. I will deviate from the usual method of making reference in medical essays. I will give the author and quotation in connection with the subject under consideration; will not attempt to discuss the etiology of typhoid fever or the origin of the specific bacillus, whether it is the cause or effect, or how much blood dyscrasia, nerve exhaustion or electric or thermic conditions of the atmosphere are factors in the development of the disease. I will make some reference to the use of drugs in general. The modern researches of the masters of the medical profession have thrown some light on the problems of human life. The correlation of scientific truths, human experience and logical reasoning may result in establishing a few fundamental principles that will be valuable guides for the general practitioner.

A knowledge of the etiology and pathology of typhoid fever, as of all diseases, is necessary on which to base a successful treatment. The general rules laid down in text-books are usually safe guides, but, to follow them strictly, the practitioner is liable to become a routinist, and to disregard them entirely may result in the patient being deprived of the advantages of the experience of the most successful physicians. The natural history of typhoid fever, as of all other diseases, should be studied, the patient should be studied, and the natural resistance estimated. The physiological and therapeutic action of all treatment, whether medicinal or non-medicinal, should be considered.

Psychotherapy, or every-day practical suggestion, is an important factor in the treatment of most all diseases; for, aside from the psychical influence, but little of the drugs taken result in good. How frequent the physician is tempted to prescribe a medicinal treatment for his drug-believing patient for its psychical effect. Care should be exercised as to how, when and to whom you prescribe a placebo. It is only in rare instances that they are really needed, as a patient with reasonable intelligence does not require it and would probably detect the fraud and brand you as a fool or knave; and those with less intelligence should not be imposed upon with expensive preparations. Such a practice will result in a greater demoralization of our profession and is more disastrous to the public in general; it causes unreasonable faith in drugs and less faith in more rational methods of treatment.

The terms mild, ordinary, aborted, ambulatory and malignant forms or types of typhoid fever are only arbitrary terms, as the severity of a case depends on the degree of toxemia and vital resistance and the various complications. The treatment should vary accordingly and be directed toward the support of the patient and not, under our present imperfect knowledge of specific medication, be directed against the disease. Serum-therapy of typhoid fever has not been established, but on that line of scientific inquiry rest the greatest hopes of future therapeutics.

Strictly surgical treatment in this disease has a very limited field.

Antityphoid vaccination has been reported favorably by such men as Frankel, Pfeiffer, Kolle, Lambert, Wright and others and has proven worthy of further investigation.

As typhoid patients are mostly all immune to future attacks, it seems probable that an effective vaccine virus will be discovered. The experiments in the South African war proved it to be equal to vaccination against smallpox. Of over 1,700 soldiers inoculated with antityphoid virus, only 2% were attacked, whereas in the uninoculated 14% contracted the disease. The mortality of the vaccinated subjects was less than ½%, of others 3%. Typhoid patients have a second attack of the fever in about 2% of the cases, the third or more attack very rarely. Early attention to cleansing the nasal cavities, especially of those patients afflicted with nasal catarrh, is very necessary, as frequently bloodclots, mucus and dried pus endanger the patient to further infection, besides the danger of infecting the nurse and others. Especially is it important if the primary colony of bacilli is located there. The early and frequent epistaxis and bronchial catarrh may be the result of infection from the primary lesion in the air-passages, then general infection may result and the bacilli and toxins may be eliminated by bowels, kidneys and skin, and as the glands of the bowels are suited to their growth and multiplication, there a battle royal ensues between the bacilli and leukocytes which frequently results in the death of the latter and inflammation, necrosis and ulceration of the field of battle. Then remember the old proverb ("Pour oil on the troubled waters"), castor oil, and watch its soothing effect.

Castor oil is the best laxative in the beginning of typhoid fever if much solid or semisolid accumulation is suspected, as it acts mechanically, is supposed to have some healing effect on the lesions, and its continuance throughout the case is advisable in most instances. Salines are preferred in case the intestines are distended with much fluid, as they will gravitate and act much better than oil, which will float on fluids and fail to have effect.

The use of quinine has been decided to be injurious in most all cases of typhoid fever. It has little or no effect on the Eberth bacillus, and only about one case in eight hundred of typhoid fever gives evidence of malaria by microscopical test.

In the investigations of Ewing and Dock no proof was elicited that typhoid fever and malaria co-exist, but possibly a small percentage of cases may in the beginning or during convalescence become infected with malaria if exposed.

Calomel, podophyllin,, leptandrin and some other purgatives are sometimes indicated in intestinal diseases; they act on the small intestines and usually cause a free flow of bile that may destroy some micro-orgnisms, excite peristalsis and aid intestinal digestion; but Chiari made the test which proves that bile does not destroy the typhoid bacillus and that the microbe is frequently found in the gall-bladder.

The experiments of Roberts, Hare, Logan and others resulted in the proof that ergot cannot cause contraction of diseased bloodvessels, and that it does harm when given for hemorrhage of that nature, as it increases the force of the heart when quiet is needed. Gelatine is recommended for hemorrhagic cases; it is said to have been used as early as 200 years B. C.

The presence in the system of microbes and their toxins stimulates the eliminative organs to their utmost to rid the system of them, and, if effectual, the excretories remain healthy, but if overpowered, congestion takes place with loss of vasomotor tone, the capillaries fill with microbes and phagocytes. The result is inflammation, exudation of serum, lymph-cell microbes and dead bloodcells, finally necrosis and ulceration in some cases.

In the intestines the capillary congestion is aggravated by stimulants, by mechanical and chemical irritation, by increased peristalsis, which invites more blood to the parts.

The heart is stimulated to meet the demand of this pathological condition. The use of artificial stimulants, such as strychnine, caffeine, digitalis, etc., would cause an earlier exhaustion of its muscular tissue, as a condition exists in which but little nutriment can be appropriated. Every artificial stimulus acts as a shock and is followed by a corresponding degree of exhaustion. The natural duration of typhoid fever or the life of the bacillus is supposed to be about 14 days, and, if no complication exists or re-infection takes place, convalescence will be established. That is the average length of life of the bacillus in the human body. At times it may be lurking somewhere in the system, possibly in the thoracic duct, not exposed to the vital resistance or natural antitoxins, if such exist, then finally re-enter the blood and cause a relapse and may re-occur every 14 days for several periods more or less distinct.

No doubt, some of the protracted cases that have been reported were complicated with tuberculosis with which it co-exists in 3% or 4% of cases.

The rash which occurs in about two-thirds of the cases in my experience is the most valuable sign and, with the fever, usually confirms the diagnosis. The tongue presents no distinctive characteristics of typhoid fever. A red tongue is a contra-indication for the use of calomel, also for the use of acids. Food is one of the most important factors in the management of this disease.

Usually no food should be given during the first week or more, unless there is some appetite or relish for it and no intestinal contra-indications. When given, it should be selected in quantity, quality and variety to suit the nature of the case, should be palatable and agreeable and inviting to the sight for its psychical effect as far as possible, easily digested proteids that are digested and absorbed from the stomach.

Use less carbohydrates and fats and heat-producing food until apyrexia or convalescence.

In my experience sweet milk is not the best diet for the majority of adults nor for children with intestinal diseases. Sweet milk is the best natural food, but in febrile conditions, especially in intestinal diseases in which digestion and absorption are so impaired, it is then not the ideal food on account of the casein it contains, but which substance in buttermilk is rendered more digestible by bacterial action.

Casein frequently collects and acts as an irritant to the diseased intestine. In case sweet milk is used, the feces should be watched, as with other food, for evidence of undigested material, as any kind of undigested food acts as a medium for the growth and multiplication of micro-organisms. The plea for less food is not that the system needs less nutriment, but that it cannot be digested, absorbed or assimilated, nor can it during the diseased condition be appropriated, constructed into healthy tissue and normally disintegrated and eliminated. In fact, the whole process of nutrition is impaired. The advocates of free feeding may forget that the body in a comparative state of rest requires much less food than in normal exercise. Norwood, of London, and Robertson, of Philadelphia, and others report the frequent finding of large masses of curdled casein in necropsies of typhoid patients that were fed on a sweet milk diet.

The *Therapeutic Gazette*, of March, 1902, reports the experiments on animals by not giving food while various toxins were injected into their systems, they resisted the poisons much better than those that were fed.

Dr. Ryerson, of Toronto, reports the treatment of soldiers afflicted with typhoid fever with enemata, and with very small amounts of food, with a decidedly smaller death-rate than was obtained by other methods of treatment.

The more perfect our knowledge of physiology and pathology, the more rational and successful will be our dietetics and therapeutics.

In an experience of over twenty years I have treated about 175 cases of typhoid fever. In 1898 I reported to the Grayson County Medical Society 39 consecutive cases, covering a period of seven years. The treatment was the usual medicinal antipyretic and intestinal antiseptics then in vogue, with a mortality of over 12%..

I learned by experience that the less drugs I gave, the better the results. During the last five years I have treated 36 cases. I used but few drugs, food as indicated, more liberal with water both internal and external. I insist on rest and use of bedpan, the use of castor oil, turpentine and the rectal tube in most cases for constipation and distension of bowels, antiseptics for mouth and nose, fresh air and light. I had but few complications and a death-rate of 5.5%.

The average duration of the fever was less than 21 days, only three cases had fever for 28 days, the majority about 20 days, several only 14 to 16 days. Some of the patients had no bowel trouble.

Lartigan, McPhedran, Bryant, Hodenpyl, Blumenthal report cases of typhoid fever during the last few years with no evidence of intestinal lesions.

Dr. Wasdin, of Buffalo, reports 27 cases treated with acetozone. In the majority the fever abated decidedly on the fourteenth day. There were no bowel complications of any consequence. Calomel and guaiacol carbonate were given in the beginning, then 1,500 to 2,000 cc. daily of a 24-hour-old aqueous solution of acetozone or about 15 grains, and he also employed hydrotherapy. He believes that the general sepsis is the result of the primary colony in the air-passages, that the intestinal infection is secondary and that acetozone is absorbed into the general circulation, that it acts directly on the germs in the blood.

Quill reports an epidemic of typhoid in Ceylon in which the infection came through the air from a camp of Boer prisoners, some of whom had the fever.

Yet, the most common mode of conveyance is supposed to be through drinking-water, but so far the bacillus is seldom found in drinking-water, nor has it been found in the stomachs at last reports. The plan of treatment of the past, and, possibly, of some at present, of locking up the bowels for several days at a time, would, no doubt, have resulted in a greater death-rate than is reported by the old and reliable authors if the primary colony of the specific bacillus was located in the intestines. The secret of their success was rest, and had that been supplemented by a daily dose of castor oil or an enema, the plan would have been better than the common medicinal, antipyretic and antiseptic treatment.

The average death-rate in an epidemic of typhoid fever in Philadelphia, in 1897, 1898 and 1899, in which over 17,000 cases were treated, was 12%, which is about the average of all countries. The mortality during the same period by the Brand method was reported from 7% to 9½%.

The mortality in the modified Brand and non-medicinal treatment during the last three years is about 6%, many special reports give it as low as 4% and 5%.

Dr. Abt, of Chicago, reported 90 cases in the *Medical News*, 1902, and says the treatment employed was the same as is everywhere in vogue, hygienic, dietetic, hydrotherapeutic, expectant and symptomatic. A large proportion of the cases ran the entire course without receiving any drugs. Patients were kept in bed as quiet as possible, and drank water freely. No solid food was allowed until after ten days of normal temperature. Intestinal antiseptics were rarely used. No antipyretic drugs were given. Enema for constipation and deödorized tincture of opium for diarrhea, some whiskey and strychnine, also elixir of iron, quinine and strychnine during convalescence. Mortality 4%.

Abt and Lackner, of Chicago, reported in the *Therapeutic Gazette*, October, 1902, forty cases of typhoid in children treated with acetozone, with 5% mortality.

Hand and Walker, of Philadelphia, in 1901 and 1902 reported 71 cases in the Children's Hospital by rest, liquid diet, hydrotherapy, calomel in ⅛-grain doses in the beginning, afterward enemata when needed; whiskey ½ to 2 drams every three hours; some bismuth salicylate was given, but the authors said without apparently any good effect. Strychnine was used occasionally, a liquid diet was continued for ten days after apyrexia. Mortality 4.2%.

In the Philadelphia Hospital, in 1900, the mortality in an epidemic in which the treatment was by water without drugs was only 4.7%, while the usual medicinal treatment in private practice gave a mortality of 13%. In September, 1902, Kuhn and Sucksdorff, of Strassburg, report 420 cases of typhoid treated with hydrotherapy and phenacetine for fever, ice-pack and rectal tube for meteorism. No intestinal antiseptics were given, as those drugs, that are effective enough to prevent or materially retard fermentation and germ-life, will also prevent or greatly retard digestion. Of the 420 cases 1.5% had hemorrhage, 4.5% relapse; death-rate 11%. Dr. Lewis, of New York, says stimulants and sedatives are employed to meet presenting symptoms, not prospective ones, and are never given as a routine treatment. Salol, bismuth and other so-called intestinal antiseptics are not given. He gives diluted muriatic acid. The diet is limited to one pint of milk in 24 hours and a smaller amount in tympanites.

Hare, in his text-book on Practical Therapeutics, 1900, says: Purgatives and so-called intestinal antiseptics in typhoid fever should not be used as a routine plan of treatment, that typhoid fever cannot be aborted; it may be modified in a sense in that we place our patient in the best possible physical state to withstand its ravages. He favors the moderate use of alcohol, the bedpan should always be employed, also hydrotherapy; strychnine only rarely.

Dr. Thayer, in the *Therapeutic Gazette*, July, 1902, on treatment, advises rest, enema to be given every other day for constipation. He says that the use of calomel is unquestionably harmful in some cases, that the demand for the so-called intestinal antiseptics is based on a misconception, that it is impossible to accomplish anything like an effective intestinal antisepsis.

Dr. Bradley, of Palo Pinto, Mo., reports 5 serious cases of typhoid fever treated with the usual antiseptics, as tincture of iodine, carbolic acid, salol, zinc sulphocarbolate and acetanilid, with frequent relapse and complications until the patients continued so long that he abandoned the treatment and adopted hydrotherapy and an expectant plan with excellent results.

J. Mitchell Bruce, of London, says in his late work on the principles of treatment, that quinine and other antipyretic and antiseptic drugs have been employed in typhoid fever without demonstrable advantage. Rest is the first end to be secured. The use of the bedpan is imperative, routine purgation is to be strictly avoided. Constipation and distension of the bowels are to be relieved by mild laxatives, as castor oil and turpentine or an enema. Salol, calomel, corrosive sublimate, naphthol and many other antiseptics are now abandoned. He says drug intoxications were common when medicinal antipyretics were in fashion. He recommends hydrotherapy for fever and strict attention to diet, as a routine no drugs given.

Dr. Ostheimer, of Philadelphia, in a summary of the latest thoughts on typhoid fever, in 1902, giving over 100 references from all of the leading medical journals of the world, says on the subject of treatment that he advises liquid diet; he does not favor a sweet milk diet, as it is an excellent medium for germs. Acidulated waters are used freely, as they are supposed to inhibit the growth of bacteria. Alcohol only rarely, hydrotherapy in all cases, drugs are only indicated for some complications.

Dr. Bass, of Columbia, Miss., reports 32 cases treated almost exclusively by castor oil with excellent results.

Dr. Anders, in his Practice of Medicine, last edition, 1902, says of intestinal antiseptics that they unquestionably neither destroy the bacillus nor counteract the ill effects of their toxins.

Dr. Emmet Holt, in his last edition, 1902, on Diseases of Children, does not mention medicinal antipyretics or intestinal antiseptics in the treatment of typhoid fever.

In 1900, Professor Austin Flint reported the result of the expectant plan of treatment of typhoid fever in the hospital, with decided improvement over the usual method.

Magendie, the eminent French physician, also tried the same plan with most excellent results, that caused him to exclaim to the world that "medicine is a great humbug."

Progressive Medicine, 1900, page 180, says the former methods of treatment, as the expectant or the use of intestinal antiseptics, have almost universally given place to hydrotherapy, and that the strict Brand method has been superseded by the more moderate use of water.

Prof. Osler, in his Text-book on the Practice of Medicine, fourth edition, 1902, says on treatment of typhoid fever: "The profession was long in learning that this disease is not to be treated mainly by drugs, that in hospital practice medicines are not often needed." A great majority of his cases does not receive a dose; he says, of 829 cases in the hospital, only 163 had diarrhea and that the small percentage may be due to the fact that no purges or antiseptics were given. The preliminary calomel purge so much used is not necessary.

Dr. Loomis, in an article on Rational Therapeutics, in the *Therapeutic Gazette*, 1902, says: "Too much drugs and too many drugs are given that cause new symptoms in addition to those usually resulting from the disease, that too much interference has killed patients when, if left alone, nature would have saved them. Keep the problem of treatment as simple as possible by the exhibition of few remedies well selected, and, when indicated, I believe the crude drugs and nauseous mixtures should be discarded in most instances for the more scientific, accurate and neat alkaloids, and then more specifically administered.

The medical profession has no more insidious foe than polypharmacy, on one hand, and Christian Science, magnetic healers and such fads, on the other. They represent the two extremes of our medical practice, and they each point out the others, sin of arrogance and ignorant dogmatism; and we, representing a learned and liberal profession, are to some extent responsible for this condition of affairs, we should profit by the mistakes of these two extremes and endeavor to get on and keep on a more rational basis, then these unscientific and irrational dogmata will fade into merited oblivion. Many proprietary nostrums are foisted on our profession, quite as much as any quack preys on the gullible public. The Americans take four times the amount of drugs taken by Europeans, and our death-rate is greater, especially from acute diseases. Conservatism is a jewel in this age of fanatic sentimentalism.

A review of the literature of the treatment of typhoid fever discloses its chaotic condition. How many of the peculiar symptoms, unusual complications and fatal terminations are due to the treatment! How many are due to errors in diet, rest and use of water, in fact to violation of the first principles of physiological or rational therapeutics! The statistics of the last few years prove conclusively that physiological treatment with only an occasional medicinal auxiliary gives decidedly the best results. Physiological therapeutics utilizes vital forces, aids in cell growth, strengthens vital resistance and promotes natural elimination and not the corroding, devitalizing, depressing and poisoning effect of many of the popular drugs and nostrums in common use. Many mild cases of most any acute disease will recover under most any kind of medicinal treatment in spite of the diseased condition and the drugs, too, and, occasionally, the effect of the drug is left on the system permanently, or the drug habit is acquired, which is one of the most appalling and unfortunate circumstances that could befall human form. Who is most responsible for this widespraed and heart-rending condition of affairs? Is not the time at hand for another experience meeting of our profession to make another good confession as at the National Medical Convention, at St. Louis, in 1856, at which the following resolutions were discussed and adopted: "Whereas it is wholly incontestible that there exists a widespread dissatisfaction with what is called the regular or allopathic system of medical practice, multitudes of people in this country and in Europe express an utter want of confidence in physicians and their physic. The cause is evident, erroneous theory and, springing from it, injurious, often, and very often, fatal practice. Nothing will now subserve the absolute requisitions of an intelligent community but a medical doctrine grounded upon right reason, in harmony with, and avouched by, the unerring laws of nature and of vital organism, and authenticated and confirmed by successful results." Is the present status of the rank and file of our profession much above that of 1856? Are our results equal to our opportunities? Have we made much improvement in general therapeutics? The mortality from typhoid fever had not materially changed during the 50 years previous to 1900, except of those treated by the Brand method; but since 1900 the modified Brand method and less medicinal treatment have given better results than during any previous period.

In conclusion, I will submit the following brief summary of the rational treatment of typhoid fever by the most eminent physicians of modern times. Treatment under two divisions, physiological and medicinal.

(1) Rest; maintain the horizontal position to save the heart strength and do not endanger the intestines if complicated by congestion, hemorrhage or perforation; regular change of position in weak patients. Cleanliness, plenty of pure air and light, cheerful, inviting and quiet surroundings, as far as possible. No food usually to be given during the period of anorexia or first week or ten days of fever; then given more freely, as the case may demand, usually from one to three pints of buttermilk daily, plenty of pure water; warm sponge bath with massage of skin and muscles, hot water to abdomen for pain, cold pack for hyperpyrexia and delirium in some cases. Mental rest, be specific and symptomatic, avoid negative directions to nervous patients. Psychotherapy, also, is an important factor in vasomotor disturbances, which effects normal metabolism and repair of lesions, as well as in the so-called functional disturbances. Avoid showing any signs of overanxiety by word or act, if possible. Inspire confidence, if you can; if not, retire at once. Serumtherapy should be employed if ever discovered and proved.

(2) No drugs as a routine, except external antiseptics and for mouth and nose and some complications. Calomel may be given in the beginning, if indicated by a pale, coated tongue and constipation. Atropine if evidence of much congestion of intestines and pale skin, but not to be continued long; atropine is also valuable in some cases of meteorism, as it may correct the atony of the muscular tissues of the intestines. Castor oil is the best laxative and usually the best remedy for meteorism, necrosis and ulceration, and to be used throughout the case. Turpentine internally for meteorism and externally with hot water to abdomen for pain, also in enemata. Avoid using too freely salines for distension of bowels with liquids or for congestion or in plethoric conditions. Diluted hydrochloric acid if tongue is pale and flabby. Morphine and atropine for sleeplessness in some cases; also for severe pain or hemorrhage or active delirium, but should be used cautiously. Strychnine may be indicated, especially during convalescence. Acetozone may be tried as a general antiseptic. Greater skill is required to carry out successfully a general physiological treatment than in the mere drug giving, and the successful application of these principles will depend much on the judgment and tact of the physician. Success in the healing art rests on a knowledge of the principles, and clinical experience.

THE POSTORBITAL LIMBUS; A FORMATION OCCASIONALLY MET WITH AT THE BASE OF THE HUMAN BRAIN.

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While examining a large number of human brains in connection with special investigations upon their surface anatomy, the writer has occasionally found a peculiar formation on the orbital surface consisting of a curved, welt-shaped eminence, i. e. "limbus," which lies in apposition with the temporal apex. This limbus is demarcated from the rest of the orbital region by a more or less distinct incisure. The appearance of this rather unusual formation leads one to think that this incisure received the edge of the lesser wing of the sphenoid bone, as if the orbital portion of the brain had protruded over this bony edge in a sort of struggle for the occupation of the middle cranial fossa. In the typical relations of these parts, it will be remembered, the lesser wing of the sphenoid is received in the basisylvian cleft, or "vallecula Sylvii," to the total exclusion of any portion of the orbital region of the brain from the middle fossa. In the cases here to be described, however, these relations are altered, and the basisylvian cleft, instead of being at the margin of the sphenoidal wings, falls below this bony edge, being crowded further toward the cranial base by the apparently redundant and protruding "limbus."

Only once before, so far as the writer can ascertain, has a similar formation been described. Retzius shows it in a figure of the brain of a Laplander[1], and speaks of it as a "postorbital gyrus." *It is not, however, a true gyrus*, for it is not limited by a fissure, but by a blunt incisure, and, furthermore, by reason of its protrusion into the middle fossa, it stands out distinctly from the rest of the orbital surface in the form described above, and hence deserves the distinctive appellation "postorbital limbus." Lastly, the term "postorbital gyrus" has hitherto been applied, and correctly so, to the gyrus demarcated by a transorbital fissure ("transverse orbital" of Weisbach), and although this convolution partly enters into the formation of our "limbus," yet the two differ quite as much as does, for example, the occipital operculum(poma) of the ape's brain from the homologous region in man's.

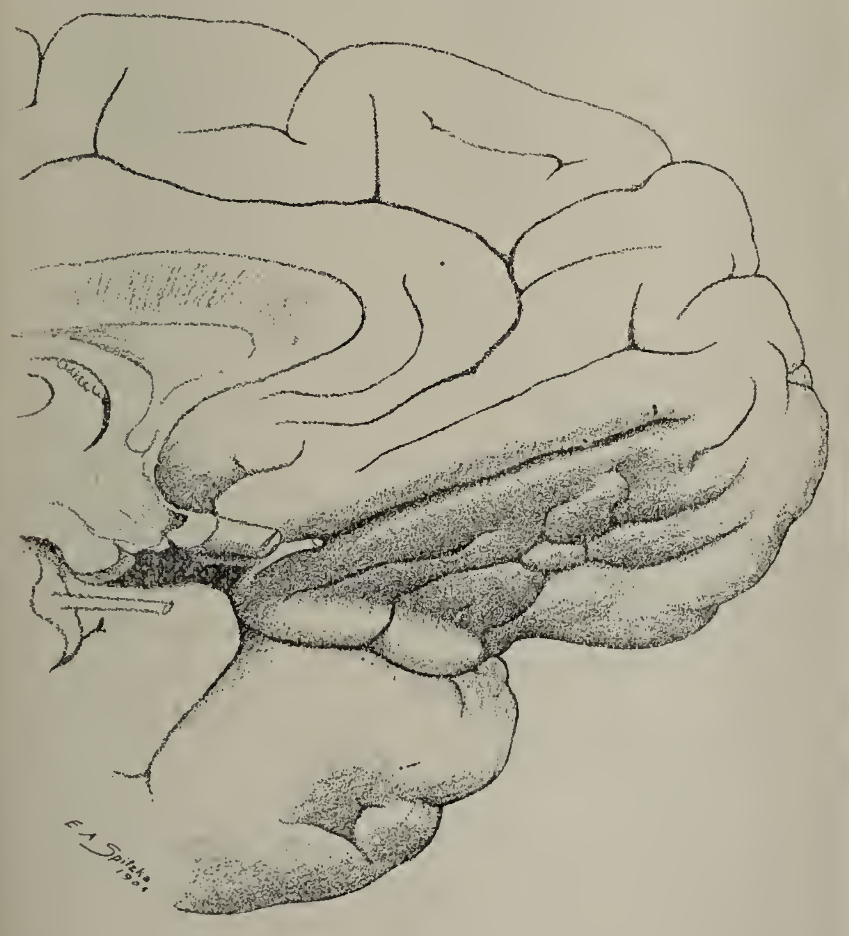

Fig. I. Showing the postorbital limbus in a Japanese brain (No. 7. Brain Collection, Columbia University). The left hemicerebrum has been tilted to show the orbital surface from the mesial aspect. (Drawn by the author.)

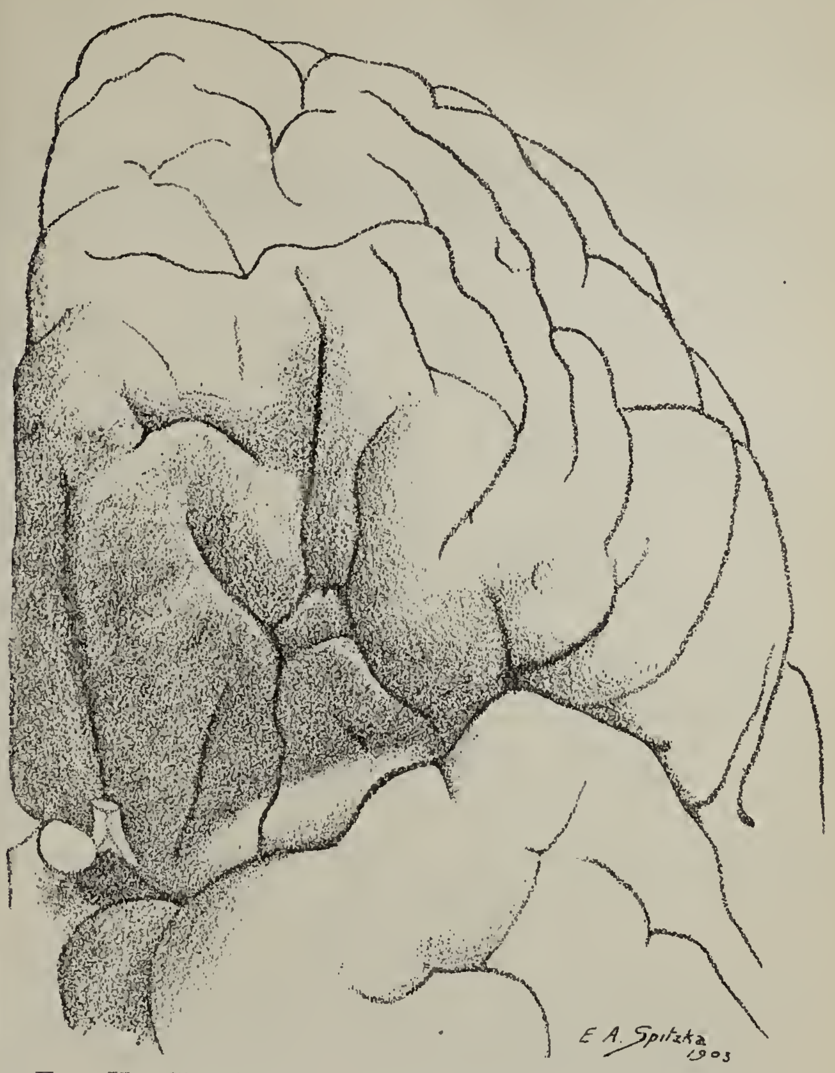

Fig. II. Showing the postorbital limbus in the same brain as in Fig. 1. The left hemicerebrum is tilted to give a fronto-ventral view of the orbital surface. (Drawn by the author.)

In the larger work by Retzius, "*Das Menschenhirn*," the limbus, in some cases quite marked, in others less so, may be seen in five or six of the illustrations, but the feature is not described in the text. A similar formation is shown in Wagner's plate of the brain of the mathematician Gauss; and Professor Wilder, in reply to my inquiries on this subject, writes that he has also observed the formation occasionally.

My own oberavtions were made upon the brain of a native of Japan*, two brains of female Papuans* (from British New Guinea), and one of a distinguished scientist. Brief descriptions on this point follow.

Papuan brain: (*No. 1. C. U.*) The limbus is present on both sides, the incisure being a little better marked on the left side.

Papuan brain: (*No. 2. C. U.*) In this brain the limbus is likewise present on both sides, particularly marked on the right; the brain is not in the best state of preservation, however, and observations upon its form cannot be absolutely positive.

Japanese brain: (*No. 7. C. U.*) This is the brain of a native of Japan, who died of phthisis, in New York City, aged 29 years. A detailed description of this as well as of the Papuan brains in the series will be published later.[2] The postorbital limbus is well marked on the left hemicerebrum and is shown in the accompanying illustrations. The incisure may be seen clearly marked on the orbital surface, demarcating the limbus, while the basisylvian cleft is seen to be pushed ventrad by this eminence.

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*In the Brain Collection of the Anatomical Department of Columbia University.

*Brain of a distinguished American scientist.*** In this brain there is a well-developed postorbital limbus on the left side, resembling in most respects the one described for the Japanese brain.

The explanation which the writer has ventured to give above for the genesis of this peculiar formation seems to be the only adequate one. The fovea-like depression which is occasionally found upon the dorsum of the lesser wing of the sphenoid bone could not give rise to the limbus as it is exhibited in these brains; nor is it quite conceivable that the incisure could be created by post mortem changes in the relations of the brain and cranium. The occurrence of this peculiar feature in the brains of two Papuans, a Japanese and a distinguished scientist, should lead to extended investigations as to its relative frequency in the brains of the races as well as in those of individuals belonging to various intellectual grades. With a sufficient number of data at hand, the significance of this formation, if it has any, may become understood.

REFERENCES.

1. Retzius, 1891, "Das Gehirn eines Lapplaenders", Int. Beitr. z. wiss. Med.
2. Spitzka, E. A., "Contributions to the Encephalic Anatomy of the Races. Second Paper: A Japanese Brain. Third Paper: Two Papuan Brains." To be published in American Jour. of Anatomy.

Health Reports.

Health Reports: The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon-General, U. S. Public Health and Marine-Hospital Service, during the week ending April 4, 1903:

SMALLPOX—United States.

			C.	D.
ALABAMA:	Mobile.	Mar. 21-28.	3	
CALIFORNIA:	Los Angeles.	Mar. 14-21.	2	
	San Francisco.	Mar. 15-22.	8	
DISTRICT OF COLUMBIA:	Washington	Mar. 21-28.	2	
FLORIDA:	Jacksonville	Mar. 21-28.	2	
ILLINOIS:	Alton.	Mar. 14-21.	1	
	Chicago.	Mar. 21-28.	18	
INDIANA:	Indianapolis.	Mar. 21-28.	17	1
IOWA:	Davenport	Mar. 21-28	5	
KANSAS:	Wichita	Mar. 21-28.	1	
KENTUCKY:	Lexington.	Mar. 21-28.	2	
LOUISIANA:	New Orleans	Mar. 21-28	3	
		Two imported, the other not traced		
MARYLAND:	Baltimore.	Mar. 21-28.	2	
MASSACHUSETTS:	Boston	Mar. 21-28.	2	
	Fall River	Mar. 21-28	3	
	Lowell	Mar. 21-28.	2	
MICHIGAN:	Detroit.	Mar. 21-28.	19	
	Grand Rapids	Mar. 21-28	4	1
	Port Huron	Mar. 21-28	3	
MINNESOTA:	Minneapolis.	Jan. 3-Mar. 28	92	3
MISSOURI:	Kansas City.	Mar. 14-29.	4	1
	St. Louis	Mar. 22-29.	6	
NEW HAMPSHIRE	Manchester.	Mar. 21-28.	10	
	Nashua.	Mar. 21-28.	2	
NEW JERSEY:	Jersey City.	Mar. 23-29.	5	
	Newark	Mar. 21-28.	2	1
NEW YORK:	Buffalo	Mar. 21-28	3	
	New York.	Mar. 21-28.	1	
OHIO:	Cincinnati.	Mar. 20-27	19	1
	Cleveland	Mar. 21-28.	1	1
	Dayton	Mar. 21-28.	5	1
	Toledo.	Feb. 14-Mar. 21	52	
PENNSYLVANIA:	Altoona.	Mar. 21-28	4	
	Butler	Mar. 14-28.	2	1
	Dunmore.	Mar. 1-31.	3	
	Johnstown.	Mar. 21-28.	9	
	McKeesport	Mar. 21-28.	2	
	Norristown	Mar. 21-28.	1	
	Philadelphia.	Mar. 21-28	31	2
	Pittsburg.	Mar. 21-28.	42	4
		Three imported		
SOUTH CAROLINA	Charleston.	Mar. 21-28.	1	
TENNESSEE:	Greene County	Mar. 26	26	
	Nashville	Mar. 21-28.	1	
TEXAS:	Galveston	Mar. 27	1	
UTAH:	Salt Lake City	Mar. 21-28.	18	
WISCONSIN:	Green Bay	Mar. 22-29	1	
	Milwaukee	Mar. 21-28.	1	

SMALLPOX—Insular.

			C.	D.
PHILIPPINES:	Manila.	Jan. 31-Feb. 7	1	
	Provinces	Jan. 31-Feb. 7, Prevalent		

SMALLPOX—Foreign.

			C.	D.
AUSTRIA:	Prague	Feb. 28-Mar. 14	18	1
BELGIUM:	Antwerp	Feb. 21-Mar. 14	5	3
	Brussels.	Feb. 28-Mar. 14		11
	Ghent.	Mar. 7-14.		2
CANADA:	Rio de Janeiro	Feb. 13-20.		1
BRAZIL:	Winnipeg	Mar. 7-14.	1	
CANARY ISLANDS	Las Palmas	Feb. 14-Mar. 7.	86	
FORMOSA:		July 1-Feb. 31, 1902	1 case	1 death
GREAT BRITAIN:	Birmingham.	To Mar. 14	41	3
	Bradford	Jan. 15-Feb. 28	9	
	Dublin	Mar. 7-14.	9	1
	Dundee.	Feb. 28-Mar. 7.	1	
	Leeds.	Feb. 28-Mar. 14	26	3
	Liverpool.	Feb. 28-Mar. 14	172	13
	London.	Mar. 7-14	2	
	Manchester	Mar. 7-14.	23	1
	Nottingham	Feb. 21-Mar. 7.	4	
INDIA:	Bombay	Feb. 24-Mar. 3.		64
	Calcutta.	Feb. 21-28		2
	Karachi.	Feb. 15-Mar. 1	1	
ITALY:	Palermo	Feb. 28-Mar. 7.		1
MEXICO:	City of Mexico	Mar. 8-15.	6	4
NETHERLANDS:	Flushing	Mar. 7-14.	1	
	Amsterdam	Mar. 14-21.	2	
RUSSIA:	Moscow.	Feb. 21-Mar.	7	3
	Odessa.	Feb. 28-Mar. 14.	6	
	St. Petersburg	Feb. 28-Mar. 7	77	14
	Warsaw	Feb. 21-Mar. 7		6
TURKEY:	Constantinople.	Feb. 22-Mar. 1		1

YELLOW FEVER.

			C.	D.
BRAZIL:	Rio de Janeiro	Feb. 13-20		25
ECUADOR:	Guayaquil	Feb. 21-Mar. 7.		33
MEXICO:	Vera Cruz	Mar. 14-21	6	3

CHOLERA—Insular.

			C.	D.
PHILIPPINES:	Cebu.	Feb. 12.	4	
	Talisay, Cebu	Feb. 12	6	
	Provinces	Jan. 31-Feb. 7	169	103

CHOLERA—Foreign.

			C.	D.
INDIA:	Calcutta	Feb. 21-28.		71

PLAGUE—Insular.

			C.	D.
PHILIPPINES	Manila.	Jan. 31-Feb. 7	2	

PLAGUE—Foreign.

			C.	D.
BRAZIL:	Rio de Janeiro	Feb. 13-20.		2
FORMOSA:		July 1-Dec. 31, 1902,		265
INDIA:	Bombay.	Feb. 24-Mar. 3.		1,297
	Calcutta	Feb. 15-28.		468
	Karachi.	Feb.-Mar. 1	90	83
	Madras	Feb. 21-27		1

PLAGUE—United States.

			C.	D.
CALIFORNIA:	San Francisco.	Mar. 17		1

LA PRESSE MEDICALE.

December 31, 1902. (Vol. 11, No. 105.)

1. New Tendencies in Therapeutics. C. BOUCHARD.
2. The Radiographs of Atheromatous Arteries. LANDOUZY.
3. Eosinophilia Following the Application of a Blister. VICTOR AUDIBERT.

1.—**Minimum doses applied locally by injection are often as efficient as large doses given internally.** This is especially true in articular rheumatism, syphilis, lupus, etc. The antiseptic, antibacterial, antitoxic action of the drug is exerted locally instead of constitutionally by this modern mode of treatment. [M. O.]

2.—Landouzy describes the **radiographs taken by Dr. Loret, of a radial artery and a posterior tibial artery, showing marked atheroma.** The illustrations show the condition well. [M. O.]

3.—In 27 cases of various diseases, **Audibert examined the serous fluid formed by a blister, and found eosinophilia in different proportions.** This is most abundant in pneumonia, increasing as the disease advances; in erysipelas it is least marked. It was higher in the beginning of phthisis than later, but the condition was just the contrary in pleurisy, acute articular rheumatism and influenza. He concludes that not sufficiently consistent results were obtained to justify definite conclusions. [M. O.]

**The writer refrains from entering into details concerning this and like brains in view of a larger monographic study, the publication of which he contemplates within the year.

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See Advertising Page 8

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Epidemic Cerebrospinal Meningitis.—Now that we know more about the pathology and bacteriology of meningitis than we have ever known before, we are beginning to realize how unsatisfactory the diagnosis is when based solely upon the physical signs. Meningitis is particularly one of those diseases which have more or less characteristic pathological changes, and more or less typical physical signs, and, nevertheless, the greatest possible diversity in etiology. Cases of meningitis due to the pneumococcus, the staphylococcus, or the diplococcus intracellularis, that is, the so-called meningococcus, present practically the same clinical picture. The most distinguished clinicians have sometimes been in doubt, in the absence of spinal puncture, as to whether the tubercle bacillus or one of the other common etiological factors was at the basis of the condition. All this only goes to show one of two things, either that the particular infecting microorganism is not of as great importance as the part affected, or that our methods of studying the symptomatology of the various forms of meningitis are as yet not sufficiently refined. Whether it is desirable to refine them further when we have in lumbar puncture an apparently satisfactory method of determining the diagnosis, is, of course, the question.

These reflections are suggested by the perusal of a remarkably good clinical study of epidemic cerebrospinal meningitis that comes all the way from Calcutta.* It is really a brief monograph on the subject, consisting of 27 quarto pages, well leaded. The author, Dr. J. Rutter Williamson, has given us a very careful account of the disease, evidently based as much on personal experience as upon his reading, which, however, has been extensive. It is a pity that he has not given us the statistics of his own cases, because a series of cases, if observed by one man according to a definite method, offers more valuable information than a collection of cases from the literature, observed according to a great variety of methods. Williamson's cases are unquestionably well studied. He speaks, for instance, of drilling through the skull in order to obtain cerebrospinal fluid, in which ultimately he succeeded in discovering the diplococcus intracellularis. After the criticisms of the German clinicians it is refreshing to find a man who has admitted from his own experience that lumbar puncture, if not curative, is at least palliative, and we dare not consider that palliation, if it is all we can do, should be neglected. Our German friends would have us believe that it merely possesses diagnostic value.

But to return to the question of bacteriological diagnosis, we cannot but believe that in time it will be of the utmost importance, because either by means of an antitoxic serum or a bacteriolytic serum, or in some other way, the infecting organism will be destroyed by the products of its own activity.

The Sanitary Problems of the Panama Canal.—The sanitary problems that confront the United States Government in connection with the construction of the Panama Canal are most formidable. First of all, there is the problem of dealing with many thousands of laborers in a region notoriously unhealthy; secondly, the possibility of the canal serving as a means of spreading the great tropical pandemic diseases. Our recent experiences in Cuba have shown what sanitary science can do when in competent, unhampered hands. The magnificent results attained there have set a mark for future effort. They have shown that cities and regions formerly regarded as plague spots of tropical disease can be brought to such a satisfactory sanitary condition as to compare favorably with any community in the temperate zones.

The building of the canal will necessitate the importation of great numbers of laborers. These hordes will be attended and followed by the parasites that prey upon them even as they do on armies. They include the prostitute, the gambler, the seller of vile liquor. Unless the government interferes with stringent measures, we may expect a repetition of the saturnalia of every form of excess that marked the early days in Panama, and fed the endless procession of funerals to Monkey Hill. If recent work in tropical sanitation has shown anything, it is that the cause of the spread of tropical disease lies in excess of carelessness; that, very largely, the conservation of his health in the tropics lies in each individual new-comer's hands. It is the duty of this government to put the field of operation in the best sanitary condition, and to lay out favorable sites for the labor colonies before actual operations begin. Then, instructing the ignorant and restraining the vicious, to make personal prophylaxis against tropical disease obligatory. It has been shown that yellow fever and malaria can be stamped out in Havana, and they must be stamped out in Panama.

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*A Clinical Study of Epidemic Cerebrospinal Meningitis. By J. Rutter Williamson. Calcutta, 1901.

The most important question, however, is the possibility of the canal facilitating the introduction of yellow fever among the teeming populations of Asia. The early history of this dreadful disease is most obscure. It has been described as originating on the west coat of Africa, spreading throughout the West Indies by the slave traffic. Others, of the earlier writers, believe it to have come originally from the West Indies. Whatever the origin of the disease, the fact remains that now the endemic area is, roughly speaking, tropical America. Spreading from this center, the disease has followed the highways of commerce. It has appeared on the Atlantic seaboard as far north as Boston. It has followed the Mississippi River to St. Louis, and, crossing the Isthmus of Panama, it has spread well up the Gulf of California. In the old world the direct intercourse between Spain and the West Indies, the constant travel of colonists and troops between Cuba and the Peninsula, have frequently led to the introduction of yellow fever into that country. It has also appeared in England, Italy and France. But there the disease has made no great inroads, and the epidemics have speedily died out. This has been due, not only to the better sanitary conditions prevailing in those countries, but chiefly to the fact that the winter cold is sharp enough to destroy the disease-bearing mosquito. The American continent has always stood as the barrier to the introduction of yellow fever into the East. But what will happen when the Panama Canal gives a direct route between the West Indies and Asia, every part of which lies through tropical seas? It seems very probable, from what we now know of the mode of infection and dissemination of yellow fever, that the danger of carrying it into the vast population of the East is a very real one. The possibility of the importation of plague and cholera to this continent will be greatly increased, and of the virulence and deadliness of the plague we have recently had a striking illustration in Mexico.

The Defeat of Prohibition.—An English clergyman once said that he would rather have England free than England sober. But the American Prohibitionists, who even want to add an amendment to the United States Constitution prohibiting the use of alcoholic liquor, evidently do not subscribe to this doctrine for this country. We think the proper sentiment would be to have America both free and sober.

The temperance question is partly a medical question, and therefore a proper one for discussion here. The *Outlook* (which is certainly a highly moral and religious journal) claims that the recent defeat of prohibition in Vermont is a subject for congratulation, and that a similar defeat would be a good thing in the other prohibition States, such as Maine, Kansas and North Dakota. It says this because it evidently believes that an enforced abstinence leads to greater evils than those which it attempts to abolish, and that it is in every sense an abridgment of human liberty.

According to figures published by Dr. A. P. Grinnell, of Burlington, Vt., that State is a great market for the sale of opium, morphine and patent medicines containing alcohol. Dr. Grinnell made an investigation and found conditions that were appalling. He had long observed (what other persons also have doubtless observed) that among the most ardent workers for prohibition were people who constantly used to excess the strongest tea, coffee, tobacco and patent medicines containing opium and alcohol. In 71 towns in Vermont there was sold, under prohibition, in one year $251,622.99' worth of liquor, or $1.38' worth for every man, woman and child. This liquor was ostensibly sold for "medicinal" purposes, and yet during that period there was no epidemic or undue prevalence of disease. Dr. Grinnell also found that in the drug and other stores there were sold every month 3,300,000 doses of opium, not including what was sold in patent medicines and what was dispensed by physicians—"which gives one and one-half doses of opium for every man and woman in the state of Vermont above the age of 21 years, every day in the year." So much for a prohibition State. It was indeed time that Vermont threw off the cloak that hid this hypocrisy.

The consumption of patent medicines containing alcohol, opium or cocaine (or a combination of two or all of these drugs) is steadily increasing—but it would be interesting to know how much of this trade is promoted by the prohibition movement in other States than Vermont. There are probably not a few physicians who have personal knowledge of temperance advocates who are slaves of opium. The writer of this has known such cases, and we have just enough knowledge of human nature to lead us to believe in the old adage of the frying pan and the fire. True temperance is part of the creed of every wise physician, but prohibition does not seem to be one of the ways to promote it.

The Quantity of Adrenalin in the Suprarenal Bodies of Man.—Since the suprarenal bodies of man can only be obtained, except in rare instances, several hours after death, Battelli (*Compts. Rendus de la Soc. de Biol.*, November 14, 1902, V. 54, No. 30) made a series of investigations to determine whether or not adrenalin is rapidly destroyed in the cadaver. He removed one of the suprarenal bodies from a dog immediately after death and left the other one in the body of the animal for forty-eight hours, exposed to room temperature. The second suprarenal body was then removed, and the colorimetric test was aplied to both. It was found that, while the aqueous extract of the suprarenal body had lost entirely or in part its property of producing a green color with ferric chloride after forty-eight hours, it had preserved its action on the bloodpressure. The suprarenal bodies of seven human subjects were examined from seven to forty-eight hours after death. These bodies contained from 0.077 grams to 0.12 grams of adrenalin per 1000 K. of body weight. This indicates that in man the quantity of adrenalin is about the same as that in the other animals in proportion to the body weight. In the cachexias the proportion of adrenalin may be considerably reduced.

A Method of Determining the Amount of Adrenalin in a Given Solution.—The medullary substance of the suprarenal bodies and its aqueous extract give a green color when treated with a solution of ferric chloride. F. Battelli (*Compts. Rendus de. la Soc. de Biol.*, May 30, 1902, V. 54, No. 18) has employed this reaction for determining the proportion of the active substance of the suprarenal bodies. This method is more exact than that which is called physiological, because it calculates the richness of a suprarenal extract in active substance. The physiological test depends upon the effects that a given extract exercises upon the bloodpressure of an animal. In applying the method, a 15 per cent. solution of ferric chloride is first prepared. This solution is used in the proportion of one drop for each cubic centimeter of fluid containing the active substance of the suprarenal bodies. Ten cubic centimeters of suprarenal extract are taken and, of these ten cubic centimeters, five cubic centimeters are placed in a test-tube, and five drops of the solution of ferric chloride are added. The green color is found to be very clear, this portion is then thrown away. The other five cubic centimeters of the extract are then diluted with an equal quantity of water, so as to make ten cubic centimeters of fluid. Five cubic centimeters of this are then taken and five drops of ferric chloride solution are added to it. If the green color is very well marked, this is set aside, and the other five cubic centimeters are diluted with an equal quantity of water. This process is continued until the greenish color obtained by adding ferric chloride solution is very slightly marked. When this point is reached, the remaining half of the fluid is diluted two-thirds, three-fourths, four-fifths, etc. Finally a point is reached at which it is difficult to be sure that the color is the greenish hue of the reaction between the active principle of the suprarenal body or the yellow color of the ferric chloride solution. But if. the drops of solution of ferric chloride are watched as they fall into the dilute suprarenal extract, a very weak greenish tint is seen which immediately disappears. This is the delicate point of the operation, and the appreciation of this color is facilitated by holding the test-tube against a screen of clear gray material, a plate of zinc, for example. In his experiments Battelli considered the limit of dilution reached when a weak, green color persisted less than four or five seconds. The last dilution in which the solution of ferric chloride produces a green tint persisting for four or five seconds is the limit of dilution. He calls the ferric chloride unit a cubic centimeter of a liquid possessing the limit of dilution. For example, fifty cubic centimeters of suprarenal extract give the limit of dilution when they are diluted to one-tenth, they then contain fifty ferric chloride units, one centigram of pure adrenalin gives from seven hundred to seven hundred and fifty ferric chloride units. That is, if one centigram of pure adrenalin is dissolved in seven hundred or seven hundred and fifty cubic centimeters of water, slightly acidified by acetic or by hydrochloric acid, five cubic centimeters of this solution will give a green tint with five drops of ferric chloride solution, which will persist for four or five seconds. Five cubic centimeters of a solution made by dissolving one centigram of adrenalin in eight hundred cubic centimeters in water will not give a green color with five drops of ferric chloride solution. One gram of adrenalin gives then 70,000 to 75,000 ferric chloride units.

The Quantity of Active Substance in the Suprarenal Bodies of Different Species of Animals.—Employing the colorimetric method above described, Battelli (*Compts. Rendus de la Soc. de Biol.*, May 30, 1902, V. 54, No. 18) found that one hundred suprarenal bodies of the ox, weighing 1780 grams, from which the active substance had been completely extracted, gave 225,000 ferric chloride units. These one hundred bodies then contained 3.10 grams of adrenalin, and one capsule contained 0.031 grams of adrenalin. In the ox the medullary substance contains about 0.75 per cent. of active substance calculated in the form of a base. Battelli then employed the colorimetric method in order to determine the proportion of adrenalin contained in the suprarenal bodies of various animals (*Compts. Rendus de la Soc. de Biol.*, July 18, 1902, V. 54, No. 25). He found that the two suprarenal bodies of an animal contain the same quantity of adrenalin. The suprarenal bodies of animals of the same species and having approximately the same weight, contain about the same quantity of active substance. The relation between the quantity of active substance and the weight of the animal varies in the different species, but these variations are not very great. The sheep has from 0.115 grams to 0.121 grams of adrenalin for 1000 K. of animal; the horse has from 0.0816 grams to 0.120 grams; the dog has from 0.0666 grams to 0.106 grams; the pig has from 0.078 grams to 0.084 grams; and the ox has from 0.074 grams to 0.077 grams. These figures show that the character of the food plays no appreciable rôle relative to the quantity of adrenalin contained in the suprarenal bodies.

The Boycott in Waterbury.—We have received letters from several of the physicians whose names were black-listed recently by the strikers in Waterbury, Connecticut, and who in consequence were supposed to be suffering the effects of a boycott. Our correspondents, as a rule, make light of the affair in so far as it affected their material interests, but they all demonstrate very clearly that the intentions of the strikers were the worst possible, and that if these strikers did not accomplish their purpose of intimidating the physcians, this failure was due to the determined stand of the physicians themselves.

Waterbury, it seems, had been "unionized;" that is, an attempt had been made to put the city under the control of a combination of labor-unions, which were affiliated with a central body. The fiat went forth that no one was to use the trolley cars, and it was for disregarding this fiat, and for using the cars in order to visit patients, that the physicians were boycotted. One of our correspondents sends us a graphic account (which we should like to print) of how a body of influential citizens, including physicians, finally met in council, and by adopting an energetic policy broke the boycott up, or at least disarmed it of its terrors.

The action of the physicians in Waterbury seems to have been resolute and successful. They persisted in attending to the sick and injured without regard to the behests of a self-constituted and irresponsible authority. Their action is an example to others, an example which others may have only too many opportunities to follow in these times of social unrest. The physician is always a privileged person when he goes to the aid of a patient; even savages have recognized that privilege in him. Even in war the red cross is recognized. It were a poor showing for labor agitators if they were to make war upon the sick and dying.

Another Case of Plague in San Francisco.—We regret to note that another case of plague has been observed in San Francisco. The *Public Health Reports* state that the case occurred in a Japanese woman and proved fatal. Under the date of March 28 it is stated that the diagnosis had been confirmed by a bacteriological examination. While we regret this occurrence, we are not altogether surprised at it, for, when plague has once secured a foothold, it is very likely to crop out once in a while even in spite of the best-directed efforts to eradicate it. We believe that persistent and intelligent efforts are now being made in San Francisco to wipe out this scourge, which unquestionably has had a footing there for several years. There seems to have been some wholesome change in public and official sentiment on the subject, and this is one of the best signs of the times. Renewed confidence in the authorities in California could only be established by evidence of a change of heart. The unmistakable attitude of the rest of the country, as well as the attitude of the better class of physicians in California, has done much, and the threat of quarantine has probably done more. The fact that no case had previously been reported for several months is an evidence, we believe, not of concealment, but of vigilant sanitary work.

Osteopaths in Iowa.—Dr. Huber's interesting paper on Psychopathic Epidemics, which appeared in our columns a few weeks ago, has called forth a number of letters of protest from the various psychopaths. One correspondent in Iowa, who calls himself "The Osteopath of Greenfield," claims that the members of his "school" pass the same and as good an examination in that State as the regular physicians. But another correspondent, who is a regular physician, says that the examination passed in Iowa by the osteopaths is the same "with the exception of surgery and materia medica." We beg leave to say that these exceptions are very material ones, and that a so-called practitioner who does not have to pass on these vital practical subjects does not pass a proper examination, and that his examination can be little else than a travesty. If such exceptions are to be made in our medical laws to please any and every cult that arises among us and has its little day, these laws may as well be abrogated. What is to prevent the Christian "Scientist" from making an exception of every branch, and demanding that his examination be based on Mrs. Eddy's "Bible;" or the negro pow-wow doctor from demanding that his examination be based entirely on the signs of the zodiac?

The Cause of Race Decline.—In the latest number of the *Princeton Alumni Weekly* there appears a letter from Dr. George J. Engelmann, of Boston, in which he compares the statistics of two college classes with reference to their progeny. The two classes are the class of '95, Harvard, and the same class from Princeton. The following table is given:

	Per cent married.	Number of children to each married graduate.	Number of children to 100 of each class, total, married and unmarried.
Princeton '95	43	0.70	29
Harvard '95	26	0.43	11
Native-born males of same age group. (20 to 29 years)	27.7		

From this table it is seen that the Princeton class makes a better showing than the Harvard class, both in the number of married men and in the number of children; and that the Princeton class is ahead of the average native-born male, while the Harvard class is practically the same as the average native. These figures, for such a small number of individuals, do not prove much of anything—but what surprises and puzzles us most is that Dr. Engelmann, who has made something of a specialty of such statistics, draws from them the conclusion that *wealth, not education, is the cause of race decline.* We fail to see any such significance in the above table. If Dr. Engelmann is right, the Harvard class is much more wealthy than the Princeton class, and the two classes have the same amount of education; while the average male American is as wealthy as the average Harvard man, and more so than the average Princeton man, while his education is presumedly less than either. As no statistics of the wealth of these college graduates are given, the conclusion of Dr. Engelmann is to us quite inexplicable. No one can deny, however, that the table proves that Princeton men get married oftener than Harvard men, and oftener, too, than the average male American!

All this is a contribution to President Eliot's symposium on the Sterility of Polite and Educated People.

Acute Information of the Ear.—We presume it was a piece of unconscious humor on the part of the printer's devil that led our esteemed contemporary, the *Northwestern Lancet*, to print the title of an admirable paper as Acute Information of the Ear. The author evidently wrote *Inflammation*, but there is something in the typographical error that appeals to our sense of the fitness of things. We wish sincerely that every original paper that appeared in this and other medical journals contained lots of acute information. It is the great desideratum of medical journalism. The *Northwestern Lancet* deserves thanks for even unintentionally suggesting such a striking theme. Acute information of the ear goes a long way, not only in otology but also in every other specialty, toward filling the void which editors and readers alike must often feel is an aching one.

Current Comment.

MUSIC IN THE TREATMENT OF THE INSANE.

It is reported that the authorities of the Manhattan Asylum, Ward's Island, are now making systematic experiments with the music cure, and have thus far treated a dozen or more patients afflicted with melancholia, giving them concerts an hour long every afternoon with the harp, violin and piano for instruments. They report after a month's trial that improvement is shown, and that patients suffering from acute mania and hallucinations show more mental alertness and cheerfulness, and that one patient has been assisted almost to recovery by the strains of the violin alone.

—*Medical Times.*

Correspondence.

ANOTHER CASE OF CONGENITAL ABSENCE OF THE UTERUS.

By WILLIAM H. SHIPPS, M. D., of Bordentown, N. J.

To the Editor of the **Philadelphia Medical Journal:**

In the **Journal** of March 28, 1903, I noticed a communication from Dr. E. S. Corson, of Toungoo, Burma, entitled, "Congenital Absence of the Uterus," that calls to mind a somewhat analagous case brought to my attention several years ago.

The patient, if the term may be so used, was a young woman, 22 years of age, 5 feet 9 inches in height, slender, but apparently in vigorius health, who came to my office with the following history: She had always enjoyed good health, but had never menstruated. Some two or three weeks prior to calling upon me she had married a sturdy young farmer, who with his bride plunged into the matrimonial sea without thought of the breakers ahead of them. After the lapse of the period above named it was concluded that something was radically wrong and that assistance should be sought. I suggested an examination, to which ready acquiescence was given, with the result that a rudimentary vagina was found, not more than an inch in depth and barely admiting the end of the index finger. Examination per rectum showed no evidence whatever of uterus or ovaries. Wishing to have my diagnosis confirmed I called in consultation Dr. Thomas G. Morton, of Philadelphia, who after a thorough examination agreed with me in the diagnosis, and the patient was candidly made aware of the true condition of affairs. Both husband and wife accepted the situation with cammendable resignation, and, so far as observation goes, they seem to be as happy as the ordinary run of married couples.

ELDER-FLOWER AS A DIURETIC.

By H. E. RANDALL, M. D., of Lapeer, Mich.

To the Editor of the **Philadelphia Medical Journal:**

I do not know whether the medical profession in general is using elder flower for dropsical conditions. I have found it almost a specific in 7 cases in which it was used. A few years ago I tried nearly everything on a case of anasarca with abdominal dropsy. The patient finally asked me whether elder flower was good for her condition. I told her I did not know; it might increase the flow of urine, but that I did not expect any permanent good from it; but, if she cared to try it, I would give her a prescription for it. I gave her the prescription, but her friends went to the woods, gathered some of the bark, steeped it, and gave it freely, and the woman got well. I have since seen it used in several cases with success. Most of the text-books do not mention it at all. I have been disappointed in the ue of cathartics and diureties for dropsical conditions. The amount of urine passed does not seem to influence the amount of fluid in the tissues. If water is withheld, the patient is as bad as ever when fluid is retaken.

Fluid extract of Sambucus Canadensis in ¼- to one-teaspoonful doses, 3 or 4 times a day, comes as near being a specific as anything I have ever tried, whether the dropsy be due to heart, liver or kidney disease.

A NEW REMEDY FOR STRYCHNINE POISONING.

By J. D. BATSON, M. D., of Marietta, I. T.

To the Editor of the **Philadelphia Medical Journal:**

On May 18, 1902, I was called to A. P. G.'s, 4 miles north of Marietta, to see his 2½-year-old boy, who had taken strychnine. The parents had been shopping and, among other things, had purchased 1 dram of strychnine with which to poison rabbits. The bundles were thrown on the floor, and some candy was given to the boy. In a few minutes the mother was horrified to see the little fellow with the bottle of strychnine to his mouth and the contents being emptied into it. She frantically called him to "spit it out," and immediately washed out his mouth as thoroughly as she could. I arrived one hour later. They had tried the home remedies to produce emesis but without effect. I immediately gave tannic acid in solution to form the insoluble tannate, and gave apomorphine hypodermically, I waited 4 minutes and repeated the apomorphine. In a few minutes the contents of the stomach were coming up. Fortunately the child had eaten dried apples (uncooked) that afternoon, and his stomach was full of undigested food and not in good condition for absorption. I gave more tannic acid and thoroughly washed out the stomach with a stomach tube. This was followed with more tannic acid and chloral hydrate. The convulsions began increasing in force and frequency, and the chloral was crowded till there was profound narcosis, but still the convulsions were stronger and now coming every two minutes. It had now been about 1 hour since the stomach was washed out, and it had evidently absorbed the residue. The convulsions were now tonic, and death was imminent. As a last resort I gave pilocarpine hydrochlorate hypodermically and with results as follows:

Gave 1/24 gr. at	9.07
No convulsion till	9.14
Convulsion at	9.19
Convulsion at	9.24
Gave 1/24 gr. at	9.25
Convulsion at	9.29½
Convulsion at	9.35

Skin now moist and saliva flowing out of mouth.

Slight convulsion at	9.44
Slight convulsion at	9.46
Very slight convulsion at	9.56

And gradually lighter at 10, 10.06, 10.17, 10.22, 10.34, 10.45 and the last at 11.13. The bowels and bladder were evacuated, and the patient made an uneventful recovery.

Reviews.

Diseases of the Eye. A Hand-Book for Ophthalmic Practice for Students and Practitioners. Fourth Edition. 1903. By George E. de Schweinitz, A. M., M. D. W. B. Saunders & Company, Philadelphia.

Ophthalmology in recent years has contributed so much to the knowledge of the most important of the organs of special sense, and also to the sum of general medical attainment, that it may justly be ranked as one of the leading subjects in medicine. In consequence, any treatise on this subject which contributes to the wider acquaintance with this truly scientific department of medicine is heartily welcomed. To attain its proper rank and command respectful attention from the profession, such a work should be scientific in spirit, and, at the same time, broad and practical in its treatment of the subject. Much of the current literature seems to be lamentably lacking in these qualities, and the qualifications of the authors do not seem to combine good literary style, painstaking research and the evidence of a large practical experience. Rather do these contributions seem to be the work of "specialists who have never had any general education in which to give their special studies wide rootage and nourishment."

The work before us is one to which none of these exceptions may be taken, but is concise in its treatment of the subject, giving just consideration to those questions which are still speculative, dealing carefully with all that which is of necessary interest to the student and practitioner, and making easily clear much that is ordinarily difficult of elucidation.

In its present—fourth—edition, the book will take still higher rank than that accorded to it on its first appearance. All the recent contributions which may properly be incorporated in a work of this size and character have been included in this edition, and the work as a whole may be cheerfully accorded recognition as one which is modern in conception and style, and is also concise while being comprehensive. Notable amongst the features which call for detailed comment, is the effort to clear up the still somewhat difficult subject of retinoscopy.

Favorable comment is called forth by the paragraphs on Thomson's Lantern Test for Color-blindness, on the Ophthalmoscopic Signs of General Arteriosclerosis, on Ocular Signs of Disease of the Sphenoid and Antrum, on the Educative Treatment of Strabismus, on Recurring Oculomotor Paralysis, on Normal and Abnormal Refraction, and the value of a number of therapeutic agents which have been recently introduced. [T. H. F.]

The Medical Epitome Series. Genito-Urinary and Venereal Diseases, A Manual for Students and Practitioners. By Louis E. Schmidt, M. Sc., M. D., Associate Professor of Genito-Urinary Diseases, Chicago Policlinic: Attending Genito-Urinary Surgeon and Dermatologist, Alexian Brothers' Hospital, Chicago. Series edited by V. C. Pedersen, A. M., M. D. Lea Brothers & Co., Philadelphia and New York.

Taking up this book for review we confess to some prejudice because of its size and because of our previous disappointment in books of the "compend" or "epitome" type. This feeling, however, gradually disappeared as the small volume was read The author has managed to make throughout an excellent division of the space allowed him for the discussion of many conditions, and deserves credit for presenting in a book of this size such a valuable and interesting mass of material. His descriptions are comprehensive, and his outline of treatment such that it can readily be understood and followed, and this latter can be said of but few of the so-called students' compends.

The chapter on gonorrhea and its complications is most thorough and satisfactory. Although not usually approving of these small and condensed volumes compiled for the "student and busy practitioner," we do feel that this epitome of genito-urinary diseases will be found of more value than many books of greater pretensions.

There are practically no illustrations in the book, excepting those of instruments. The type, paper and binding are all that could be desired. [J. H. G.]

News and Notes.

AMERICAN

PHILADELPHIA AND PENNSYLVANIA.

Henry Phipps' Institute for the Study, Prevention and Treatment of Tuberculosis.—The opening of the ward, which was to have occurred last week, has been unavoidably delayed on account of the water-supply, as in that section of the city the water does not reach the third floor. Arrangements have been made to put in a pump. There are at present 15 cots in the ward, and an equal number can be placed on the floor below. The sum of $1000 was left by the late Mrs. Elizabeth L. Comly for the building fund of the Free Home for Poor Consumptives, of which Dr. Flick is also president. It is hoped that the ward will soon be opened.

Department of Health and Charities, Philadelphia.—The Governor signed this bill, April 8 last. The bill provides that the Department of Public Health and Charities shall be under the charge of a Director and an Assistant Director, whom the Mayor shall appoint, to which department shall be confided the care, management, administration and supervision of the public health, charities, almshouses, hospitals and all other similar institutions, the control or government of which is intrusted to the city. The Director of Public Health and Charities, as chief executive officer thereof, shall appoint, supervise and control all the subordinate officers and employés attached to the department, and shall appoint all vaccine physicians and health inspectors; and all hospitals belonging to the municipality in which provision is made for the care of contagious diseases shall be under the immediate supervision and control of the Director of Public Health and Charities. The Director of the Department of Public Health and Charities shall also be appointed by the Mayor, but his term of office shall be four years from the date of his appointment, if he shall so long behave himself well. It is reported that Dr. John V. Shoemaker, who suggested the establishment of this new department, is to become its director. Dr. Shoemaker was born in Chambersburg, March 18, 1853, was graduated from Dickinson College in 1872, and from Jefferson Medical College in 1874. He held several positions in Jefferson Medical College Hospital and is now president of the Medico-Chirurgical Hospital. For some time he was surgeon-general of the Pennsylvania National Guard.

Philadelphia Pathological Society.—The annual conversational meeting will be held in the upper hall of the College of Physicians, Thursday evening, April 23, at 8.30 P. M. The address of the evening will be delivered by Dr. Aldred Scott Warthin, of Ann Arbor, Mich., upon "The Hemolymphnodes, with Especial Reference to Their Relations to Adipose Tissue." Members of the medical profession and medical students in Philadelphia are invited to attend.

The Health of Philadelphia.—During the week ending April 11, 204 cases of typhoid fever were reported, with 17 deaths, a marked increase over the previous week, when 184 cases with 21 deaths occurred. The greatest number of cases was reported from the 34th. ward, the 24th. ward coming next. The only wards not having cases were the 8th., 37th. and 41st. wards. There was a great decrease in the number of cases of scarlet fever reported, 70 cases, with 6 deaths, as compared 105 cases, with 8 deaths, during the preceding week. There was a slight increase in the number of cases of diphtheria reported, 59 cases, with 11 deaths, as compared with 48 cases, with 12 deaths. There was also a marked decrease in the number of cases of smallpox reported, 16 cases, with 5 deaths, as compared with 27 cases, with 2 deaths, in the week preceding. One death was also reported from acute epidemic cerebrospinal meningitis.

Jefferson and Medico-Chirurgical Hospitals.—Bills appropriating $260,000 to each of these hospitals have now become laws, having been signed by Governor Pennypacker, April 9.

Typhoid Fever at South Bethlehem.—It is reported that almost 200 cases of typhoid fever have occurred at South Bethlehem during the winter. At a meeting, held April 7, the president of the water commission received the report of an expert, who expressed disbelief in the efficiency of the filter which it is proposed to place in the Lehigh river. He recommended a slow-process sand-filter as the only means of eliminating disease-producing germs from the water. As many as 10 cases of typhoid fever have been reported in one day.

Pennsylvania Society for the Prevention of Tuberculosis.—At the annual meeting, held in Philadelphia April 8, 1903, an address was delivered by Dr. H. S. Anders, who was re-elected president of the society. He stated that institutions for the treatment of tuberculosis should be under Government control, and that education of the masses was most necessary. Dr. S. A. Knopf, of New York, also delivered an address, advocating popular addresses upon tuberculosis and its prevention. It was decided to appoint a lecture committee of 3, to provide for a series of popular addresses upon tuberculosis and its prevention, to be given in Philadelphia. The secretary of the society is Dr. A. H. Davisson.

Society Meetings Next Week.—The following societies will meet next week at the College of Physicians, Philadelphia, at 8.15 p. m.: Tuesday evening, April 21, Section on Ophthalmology, College of Physicians; Wednesday evening, April 22, Philadelphia County Medical Society, and Thursday evening, April 23, the annual conversational meeting of the Philadelphia Pathological Society.

NEW YORK AND NEW JERSEY.

New Hospital on Randall's Island, New York City.—Plans have been filed with the Building Bureau for a new two-story reception hospital, 157 feet front and 28 feet deep, to be built by the city on Randall's Island, opposite 123rd. street. The building will have façades of brick and ornamental stone, and is to cost $35,000.

Diphtheria in Trenton, N. J.—During the week ending April 11, 11 cases of diphtheria, with 2 deaths, were reported in the city of Trenton.

New Jersey State Medical Examining Board.—By amendments to the Medical Practice Act of New Jersey, recently secured by the State Board, the standard of admission to the examinations has been raised from a competent common school education to a diploma issued after 4 years of study in a Normal, Manual Training or High School of the first grade or its equivalent. The medical requirements have been increased from 3 to 4 courses of medical lectures, of at least 7 months each, in different calendar years, prior to receiving the degree of doctor of medicine. These amendments go into effect July 4, 1903. After that date candidates for examination or for the endorsement of a license issued by a recognized examining board of another State will be obliged to comply with the new standard of requirements for a license in New Jersey.

NEW ENGLAND.

Hospital for the Poor, Providence, R. I.—By the will of the late Dr. L. Gideon Archambault. one of the oldest physicians of Rhode Island, who died recently in Providence, $40,000 were left for founding a hospital for the aged poor in that city.

In Memory of Dr. Homans.—A meeting in memory of the late Dr. John Homans was held March 30, at the Boston Medical Library, under the auspices of the Boston Society for Medical Improvement. Addresses were made by Drs. M. H. Richardson, A. T. Cabot, G. B. Shattuck, E. H. Bradford, R. T. Edes, and S. W. Langmaid. The following resolutions, presented by Dr. J. Collins Warren, were unanimously adopted: Resolved, That we take this opportunity to express our appreciation of the prominent part which Dr. Homans has taken in the development of abdominal surgery, in his bold pioneer work in widening the field of this important department of modern surgery, and in placing it upon a rational and enduring basis: That we recognize in his death the loss of a personality which has shed new luster on an already honored name, and has left a deep imprint upon the traditions of New England surgery.

WESTERN STATES.

Bubonic Plague in San Francisco.—Another case of bubonic plague, with fatal termination, occurred in Chinatown, San Francisco, March 17. This was the first case to occur in 1903. The patient was a Japanese woman, and the diagnosis was bacteriologically confirmed, March 28. This was the 94th. case of bubonic plague since the outbreak of the epidemic, in March, 1900.

A Strange Disease in Kansas.—It is reported that the secretary of the Kansas State Board of Health left Topeka, April 13, to visit Rice county, to investigate the cause of 9 sudden deaths among a gang of railroad laborers. The first reports stated that the deaths were due to bubonic plague. Later came the rumor that a local physician had pronounced the infection black smallpox. Every case has proved fatal, and the surrounding territory is strictly quarantined.

SOUTHERN STATES.

Congress of American Physicians and Surgeons.—The sixth annual meeting will be held in Washington, D. C., May 12 to 14, 1903, under the presidency of Dr. W. W. Keen, of Philadelphia. This congress includes the following associations and societies: American Gynecological Society, American Dermatological Association. American Laryngological Association, American Surgical Association, American Climatological Association, Association of American Physicians, American Association of Genito-Urinary Surgeons, American Orthopedic Association, American Physiological Society, Association of American Anatomists, American Pediatric Society, American Ophthalmological Society, American Otological Society, and the American Neurological Association. The presidents of these societies are all vice-presidents of the congress. The treasurer is Dr. N. M. Shaffer, of New York, the secretary Dr. W. H. Carmalt, of New Haven. At the opening meeting, May 12, the pancreas and pancreatic diseases will be discussed by Dr. E. L. Opie, of Baltimore; Dr. R. H. Fitz, of Boston; Dr. von Mikulicz, of Breslau, Germany; Dr. Roswell Park, of Buffalo, and Drs. C. G. Stockton, H. U. Williams and M. H. Richardson. The address of the president will be upon the duties and responsibilities of the trustees of medical institutions. On the next day the subject to be considered is the medical and surgical aspects of diseases of the gall-bladder and bile-ducts. Papers will be read by Dr. Ewald, of Berlin, Germany; Dr. J. H. Musser, of Philadelphia; Dr. C. G. Herter, of New York; Dr. Hans Kehr, of Halberstadt, Germany; Dr. W. J. Mayo, of Rochester, Minn.; and Dr. G. E. Brewer, of New York. Drs. Frank Billings, George Dock, W. S. Halsted and Henry Sewell will take part in the discussion.

American Medical Association.—A number of entertainments and excursions have been arranged for the delegates to the coming meeting, to be held at New Orleans, May 5 to 8. A reception will be given on the evening of May 5, 2 large receptions on the afternoon and evening of the next day, a fête champêtre at the City Park, May 7, and a boat ride on the Mississippi, May 8. Arrangements have also been made for excursions to San Antonio, Texas, and to Mexico.

Smallpox in Huntington, W. Va.—Under date of April 6, there were 38 cases of smallpox reported at Huntington. The court has adjourned on account of the prevalence of the disease. The 20 prisoners in the county jail have all been exposed to the disease.

Food Investigations, Agricultural Department, Washington.—The experiments now being made by Dr. Wiley upon the effects of food preservatives are being conducted under great secrecy, but as the men undergoing the experiments are not kept indoors, the fact that they do not suffer from the chemicals added to their food is plain. That these men have developed a delicate pink complexion in the past few weeks, has, indeed, attracted attention, yet they are all in perfectly healthy condition. It has been admitted, however, that all of the drugs so far added to the food have proved absolutely harmless. Officials state that the pink complexions are due, not to chemicals in the food, but to complete elimination of all impurities from the blood, brought about by eating pure food. The men eat regularly, stated amounts at regular intervals only.

War on Mosquitoes.—A board of U. S. Engineers has recently been inspecting the Gulf fortifications near New Orleans. The president of the board states that efforts are being put forth by the quartermaster to rid the forts along the Lower Mississippi and the Gulf Coast of mosquitoes. The ground in and about the fort is to be raised to a considerable height as a part of this plan. There are a number of other details which he has not made himself acquainted with. The mosquitoes are the source of greatest discomfort to those who must do duty at the Gulf forts. Could they be exterminated or prevented from approaching the fortifications, the men who are on duty would naturally be very greatly favored.

Talbot County Hospital, Easton, Md.—A meeting was held April 16, under the presidency of Dr. E. M. Hardcastle, at which plans were discussed for the building of a public hospital at Easton. Inquiries have already been made among property owners for leasing their buildings for hospital purposes. The Hambleton property is considered the best fitted for hospital purposes.

Physician Sues a Telegraph Company.—A prominent physician of Baltimore has sued the Western Union Telegraph Company for $2000, because the alleged negligence of the company prevented him from performing an important surgical operation in Cambridge, Md., last October. The physician left Boston, remaining on the train which runs directly through to Baltimore without change. Telegrams were sent to him, from Baltimore, to New Haven, Conn., and to Trenton, N. J., telling him to come to Cambridge, Md., at once, to perform a surgical operation of urgent necessity the next day. It is alleged that neither telegram was delivered, that the physician went directly to Baltimore, and that the urgent operation was not performed.

CANADA.

(From Our Special Correspondent.)

Canada Medical Act With Regard to Interprovincial Registration.—The general principle of Dr. Roddick's bill, now known as the Canada Medical Act, 1902, with regard to the interprovincial registration of medical practitioners in Canada, has been endorsed at a largely attended meeting of the French Canadian practitioners of Montreal, held recently in Laval University, Montreal. The endorsement was almost unanimous. There is a bill at present before the Quebec Legislature, seeking the ratification of Roddick's bill. It is, however, generally felt in Montreal that the measure will fail to pass, because the College of Physicians and Surgeons, Quebec, was decidedly against the bill, and the French Canadian country practitioners are strongly opposed to it. Should the Quebec Legislature fail to ratify this measure, the Canada Medical Act will not be operative.

Academy of Medicine, Toronto.—A plan is now being discussed to arrange for the amalgamation of the Toronto Clinical Society, the Toronto Medical Society and the Toronto Pathological Society, with the Ontario Library Association, to found an academy of medicine and medical club in Toronto. Several thousand dollars have already been subscribed for his purpose. The undertaking is in charge of Dr. J. F. W. Ross, president of the Ontario Medical Library Association.

Against Cigarette Smoking.—In the House of Commons, recently, a motion for the prohibition of the manufacture, importation and sale of cigarettes was carried by a vote of 103 to 48. The motion, however, was only a test, as it was not introduced as a Government measure. The Prime Minister, in fact, has advised the House to reject it.

Montreal League for the Prevention of Tuberculosis.—This association, which has become a member of the central association at Ottawa, is rapidly growing in importance. At the annual meeting of the central association, held at Ottawa, April 16, the Montreal League was represented by Dr. Roddick, Dr. Richer, Dr. Lachapelle and Professor Adami.

Ontario Medical Association.—The annual meeting will be held in Toronto, June 16 to 18 next, with Dr. J. C. Mitchell, of Toronto, president and Dr. H. C. Parsons, secretary. Among the papers to be read are one by Dr. Musser, of Philadelphia, and another by Dr. Cullen, of Baltimore.

Canadian Medical Association.—The annual meeting will be held at London, Ontario, August 25 to 28, with Dr. W. H. Moorhouse, of London, as president. The address in medicine will be delivered by Dr. James Stewart, of Montreal, the address in gynecology by Dr. Matthew D. Mann, of Buffalo, and the address in surgery by Dr. A. H. Ferguson, of Chicago. The special committee, consisting of Drs. R. W. Powell, Thomas Roddick, and E. P. Lachapelle, appointed with regard to the establishment of a Dominion Bureau of Health, has had an audience with the Prime Minister, who promised that the matter would receive the careful attention of the Government.

Death of Dr. Gordon.—Dr. Donald Gilbert Gordon, who was graduated from the University of Toronto in 1883 and received his medical degree from Trinity College, Toronto, in 1887, professor of hygiene in Trinity Medical College, died at Baltimore, Md., March 28 last, of peritonitis. He was only 44 years old and had gone to Old Point Comfort, Va., after an operation for tuberculous peritonitis. On account of his condition he was then sent to Baltimore.

Death of Dr. Halliday.—Dr. Andrew Halliday, a graduate of the University of Glasgow, associate professor of pathology in the Halifax Medical College, died at Halifax, N. S., March 10, of consumption.

MISCELLANY.

Vaccination in the Philippines.—Major-General Davis has recently issued an order directing that no troops be allowed to land at Manila until the men have been vaccinated.

Making Manchuria More Healthful.—An international sanitary commission has been organized at New Schwang, Manchuria, with a Russian as its director, to prevent a recurrence of the outbreak of bubonic plague.

Yellow Fever in Yucatan.—A despatch from Merida states that the number of cases is increasing rapidly, and that the disease is usually fatal. Many foreign residents have left the city.

The Hottest Place in the World.—The hottest region on the earth is on the south-western coast of Persia, where Persia borders on the gulf of the same name. For forty consecutive days in July and August the thermometer does not fall lower than 100 degrees, night or day, and often mounts as high as 128 degrees.

Obituary.—Dr. J. H. Bryant, at Los Angeles, Cal., April 4, aged 76 years.—Dr. Sheldon Stringer, at Brooksville, Fla., April 6.—Dr. William G. Allen, at Mansfield, Mass., April 5, aged 46 years.—Dr. R. E. Montgomery, at Washington, D. C., April 8, aged 60 years.—Dr. Charles Tilden Sempers, at Blythedale, Md., April 8, aged 82 years.—Dr. Edgar Perry, at Boston, Mass., April 7, aged 48 years.—Dr. Isaac S. Tanner, at Shepherdstown, W. Va., April 9, aged 85 years.—Dr. Henry D. Kerfoot, at Berryville, Va., April 9, aged 57 years.—Dr. G. A. Collamore, at Toledo, Ohio, April 8.—Dr. William H. Curry, at Baltimore, Md., April 10, aged 61 years.—Dr. Hugh Marshall, at Monmouth, Ill., April 11, aged 77 years.—Dr. James M. Brown, at Philadelphia, Pa., April 13, aged 51 years.

FOREIGN.

GREAT BRITAIN.

University of London.—The honorary degree of doctor of science is to be conferred upon Lord Lister, June 24 next, by the University of London. At the same time the Prince and Princess of Wales and Lord Kelvin will also receive honorary degrees.

Cancer Statistics in England.—According to a London despatch to the *New York Tribune*, the latest reports of the registrar-general show that fatal cases of cancer are steadily increasing in England, not merely in number, but in proportion to the population. In the last 40 years this proportion has been at least doubled.

Donations.—Mr. Henry Barnato has recently given $5000 to the London Hospital and $2500 each to St. Mary's Hospital, City Orthopedic Hospital, Hospital for Incurable Children, Jewish Home for Incurables, and Jewish Hospital, London.

CONTINENTAL EUROPE.

International Congress of Otology.—The Seventh International Congress will be held at Bordeaux, August 1 to 4, 1903, under the presidency of Dr. E. J. Moure. The subjects for discussion are the choice of a simple and practical acoumetric test, the diagnosis and treatment of suppurative processes in the labryrinth, and the technique of the opening of brain abscess of otitic origin and the after-treatment of such cases. All communications should be addressed to the general secretary, Dr. Marcel Lermoyez, 20½ Rue de la Boëtie, Paris.

International Exhibition of Health Resorts.—This exhibition, to be held at Vienna, September 12 to October 20, 1903, will consist of pictures, panoramic views, raised maps and plans of health resorts, with details as to the composition of waters, special treatment, climatic conditions, musical and other entertainments, promenades, etc., including the cost of living and treatment.

Thirteenth International Medical Congress, Madrid.—A number of prominent physicians left New York April 11 on the steamer *Princess Irene*, for Gibraltar, to attend the Dr. G. W. Brown, Milwaukee; Dr. W. O. Brides, Omaha; these were Dr. Abraham Jacobi, Dr. Louis Fischer, Dr. A. H. Smith, Dr. A. E. Macdonald, Dr. J. H. Huddleston, Dr. J. Z. Powell and Dr. D. H. Smith, of New York, Dr. N. Senn, Dr. J. D. Murphy and Dr. C. W. Adams, of Chicago; Dr. G. W. Brown, Milwaukee; Dr. W. O. Brides, Omaha; Dr. Richard Douglass, Nashville; Dr. C. E. French, Lowell, Mass.; Dr. J. D. Griffith and Dr. N. D. Harrelson, Kansas City; Dr Waldo Johnson, Philadelphia; Dr. Howard Kelly, Baltimore; Dr. C. G. Page, Boston; Dr. R. H. Reed, Rock Springs, Wis., and Dr. I. N. Wear, Fargo, S. D. Surgeon-General R. M. Reilly, U. S. A., left for Madrid some weeks ago, and Dr. Reginald Sayre, of New York, has also sailed.

University of Copenhagen.—In the interest of the university, the Danish Parliament has decided to build a new hospital, a new maternity pavilion, and a new medical school. The buildings will be erected in the northern part of the city, and it will take almost 6 years before they are completed. $1,200,000 have been appropriated for this undertaking.

Women Physicians in Russia.—Of the 981 graduates in medicine who recently took the examinations for a license to practise medicine in Russia, 859 passed successfully. Among the candidates were 112 women, 111 of whom passed, 93 of them receiving honorable mention. The percentage of success, as well as that of honorable mention, was considerably higher among the women than among the men.

Physiological Action of Boracic Acid.—Dr. Merkel, of Nuremberg, recently published a number of observations showing the effects of the internal administration of boracic acid. He gave from 15 to 30 grains in solution, from 2 to 8 days at a time, with the result that symptoms of gastro-intestinal irritation, such as flatulence, eructations, colic, epigastric pains and diarrhea, developed. Invalids were more sensitive to its influence than healthy subjects, who seemed able to take moderate doses without inconvenience. He concludes that boracic acid should not be used as a preservative in food for invalids or young individuals. It is particularly objectionable in milk.

University Notes.—Breslau: Dr. Karl Ludloff, of Königsberg, has been placed in charge of the new orthopedic department of the surgical clinic.—**Graz:** Dr. Moritz, professor of medicine at Greifswald, has declined an offer to become professor of medicine succeeding Dr. Kraus.—**Greifswald:**—Dr. Löffler, professor of bacteriology, has been appointed rector of the University.—**Hannover:** Dr. Ludwig Bruns, physician-in-charge of the medical department of the Children's Hospital, has been granted the title of professor.—**Halle:** During the past winter, lectures on surgery have been given on Sunday mornings by Dr. von Bramann and on otology by Dr. Schwarze, to over 130 physicians.—**Kiel:** Dr. Jessen, the well-known alienist celebrated his eightieth birthday March 6.—**Lausanne:** Dr. G. Rossier has been appointed professor of obstetrics, and Dr. Muret, professor of gynecology.—**Leipsic:** Dr. K. Eigenbrodt, professor of surgery, has resigned, leaving the university on his own accord.—**Marseilles:** Dr. Bouisson, professor of natural history, has been retired, receiving the title of honorary professor. Dr. Heckel, professor of materia medica, has also been appointed professor of natural history.—**Paris:** Dr. Lannelongue, the well-known professor of surgery, and Dr. Landouzy, professor of internal medicine, have both been decorated by the Emperor of Germany.—**Prague:** Dr. Karl Maydl, professor of surgery in the Bohemian University, well known throughout the civilized world on account of his operations on the stomach, celebrated his fiftieth birthday, March 10. He received a great ovation.

Obituary.—Dr. Laborde, a member of the French Academy of Medicine, well known throughout the civilized world on account of his tongue traction method of inducing artificial respiration, died in Paris, April 6.—The death is announced of Dr. Raingeard, of Nantes, surgeon to the hospitals and formerly professor of anatomy and physiology in the Medical School.—Dr. G. Pauffard, formerly professor of anatomy in the Lyons Medical School, also died recently.—Dr. J. V. Carus, for many years professor in the Leipsic Medical School, died March 10, in his eightieth year.—Dr. Clemens von Kahlden, professor of pathological anatomy in Freiburg, died suddenly March 24, of apoplexy.—The death is also announced of Dr. Francesco Randacio, professor of anatomy in the Palermo Medical School, and of Dr. Luciano Armanni, professor of histology in the Medical School of Naples.

The Latest Literature.

BRITISH MEDICAL JOURNAL.

March 28, 1903. (No. 2,204.)

1. A Demonstration on Some Experiments on the Nature and Specific Treatment of Hay Fever. FELIX SEMON.
2. The Goulstonian Lectures on Theories of Immunity and their Clinical Application. Lecture II. A. S. GRUNBAUM
3. On Ankylostomiasis. OSWALD BAKER.
4. Trypanosomiasis on the Congo. PATRICK MANSON.
5. Trypanosomiasis and Its Cause. A. MAXWELL-ADAMS, JUN.
6. Filaria Perstans. GEORGE C. LOW.
7. Screw-worms in St. Lucia. GEORGE GRAY.
8. The Diagnostic Value of Blood Counts in Malarial and Other Fevers. T. H. DELANY.
9. Beriberi Among Lascar Crews on Board Ship. D. W. KEILLER MOODY.
10. Note on the Changes in the Red Cells Produced by the Malignant Tertian Parasite. J. W. W. STEPHENS and S. R. CHRISTOPHERS.
11. A Case of the Form of Chronic Joint Disease in Children Described by Still. F. PARKES WEBER.

1.—Semon has experimented with some of the **toxin obtained** by Dunbar, of Hamburg, **from maize pollen.** He also employed the **antitoxin obtained** by the same worker after **injecting the toxin into horses.** The experiments were made by instilling a 1 to 1,000 solution of the toxin in normal salt solution into the conjunctivæ of several persons who were willing to submit themselves to the experiment, and who were known not to be hay fever subjects. Two of these patients developed some toxic symptoms after the instillation of the toxin solution, although neither of them had ever had attacks of hay fever. These 2 persons were considered to be more susceptible to the poison than the general run of ordinary nonpredisposed persons. When instilled into the eyes or into the nose of a person known to be the subject of hay fever, the toxin produced symptoms, similar to those of hay fever, which was usually relieved in a short time by the antitoxin. The effects of the instillation of the toxin are as variable in persons who are predisposed to hay fever as are the attacks of the disease. When the toxin and the antitoxin are introduced into the conjunctival sac together, the latter neutralizes the former. It is impossible to tell at this time whether the use of the antitoxin will result **in the cure of a spontaneous attack of hay fever or whether** it will be possible to use it to abort the attack. The author gives warning against premature hopes which may not be fulfilled. [J. M. S.]

3.—Baker writes on **ankylostomiasis.** The embryos of this parasite will not live in water, and the water-borne theory of infection must be given up. The usual source of infection is geophagism or the eating of food with unwashed hands. The symptoms are at first epigastric discomfort and a capricious appetite. As the disease advances, the patient loses all desire for food and becomes profoundly anemic. Edema arises, first in the eyelids, subsequently extending over the entire body. Albumin appears in the urine, the mental faculties fail, and a great drowsiness supervenes. Except for eosinophilia, the blood presents no feature special to the disease; toward the termination of a fatal case it shows the character of pernicious anemia. The characteristic ova of the ankylostoma are found in the feces. The means of prevention of ankylostomiasis are fully expressed by the word sanitation. For the treatment of ankylostomiasis there is no vermifuge comparable to thymol. Three doses of the drug are generally given on the same day, at intervals of either a half hour or some hours. The dose of thymol is from 10 to 60 gr. In using thymol the same precaution in regard to food and purgatives should be taken as when using other anthelminthics. The effects of thymol closely resemble those of carbolic acid, and in prostrated patients it is sometimes advisable to improve their condition before adminstering the drug. [F. T. S.]

4.—Manson reports the case of a woman, aged 40 years, who had lived for 3 years on the Congo. She complained of attacks of fever accompanied with an erythematous rash which appeared every 10 days; the fever lasted 3 days and was followed by 7 days of complete apyrexia. The patient was anemic when first seen, but no visceral disease could be demonstrated. No blood examination was made at the time. After her return to the Congo, a physician in that region examined her blood and found a **trypanosoma.** The disease is supposed to have been caused by a bite which the patient had received on her foot about 2½ years before. What animal or insect the bite was made by was not known, although Manson is inclined to believe that the poisonous tick of bug-like habits was responsible. The patient complained of defective vision during her illness. At last accounts she was improving in health, and this encourages the hope that immunity may finally be acquired and that the disease is not necessarily fatal. [J. M. S.]

5.—Maxwell-Adams believes that **trypanosomiasis in man** is due to the bites of rats. He hints that this animal is the intermediate host of the parasite. [J. M. S.]

6.—**Filaria perstans** has only been found in or near the equatorial belt, where the temperature is high and the atmosphere is saturated with moisture. Low describes the anatomy of the embryonal form of this worm as well as that of the adult form. The adults are found in the connective tissue at the base of the mesentery. Analogy leads him to suppose that the embryo filariæ are sucked out of the blood by some insect, in the body of which they develop into adult forms. Filaria perstans gives rise to no symptoms. The sleeping sickness is not associated with this worm. [J. M. S.]

7.—The **screw-worm** is the larval form of a small fly, **chrysomyia (compsomyia) mascellaria.** It attacks domestic animals and is widely distributed in America. Gray reports 5 instances in which the larvæ were found in human beings. [F. T. S.]

8.—Delaney reports the results of the **blood examinations** in 66 cases of supposed **malaria.** He divides the cases into 3 classes: (1) Those in which the diagnosis of malaria was clear from the beginning; (2) those in which the diagnosis was made only after a blood examination had been made and (3) those which were not malarial. A percentage of large mononuclear leukocytes above 12 is diagnostic of malaria. The lymphocytes are usually increased: the total leukocytic count is diminished; myelocytes are frequently present to an appreciable extent; the erythrocytes are diminished; but the hemoglobin is not much diminished, the color index often being above 1. If, in a malarial case, the fever is very recent, the blood changes may not have had time to develop. If leukocytosis is present from any cause, the 12% of large mononuclears may appear not to be present. If the temperature is 103° or more when the puncture is made, the above conditions may not be found. [J. M. S.]

9.—Moody reports 2 cases of **beriberi among Lascar crews** on board ship. He believes that rice is a prime factor in the disease, and that the germ, whatever it is, is closely adherent to the rice. [J. M. S.]

10.—Stephens and Christopher describe the **stippling of the erythrocyte due to the presence of the malignant tertian malarial parasite** in the blood. When caused by this parasite, the staining dots with the Romanowsky method are few in number and are coarse in size and irregular in outline. [J. M. S.]

11.—Weber reports a case of **rheumatoid arthritis** which followed an attack of endocarditis and in which the patient almost completely recovered. [F. T. S.]

LANCET.

March 28, 1903.

1. Goulstonian Lectures on Theories of Immunity and Their Clinical Application. Lecture II. A. S. GRUNBAUM.
2. The Comparative Value of the Mouth, the Rectum, the Urine, the Axilla and the Groin for the Observation of the Temperature; Especially in Regard to Tuberculosis and to the Effects of Exercise and Other Conditions. F. W. BURTON-FANNING and S. GUERNEY CHAMPION.
3. Medicolegal Post Mortem Examinations. HENRY HARVEY LITTLEJOHN.
4. Bilharziosis Surgically Considered. FRANK MILTON.
5. Further Note on the Pulse-Wave in Aortic Regurgitation. PAUL M. CHAPMAN.
6. On the Necessity for a More Frequent Use of the Cys-

toscope in the Diagnosis of Diseases of the Urinary System. JOHN G. PARDOE.

7. An Unusual Case of Matting of Intestines for Which Double Enterectomy Was Performed Successfully. BILTON POLLARD.
8. Treatment of a Formidable Case of Sprue by Diet; the Value of Strawberries. EDWARD H. YOUNG.
9. Advances in the Treatment of Paralytic Deformities. A. H. TUBBY.
10. A Case of General Miliary Tuberculosis; Symptoms of Acute Myelitis Involving the Conus Medullaris and Cauda Equina; with a Note on the Value of the Abdominal Icebag. VIDAL G. THORPE and EDWYN R. GRAZEBROOK.
11. Recent Experiments of the United States Army with Regard to Sanitation of Yellow Fever in the Tropics. W. C. GORGAS.

2.—Burton-Fanning and Champion present a study of the comparative value of the mouth, the rectum, the urine, the axilla and the groin for the observation of the temperature. They point out that the time commonly allowed for taking the temperature by the mouth is often too short, and as long as 30 minutes may be required to determine the maximum oral temperature. They also conclude that the interior of the mouth becomes cool under the following conditions: (1) The breathing of air with parted lips, (2) exercise entailing more rapid respiration and (3) the contact of cold with the outside of the cheeks. When the thermometer is inserted into the rectum, the maximum temperature is reached in from 1 to 5 minutes. The rectal temperature taken during rest and that taken immediately after any movement are totally different, being higher after any exertion. They also state that the passage of 5 ounces of urine over the bulb of the thermometer when held close to the meatus urinaris gives a correct reading in the majority of the cases. Occasionally—about once in 20 observations—they found a curious discrepancy between the rectal and urine temperatures which they are unable to explain. The maximum axillary temperature can be obtained in 10 minutes in the majority of cases. In some instances the maximum is not reached until after the lapse of from 15 to 50 minutes and in children of over an hour. They point out that the rectal temperature is on an average 0.4° higher than that of the mouth. The limits of variation between the rectal and oral temperatures were found to be between 0.8° and 0.0°. In 150 comparative observations the average excess of the rectal temperature over that of the urine was 0.2°. They consider the urine temperature untrustworthy for observation. Out of 200 observations of the comparative temperatures of the groin, axilla and rectum, the following average variations were observed: The rectal temperature was 0.6° higher that that of the groin and 0.9° higher than that of the axilla. They point out that much depends on the observer having the patience to coax the thermometer up to its maximum by allowing it to remain in the axilla or groin sufficiently long. They found that slight exercise will produce an appreciable rise of temperature in the rectum, while with more exertion they have noted a rise of as much as 3½°. The fluctuation of temperature consequent on exercise and repose can only be reliably observed by taking the temperature in the rectum. They also point out that a distinct rise of temperature precedes each menstrual period, the amount of elevation being 0.5°, affecting the morning and evening records. [F. J. K.]

3.—Littlejohn contributes an article on **medicolegal post mortem examinations.** He writes that post mortem examination should be required in all cases of persons found dead, no matter whether the body presents indications of violence or not, and, when positive and correct evidence from impartial and reliable witnesses cannot be obtained, it should be decided that the deceased died from natural causes. He then discusses the question: Who should perform the medicolegal post mortem examination? and also the procedure and methods which should be followed in medicolegal post mortem examinations. [F. J. K.]

4.—Milton discusses **bilharziosis** from the **surgical point of view,** relating his experience in the Kasr-el-Aini Hospital of Cairo. The only places in which this disease offers opportunity for relief by surgical means is in the bladder, the urethra, the rectum and the female genital organs. It presents itself in three forms, the atrophic, the hypertrophic and a combination of the two. It most frequently attacks the bladder, its symptoms being hematuria occurring at the end of micturition, pain and scalding during micturition and frequent micturition. These symptoms occur in the early stages of the disease. Later it produces all the symptoms of an intractable septic cystitis. The patient is frequently subject to stone. In cases in which the formation of the bilharzial tissue is extreme, adhesion may form between the distended bladder and the anterior abdominal wall with the subsequent formation of urinary fistulæ. When the ureter becomes involved obstruction to the passage of urine is apt to occur. This obstruction may be the result of narrowing in the atrophic form, and of polypi in the hypertrophic form of the disease. After discussing the various forms of the disease and their treatments, Milton concludes his article with some interesting statistics. At the Kasr-el-Aini Hospital, during the year 1901, 930 cases of this disease were treated; 714 of these in the out-patient department alone. The disease is most frequent between the ages of 15 and 45, although it may occur at any age; 893 patients were males and only 37 were females. The black races appear to enjoy a certain amount of immunity from the disease, which is most prevalent among the peasants of lower Egypt. It is shown that many more people suffer from the disease than are aware of the fact, which is proved by the examination of the urine of a large number of school children, in which the bilharzia was frequently discovered. [J. H. G.]

5.—Chapman presents a note on **the pulse-wave in aortic regurgitation.** In a former communication he referred to a case in which the radial pulse was delayed slightly; the normal radial delay being 0.20 second and in his case it was 0.216 second, a lengthening of 1/100 second. The case reported by him in this article is illustrated with cardiograms and pulse-tracings. He furnishes proof that the pulse in aortic regurgitation is not always retarded or delayed, and, indeed, the tracing given shows that the heart radial interval may be even shorter than normal. [F. J. K.]

6.—Pardoe refers to a number of cases of **disease** of the **bladder,** showing the great necessity for the use of the **cystoscope.** In the cases reported, by means of the cystoscope it was discovered that the bladder condition was not the one suspected and for which operation was about to be performed. The use of the cystoscope produces no more inconvenience and trouble than the passage of an ordinary urethral instrument, and its advantages are manifold. The author considers that in diseases of the urinary organs in which the diagnosis is doubtful the examination is incomplete without the use of this instrument. [J. H. G.]

7.—Pollard reports an unusual and interesting **case of matting of the intestines** for which he performed a **successful double enterectomy.** A large amount of the small intestine was matted together and firmly adherent to the sigmoid. It was necessary to remove the whole mass of small intestine, measuring about 3 feet, and a number of inches of the sigmoid flexure. An end-to-end anastomosis by means of sutures was employed in each instance. The patient made a good recovery. [J. H. G.]

8.—Young presents **the history of a case of sprue,** occurring in a woman, 59 years of age. He lays particular stress on the treatment and the value of strawberries as an addition to the dietary. It was found that milk diet would alone control the disease, but the patient, when kept on milk alone, declined in strength and vitality. The addition of mashed bread to the milk added to the strength of the patient but was attended by the recurrence of the characteristic movements of sprue. Further addition to the dietary of fish, custard or arrowroot caused a return of the trouble. A remarkable change in the condition of the patient occurred after the addition to the diet of strawberries, which appeared to have a specific effect on the disease. When strawberries were given, the bread could be increased to practically any extent without risk. [F. J. K.]

9.—Tubby discusses the **recent advances in the treatment of paralytic deformities,** paying particular attention to tendon grafting or muscle transference, referring to the history, technique and after-treatment of this operation. It is often necessary, if a foot, for instance, has for several years been in a position of valgus or varus, to re-shape the joint surfaces, since these have always become changed. Arthrodesis or artificial ankylosis of a joint for the purpose of relieving a flail-like joint has been most frequently practised upon the ankle. Tubby does not recommend it at the knee, preferring a mechanical apparatus. His paper closes with a discussion of the advances made in the treatment of spastic paralysis. [J. H. G.]

10.—Thorpe and Grazebrook report a **case of general miliary tuberculosis** which occurred in a man, 23 years of age. The autopsy revealed many old tuberculous lesions in the lung, some of which had undergone calcification, and the left and right kidney contained many yellow tubercles. The bladder contained many small ulcers. A left psoas abscess was found which extended from the lower border of the second lumbar vertebra to two inches below the brim of the true pelvis. Pus existed in the spinal canal pressing on the membranes covering the cauda equina. The brain membranes were normal. They hold that the abscess in the iliopsoas muscle was due to caseation of innumerable tubercles deposited in its substance. [F. J. K.]

11.—Gorgas reviews **the recent experience of the United States Army with regard to sanitation of yellow fever in the tropics.** He points out that, since the discovery of the mosquito transmission of yellow fever, the morbidity and mortality of yellow fever have practically disappeared in Havana. The article includes a table which illustrates the number of deaths per year from 1900 to 1902. The average number of deaths per year up to 1901 was 446. After the introduction of measures aimed at the destruction of mosquitoes, and the prevention of these insects from biting those sick and those suspected of having yellow fever, the prevalence and mortality fell; from 1901 to 1902 the number of deaths was five, and in 1902 there were no deaths. [F. J. K.]

MEDICAL NEWS.

April 13, 1903. (Vol. 82, No. 15.)

1. Some Problems in the Major Surgery of the Kidneys; with a Report of Cases. JOSEPH A. BLAKE.
2. An Operation for Paronychia, or "Run-round." SINCLAIR TOUSEY.
3. The Geographic Distribution of Uncinariasis in the United States. WILLIAM RIDGELY STONE.
4. Lung Surgery: Historical and Experimental. BENJAMIN MERRILL RICKETS.
5. Report of a Case of One-sided Dislocation of the Mandible. Reduced by a Novel Manipulation. FRANK WOODBURY.
6. Eye Affections Complicating and Resulting from Rheumatism. RALPH OPDYKE.

1.—Blake says the danger of the so-called conservative operations, nephrolithotomy and pyelolithotomy in severely affected kidneys cannot be too strongly emphasized. In 13 cases so treated the mortality was 38.4%, while 15 nephrectomies for the same condition gave a mortality of 16.3%. On the other hand, in aseptic and very slightly infected kidneys in which the ideal operation of suture of the kidney could be done, the mortality was only 3.4% in 29 cases. [T. M. T.]

2.—Tousey states that incision into the flesh is always radically wrong, even though the pus may be nearly a dram in amount. The author advises separating the attachment of the cuticle to the dorsal or exposed surface of the nail to a sufficient extent to permit the escape of the pus and the introduction of a stick of silver nitrate to disinfect the sulcus. In this treatment there will be no disfiguration. [T. M. T.]

3.—Stone reports 38 cases of **uncinariasis** in this country. It has been found in Louisiana, Florida, Texas, Alabama, Georgia, South Carolina, Missouri, Mississippi, Virginia, Maryland and New York. The 2 varieties are uncinaria duodenale and uncinaria Americana. [T. M. T.]

5.—Woodbury explains his **novel manipulation in one-sided dislocation of the mandible** as follows: By the gentle motions of opening and closing the mouth, the condyle is worked gradually backward toward the articular eminence. The sudden application of force takes the muscles by surprise, and, while they are, so to speak, off their guard for an instant, the condyle with its articular cartilage slips over the obstruction into the glenoid fossa, before the muscles have time to contract in response to the tap or jolt communicated to them through the bone. [T. M. T.]

6.—Opdyke tries to show in his article that resultant from an attack of articular rheumatism there may be an inflammation of wellnigh any of the tissues in or about the eye, and that these same structures frequently show a peculiar susceptibility toward the rheumatic poison. Also that these textures, when involved, quickly respond to the recognized rheumatic remedies. [T. M. T.]

MEDICAL RECORD.

April 11, 1903.

1. The Technique of Nephropexy, with Special Reference to a Method of Attaching the Kidney as Nearly as Possible in Its Normal Position. RAMON GUITERAS.
2. Intranasal Obstruction and Its Treatment. H. HOYLE BUTTS.
3. Cases of Morphinism in Which the Drug Was Immediately Withdrawn. MARGARET S. HALLECK.
4. Bronchopneumonia. JOSEPH N. STUDY.
5. The X-Rays and the Finsen Light in the Treatment of Lupus. A. D. ROCKWELL.
6. The Treatment of Ringworm. GEORGE THOMAS JACKSON.

1.—Guitéras describes the **technique of nephropexy,** with special reference to a method of attaching the kidney as near as possible in its normal position. He outlines in detail the various types of operation employed since Hahn in the fixation of the kidney, classifying them according to certain leading features. Guitéras denudes but one-half of the posterior surface of the kidney, that nearest the convexity, leaving the anterior surface intact. He passes the sutures in such a manner through and under the reflected capsule that they hold the organ securely during the formation of adhesions that goes on after the operation, and he ties his sutures over the muscles and fasciæ in such a way as to bring the kidney into close apposition with the parietes as nearly as possible to the normal level, and in its normal horizontal angle, with the convex border pointing outward and slightly backward. Guitéras' paper is accompanied by excellent illustrations, and 59 references to the literature of the subject are appended. [T. L. C.]

2.—Butts outlines among other **causes of intranasal obstruction: Acute and passive hyperemia, foreign bodies, rhinitis hypertrophica, and ecchondrosis and exostosis of the nasal septum.** As to the advisability of operation in cases of **nasal spur** he lays down the following rules: (1) When a septal spur seriously impairs the respiratory function of a nasal fossa, it should be removed. (2) When a septal spur impedes the drainage from an accessory sinus or a nasal fossa, it should be removed. (3) When a septal spur is in contact with opposing structures, it should be removed. The technique of the operation is described. Besides the causes of nasal obstruction mentioned above, the writer devotes especial attention to **deflections of the cartilaginous septum.** In cases of this condition in which surgical treatment is necessary he advises the operation of **Asch.** Nasal exmyxomata are also described and the methods of dealing with them considered. [T. L. C.]

3.—Halleck, working in the New York State Reformatory for Women, presents the notes of 4 cases of morphinism in which the drug was immediately withdrawn. All of these patients expressed the desire to be broken of the habit. The various indications were met by the use of strychnine, hyoscine, cascara and codeine. The results were regarded as successful. [T. L. C.]

5.—Rockwell states that a patient recently treated for lupus received benefit **both from the X-rays and the Finsen light.** The question as to which of the two is the more effective method seems to be answered by the fact that the difference exists in degree rather than in kind. **The actinic rays,** which are the only efficient rays of light in the treatment of malignant and tuberculous skin affections, possess one great manifest advantage over the X-rays, namely, their more benign action. It is true that light-radiance, like its fellow, the X-ray, causes both chemical changes and fluorescence, as well as dermatitis and pigmentation, but the dermatitis, the result of light, is soon produced and undergoes rapid resolution, while X-ray burns are both slower to develop and far slower to heal. So far, then, the light is to be preferred to the ray. On the other hand, there seems to be no question that **the curative effects** of the X-rays in lupus and other skin affections follow more rapidly than those of light, while with improved technique X-ray burns may in time become an almost negligible quantity. The X-rays and the actinic rays of light do not differ so much in kind as in degree—in the frequency and intensity of their vibrations. Their therapeutic effects are therefore very much the same. They cure the same diseases. [T. L. C.]

6.—Jackson recommends **goose grease in the treatment of ringworm**, and he has found the efficiency of this remedy is increased if a dram of the **crystals of iodine** is added to the ounce of goose grease. [T. L. C.]

NEW YORK MEDICAL JOURNAL.

April 11, 1903.

1. Intestinal Obstruction. JOHN B. HARVIE.
2. On the Physiological Action of Silver Sulpho-ichthyolate. HORATIO C. WOOD, JR.
3. Practical Points on Intubation of the Larynx for Croup, with a Report of Thirty-six Cases. FIELDING LEWIS TAYLOR.
4. Food and Nutrition in Disease. L. H. WATSON.
5. Methods Which Render Some Therapeutic Agents More Palatable. SAMUEL E. EARP.

1.—Harvie defines **intestinal obstruction** as any condition which will interfere with the continuity of the intestinal canal. The obstruction may be either acute or chronic and partial or complete. In discussing the etiology, the various forms of hernia, he says, are the most prolific factors to be considered. Whereas, in the chronic form, malignant disease and postoperative adhesions are probably the most frequent causes. The author then describes the usual symptoms of intestinal obstruction. In speaking of malignant disease as a causative agent, the author says. if this is manifested by pain it indicates that the malignant process has disseminated far from its original site, thus rendering operative interference hopeless. The author has found that regional infection occurs early if the growth is high up, but if located in the large intestine it, as a rule, develops late. Two case-histories accompany this paper, picturing the insidious onset of malignant obstruction. [P. B. B.]

2.—Wood, in discussing the **physiological action of silver sulpho-ichthyolate**, first considers the chemical relations of this substance. He has found that it is precipitated by the ordinary reagents for silver, particularly by the salts of hydrochloric acid. Therefore, it would seem impossible for this agent to retain its integrity in the stomach. The changes that this substance may undergo when given intravenously are not definitely known. The author does not believe, however, that it can maintain its integrity in the blood. Furthermore, from the fact that this substance is precipitated by the chlorides and the albumins of the body, it would seem highly improbable for this agent to be absorbed unchanged when given hypodermically. The discrepancy that exists between the results obtained by Wood and those of Aufrecht, would seem entirely explicable on the ground that Aufrecht failed to note the mode of administration, and it is, therefore, probable that the low toxicity he obtained was due to imperfect absorption. The author shows that the harmlessness of large doses depends on the mode of administration. The action of this compound Wood has found to be precisely similar to that of the other silver salts. [P. B.B.]

3.—Taylor concludes his paper on **intubation of the larynx** by setting forth a long list of case-histories. These illustrate the difficulties sometimes experienced in intubation and also the results obtained if early and properly performed. [P. B. B.]

4.—Watson contributes a paper on **food and nutrition in disease.** He first speaks of the chemical composition of the body and calls attention to the similarity which exists in the foods which nourish it. He discusses at some length the compounds used as our foods, namely, protein, fats, carbohydrates, mineral salts and water, the most important of which, of course, is protein. The substances from which these compounds are derived are then spoken of. The function possessed by each of these agents are also described in detail. The author says that it is unnatural to introduce food into the stomach during periods of physical or mental suffering. At this time the appetite is usually wanting, and without it, therefore, imperfect assimilation will only add to the physician's worries and the patient's discomfort. Appetite, he says, is the mightiest exciter of the secretory nerves of the stomach. From his studies of the ferments of the pancreas Watson has found that the amount of secretion was dependent upon the quality and character of the food injected. The author does not favor the existent habit of drenching the intestinal tract with alkaline waters. The employment of these agencies in obesity he emphatically condemns. In considering the diet for patients with gastric disease, he lays stress on the fact that not alone digestibility but the occupation in life must be considered. [P. B. B.]

5.—Earp considers some **methods which render certain therapeutic agents more palatable.** Castor oil, he says, is best given with a small quantity of glycerine and sherry wine. However, when this agent is to be dispensed in large quantities, a flavored emulsion will be more serviceable. To disguise the taste of quinine, he recommends one grain of tannic acid to each 3 grains of quinine, given in a vehicle composed of syrup of tolu. Chloral hydrate, he finds, is best given with peppermint water. In giving the medicinal oils he recommends that the mouth be previously flushed with a small quantity of whiskey. Objectionable-tasting drugs may also be disguised by first placing a few grains of table salt upon the tongue. [P. B. B.]

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

April 9, 1903. (CXLVII, No. 15.)

1. Dry Hot Air as a Therapeutic Agent, with Demonstration of the Body Treatment. CLARANCE EDWARD SKINNER.
2. The Rôle of Atmospheric Pressure in the Hip Joint. SEABURY W. ALLEN.
3. The Doctor in the Navy. A. J. NUTE.

1.—In Skinner's article the important points in **the use of hot air are**: (1) Immediate relief of pain, however severe, which relief may be rendered permanent by repeating the treatment as often as the pain becomes troublesome; every hour, if necessary. (2) Shortening of the duration of the disease, which usually lasts only from 5 to 10 days when hot air is thoroughly administered in combination with salicylic acid. (3) Lessening of the liabilty of cardiac involvement because of the rapid control obtained over the pathological condition, whereby the infection is inhibited from further attacks upon other tissues. (4) The lessened number and quantity of the drugs which it is necessary for the patient to ingest because of the increase produced in the efficiency and intensity of their action at the seat of infection, hence rendering it impossible to avoid drug intoxication. (5) In many cases which prove intractable to other measures its employment will render impossible the extinction of the trouble. (6) When properly and judiciously applied, its use is never productive of any vicious aftereffect; on the contrary, the patient's general condition is immediately and greatly improved. [T. M. T.]

2.—Allen's experiments, reported in his article on the **Rôle of Atmospheric Pressure on the Hip Joint,** show that what holds the bones together is primarily the cotyloid and secondarily the capsular ligaments (of course, in life the elasticity of the surrounding structures helping them out) and that air pressure need not be considered. [T. M. T.]

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

April 11, 1903.

1. The Study of Pediatrics in its Relation to Medical Education. THOMAS MORGAN ROTCH.
2. The Trend of Modern Surgery. JAMES E. MOORE.
3. A Modification of Panas' Operation for Ptoses. FRANK ALLPORT.
4. The External Preparations and their Therapy. CARL S. N. HALLBERG.
5. General Puerperal Septicemia Treated by Intra-Abdominal Irrigation with Normal Saline Solution. Recovery. JAMES H. BURTENSHAW.

6. Fistula Between the Gall-Bladder and the Stomach. A. BARR SNIVELY.
7. Light in the Treatment of Lupus and Other Chronic Skin Affections. J. W. KIME.
8. Therapy of Dysentery. WILLIAM ROBERTS.
9. Postoperative Pulmonary Complications. RUBENS PETERSON.
10. Iodoform Dermatitis. W. A. BRYAN.
11. Cell Implantations in the Production of Tumors. LEO LOEB.
12. Report of a Case of Typhoid Perforation with General Peritoneal Infection and Five Other Consecutive Cases of General Suppurative Peritonitis; All Recovered. J. B. MURPHY.
13. Functional Tests of Hearing: Some of the Principles on which they are Based. WILLIAM LINCOLN BALLENGER.
14. The Treatment of Traumatic Gangrene of the Extremities. VAN BUREN KNOTT.
15. Poisoned Wounds by the Implements of Warfare. LOUIS A. LAGARDE.

2.—Moore, in his presidential address before the Western Surgical and Gynecological Association, discusses the good and bad **tendencies of modern surgery.** Surgeons are more truly conservative now than ever before, as they save more lives and prevent more suffering than their predecessors. Surgeons should not be held responsible for the work of the "would-be surgeon" found in every community. The author thinks more time should be given to practical clinical work in the college course and not so much to the laboratory, or else the course should be lengthened in order to allow of more practical teaching. It is also suggested that too much major and too little minor surgery is taught to the student in our medical schools. In referring to the great advancement made in medicine, Moore states that it is his belief that it is due more to specialism than to anything else. One of the bad tendencies of to-day is that of young men to enter at once upon special practice before they know what line of work they are best suited for and before they have enough general information. [J. H. G.]

3.—Allport suggests a **new modification of Panas' operation,** which, however, can only be understood by consulting the numerous illustrations accompanying the article. [J. H. G.]

4.—Hallberg discusses the preparations embraced in the broad generalization of external preparations in the following order: Suppositories, cerates, plasters, oleates, liniments and collodions. He also discusses and gives formulæ of modern dermatological preparations. [F. J. K.]

5.—Burtenshaw gives a unique report of a case of general puerperal septicemia treated for a considerable length of time by irrigation with normal saline solution, the patient making a good recovery. Large quantities of the fluid were introduced into the abdominal cavity through a 2-inch incision midway between the umbilicus and pubis. [W. A. N. D.]

6.—Snively refers to the literature relating to **fistula between the gall-bladder and stomach** and reports an interesting case. The rarity of the condition is shown by the fact that, out of a collection of 10,866 autopsies, fistula between the gall-bladder and stomach was found but once. Other biliary fistulæ occurred 42 times. The case reported is that of a woman, 53 years of age, who suffered from numerous attacks of hepatic colic during which she passed large numbers of stones. Symptoms of gall-stones had existed for 22 years. In a recent attack the patient passed 97 stones and in the one previous to that 80 gall-stones. After the last attack she improved in strength, but the bowels remained constipated, and she complained of a burning sensation in the stomach. The diagnosis of fistulous opening between the gall-bladder and stomach was made upon the following symptoms which later developed: Eructations of bile and gas; a persistent tender spot in the region of the pyloric end of the stomach; continuous obstinate constipation, and pain when any food was taken into the stomach. At this time operation was advised, but the patient refused to be operated upon; later, however, she consented, and Dr. Cullen of Baltimore operated. The gall-bladder was small and found intimately adherent to the stomach and surrounding structures. The opening between the stomach and gall-bladder was easily discovered and the two organs separated. The opening in the stomach was closed, the gall-bladder attached to the abdominal wall and 2 stones removed from the cystic duct. On the fourth day after the operation the stools were bile-stained. The external fistula closed promptly, and the patient ultimately made a good recovery. [J. H. G.]

7.—Kime contributes an article **on light in the treatment of lupus and other chronic skin affections.** His method of treating lupus with concentrated actinic light derived from the sun is as follows: The wound is first thoroughly cleansed; he avoids antiseptics in order to determine accurately the specification of the light. The instrument for concentrating the light is placed about 18 inches from the patient, then the concentrated light is applied to the wound surface until the albumin of the superficial tissues becomes a smoky white color, which requires but a few moments' exposure. The treatment is then turned over to a nurse who seats the patient a little farther from the glass or a little nearer to it so as to avoid the focal point of the lens. The application of the light is continued for about 20 minutes. After this a wet dressing of absorbent cotton and water is applied, and daily treatments are repeated until healing is complete. The article includes reports of 4 cases. Kime regards strong concentrated actinic light as a most efficient remedy. [F. J. K.]

8.—Roberts discusses **the therapy of dysentery,** which deals particularly with the use of ipecac. He writes that the advantages of the ipecac treatment in almost every form and type of acute dysentery are: (1) Its simplicity, its safety and its certainty, compared with any other method. (2) The promptitude with which the inflammation is stopped. (3) The rapidity with which repair takes place (a) by resolution or (b) by granulation and cicatrization. (4) Conservatism of the constitutional powers. (5) Abbreviation of the period required for convalescence. (6) Decrease in the frequency of recurrence. (7) Decrease in the frequency of abscess of the liver. (8) Diminution of mortality in cases treated. The chief objection to ipecac is its frequent rejection from the stomach. Its administration in the form of compressed pills coated with salol is recommended to avoid nausea and vomiting and therefore securing the action of the remedy. [F. J. K.]

9.—Peterson writes on **postoperative pulmonary complications** and records the histories of 6 cases which include 2 of lobar pneumonia, one of fibrinous pleurisy, one of bilateral septic pleurisy with effusion, one of right-sided dry pleurisy and one of bronchitis. He states that he is having more and more careful physical examinations made of the patients prior to the narcosis, and, unless the operation be one of emergency, it is postponed in the presence of even a slight cold. [F. J. K.]

10.—Bryan discusses **iodoform dermatitis.** The first manifestation of this condition appears at the end of the first 24 or 48 hours after the application of iodoform to the wound and resembles very closely the poisoning of *rhus toxicodendron,* differing, however, in that there is not so much redness. Numerous vesicles appear which gradually increase in size and may extend several inches from the original focus. The patient complains of intense, intolerable itching and burning pain. Under treatment the duration of this dermatitis is from one to 4 weeks. The article is illustrated, and the histories of several cases are recorded. [F. J. K.]

12.—Murphy discusses **general perforative peritonitis** and its treatment, reporting a case of **typhoid perforation** and 5 other consecutive cases of general suppurative peritonitis, the patients recovering. General suppurative peritonitis is not necessarily a fatal disease. The result depends upon the type of the infection, whether of streptococcic or staphylococcic origin for instance. A virulent streptococcic infection produces rapid denudation of the epithelial covering of the peritoneum, rendering absorption very prompt. With the staphyloccus or colon bacillus infection this change takes place more slowly, and the patient may survive such infection for a number of days. Another feature in determining the result is the period of time which elapses between the infection and the time of operation. In times past the diagnosis of perforation was based on the condition of collapse, whereas at present it is more on the symptoms of pain, nausea, vomiting, localized tenderness, circumscribed flatness on piano percussion, elevation of temperature, and hyperleukocytosis. The tension under which the products of infection are retained in the peritoneal cavity, is another question deserving serious consideration, since the greater the pressure under which the pus is held in these acute conditions, the more rapid is the absorption. When the pressure is removed absorption ceases, as after the opening and draining of any abscess. The diffusion of the infective material through the peritoneal cavity, the administration of antitoxins and other substances to antidote or dilute the poison, the length of time the patient is kept under the anesthetic, all influence the result. Murphy believes in general anesthesia as sufficient time can be saved more than to compensate for the dangers attending its use. Time is of the most vital importance in these operations. In all of the cases reported Murphy's method of operating was quickly to open the abdomen on the right side and without sponging or irrigation to introduce 2 large drainage tubes, one into the pelvis and one into the right iliac fossa. The patient before, during and after operation was kept in a semisitting posture in order to produce a gravitation of the fluid to the pelvis. A thorough stimulation was employed in all the cases, and antistreptococcic toxins were employed in some. In each of the cases reported, excepting the typhoid perforation, the source of the infection was the appendix, which was removed in each case. A point upon which Murphy lays great stress is that there is little or no depression immediately after the perforation of the intestine and no collapse. Collapse is a late manifestation and is the expression of the denudation of the peritoneum of its epithelial coat and absorption of infection. [J. H. G.]

14.—Knott recommends, in the **treatment of traumatic gangrene of the extremities**, a circular amputation of all structures, soft parts and bone together, just above the line of apparent demarcation, and later, when the patient's condition is improved, a second operation which consists in a higher division of the bone and approximation of the soft parts. His reasons for advising this are that the cutting of the flaps and the introduction of the sutures tend to produce a gangrene of this structure, the circulation of which is already bad. He had practised the method advised 4 times, once in the upper third of the thigh, once in the middle third of the forearm, and twice in the upper third of the leg, with uniformly good results. [J. H. G.]

15.—To be abstracted when concluded.

AMERICAN MEDICINE.

April 11, 1903.

1. Congenital Absence of the Clavicles, with Photograms and Radiograms: Cleidocranial Dysostosis. HARRY M. SHERMAN.
2. Degeneration of the Erythrocyte. JOHN C. DA COSTA, JR.
3. An Operation for Cicatricial Contractures of the Upper Extremities. A. H. TRAVER.
4. Glycerol of Iodine. T. W. WILLIAMS.
5. Cancer of Male Breast: Report of a Case. EDWARD A. BALLOCH.
6. Congenital Absence of Both Inferior Recti Muscles. EDWARD STIEREN.

1.—Sherman reports 2 cases of **congenital absence of the clavicles.** The first patient was a boy of 3 years who was normal mentally, but who had marked evidences of rachitis. It was possible to pull the child's shoulders forward with very little force and to touch them together under the chin. This act caused no pain or discomfort, and the shoulders returned spontaneously to their usual position as soon as they were released. The lack of the clavicles seemed to be no detriment to the child, and the fact of their absence was but accidentally discovered. His second patient was a first child of 7 years, with practically the same history and physical signs. Sherman is inclined to regard the cases as chance occurrences of this particular type of imperfect development. [T. L. C.]

2.—Da Costa concludes his paper on **degeneration of the erythrocyte,** with the following deductions: (1) The viscosity of the erythrocytes is influenced by cellular plasma alterations, the nature of which is obscure. The viscosity is exaggerated by the direct influence of various toxic agencies, and is diminished in many anemic states. This phase of cellular pathology is interesting from an experimental point of view, rather than as a finding of clinical application. (2) Simple decoloration illustrates the earliest retrograde change affecting the erythrocytes, and its intensity generally corresponds to the severity of the anemic process by which it is excited. The change may exist alone, as in the milder forms of anemia, or it may be combined with graver necrotic degeneration of the cells, in anemias of greater severity. (3) Deformities of shape and size are common to all pathological blood, the degree to which such changes develop being related to the intensity of the blood impoverishment. Megalocytosis is a more serious sign than microcytosis. (4) Atypical staining of the erythrocytes betrays an impairment of function, and, as a rule, is found most commonly in corpuscles the hemoglobin content of which is subnormal. It is most striking in anemias of the primary type. (5) The prevalence of megaloblasts indicates a fetal reversion of the bone marrow, and stamps the blood changes as pernicious, except in the anemias symptomatic of *bothriocephalus latus* infection and of nitrobenzol poisoning. The presence of megaloblasts indicates a severe anemia, but not necessarily one of fatal outcome. (6) Granular basophilia, whatever may be its exact origin, should be interpreted as a sign of degeneration. It is a constant blood finding in but a single condition—lead poisoning—but is associated with many diseases involving a variable degree of blood deterioration. The experimental basophilia excited by the administration of preparations of hemoglobin warrants a doubt as to the wisdom of using such medicaments as substitutes for iron in the treatment of anemia. [T. L. C.]

BERLINER KLINISCHE WOCHENSCHRIFT.

March 9, 1903. (40. Jahrgang, No. 10.)

1. The Treatment of Tuberculosis of the Knee Joint. KOENIG.
2. Immunity and Narcosis. J. J. SNEL.
3. Mercury in the Etiology of Tabes. PAUL COHN.
4. Traumatic Albuminuria. F. ENGEL.
5. A Case of Double Apex-Beat. K. DOLL.

1.—König reports a case of **tubercular knee joint disease** in a servant-girl, aged 24. It was impossible to determine whether the bone was affected or not. The duration of the disease is variable. The best treatment is operation, removal of the diseased tissues, with subsequent drainage. In the majority of cases this alone is followed by recovery. When this fails, resection, arthrectomy, will be indicated; but this occurs almost never. Therefore, conservative surgery is best in the treatment of tuberculosis of the knee joint. [M. O.]

2.—Animals immune to a disease may lose their immunity when exposed while in narcosis. A series of experiments is reported, showing that **narcosis removes immunity.** Snel believes that these experiments explain the occurrence of pneumonia after long anesthesia, the latter predisposing to the former. Therefore, for several days before an operation, mouth and pharynx should be disinfected. [M. O]

3.—To show the absurdity of the statement that tabes might be due to the mercury given in treating syphilis, Cohn quotes the histories of 86 men, 63 of whom, 75%, had never undergone mercurial treatment; so that their tabes could not be mercurial in origin. In 6 of the other 23 cases the mercury was in such homeopathic doses that it could never have caused tabes. Of the other 17, not one had regular, methodical antisyphilitic treatment. Of 31 women, only 5 had been given mercury. **Cohn concludes that mercury does not cause tabes.** [M. O.]

4.—Engel reports the case of a man of 22 who was thrown from his horse, knocking his chest against a wall. **Albuminuria** followed during the next 24 hours only. This, with pains in the lumbar region, was probably the result of contusion of the kidneys, which recovered rapidly. The albuminuria was **undoubtedly traumatic in character.** [M. O.]

5.—Cases with a **double apex-beat** are rare. Doll reports 2 such cases in a man and woman, each aged 43 years, one with widespread arteriosclerosis, the other with double mitral disease. Both cases ended fatally soon afterward. It was possible that the condition followed the administration of too high doses of digitalis. [M. O.]

WIENER KLINISCHE WOCHENSCHRIFT.

March 5, 1903. (XVI. Jahrgang, No. 10.)

1. Twisting of the Pedicle of the Spleen and the Etiology of Floating Spleen. KONRAD BUEDINGER.
2. Suturing and Transplanting Bloodvessels in Animals. ALFRED EXNER.
3. The Casuistics of Cervical Ribs. EGON RANZI.
4. Charcot-Leyden Crystals in the Pus of Empyema. HEINRICH FLODERER.
5. Aristochinin in the Treatment of Pertussis. NORBERT SWOBODA.
6. Lymphosarcoma of the Urethra Following Gonorrheal Stricture. GEORGE KAPSAMMER.

1.—Büdinger reports in detail the case-history of a woman of 37, with sudden pain in the abdomen, on the left side. The diagnosis first made was incarcerated floating kidney. As the condition persisted, with vomiting and collapse, operation was performed, the surgeon, Dr. Mader, making the diagnosis of **twisted pedicle of the spleen** before operating. The twisting was double and in the longitudinal axis of the spleen, a rare condition. As there were several small auxiliary spleens present, the **spleen was removed,** with recovery following. The spleen was probably a floating spleen, from some cause having loosened its normal adhesions, leaving the pedicle as its only attachment. Twisting of the pedicle of the spleen seems not necessarily to cause circulatory disturbances. Operation is only indicated when twisting of the pedicle occurs, not for floating spleen alone. [M. O.]

2.—Exner's experiments on animals show that thrombi generally follow if a vein is used to replace an artery, on account of the difference in bloodpressure. While **a vein** may hold arterial blood, yet, **under normal arterial pressure, thrombosis occurs.** On account of the poor nutrition of the bloodvessel walls, transplantation experiments also failed. [M. O.]

3.—Ranzi, who found 32 cases of **cervical ribs** reported in the literature, in 18 of which resection was done, describes in full 2 more cases, with recovery after resection. In both cases there were pain, sensory and vasomotor disturbances in the arm on the affected side, with weakness, loss of power, atrophy, etc. Massage after operation effected recovery. The literature is fully reviewed. [M. O.]

4.—Floderer reports a case of **empyema** in a child of 13; in the pus **Charcot-Leyden crystals were found, with streptococci.** Floderer suggests that the occurrence of Charcot-Leyden crystals may show that the bacteria causing the production of pus have lost their virulence, making the prognosis favorable. [M. O.]

5.—Swoboda reports 10 cases of **pertussis in children treated with aristochinin,** in daily doses of under 5 grains for infants under one year, and, in older children, never over 15 grains a day. As a rule, 9 days suffice for the treatment, large doses being given for 3 days, half doses for the next 6 days. It is well borne, produces no secondary symptoms and causes rapid improvement and recovery. [M. O.]

6.—Kapsammer reports the history of a man of 69, with **a lymphosarcoma of the bulbous urethra, which grew from an old gonorrheal stricture.** The tumor was removed by operation, and histological examination confirmed the diagnosis. Death followed 9 weeks after operation. An autopsy was not permitted. [M. O.]

MEDICINSKOIE OBOZRENIE.

Vol. LVIII, No. 21, 1902.

1. The Therapy of Cancer of the Uterus Complicated with Pregnancy. V. V. USPENSKY.
2. On the Diagnosis of Endometritis Dolorosa. D. L. TCHERNECHOVSKY.
3. On the Casuistics of Affection of the Joints in Tabetics. I. A. RUSLOFF.
4. On Rarely Met With Forms of Tabes Dorsalis. MICHAEL LAPINSKY.
5. The Treatment of Some Forms of St. Vitus Dance with Antistreptococcic Serum. P. A. PREOBRAZSHENSKY.

1.—Uspensky draws the following conclusions from a perusal of the literature and his own observations: (1) **Complication of cancer of the uterus with pregnancy** does not present any indications for a change in the usual methods of surgical intervention. (2) Vaginal extirpation of the uterus and its contents is performed during all months of pregnancy. (3) Up to the third month of pregnancy extirpation of the uterus is performed without previous reduction of its size. (4) From the third to the fifth month the necessary reduction in the size of the uterus is accomplished by evacuation of the amniotic fluid, or, rarely, by removal of the fetus. (5) From the fifth to the seventh month evacuation of the uterus is necessary. (6) In the case of a viable child vaginal hysterectomy *in toto* is indicated. (7) Uterine carcinoma complicated with pregnancy is especially liable to rapid invasion of the glands of the pelvis, and surgical intervention should, therefore, be instituted at the earliest possible moment. [A. R.]

2.—Tchernechovsky criticises a paper on **endometritis dolorosa** contributed by Dr. Kozlenko. He claims that the case reported by the latter is not one of painful endometritis, a condition described by Snegireff and the author. [A. R.]

3.—Rusloff discusses the various theories bearing on the **pathogenesis of tabetic arthropathies,** and reports a case of tabes which shows a possible combination of tabes and syphilitic affection of the spinal cord. [A. R.]

4.—Lapinsky reports 5 cases of **tabes in the pre-ataxic stage showing primary localization of the disease in the motor centers.** He concludes that there are cases of tabes dorsalis to which but little attention has been paid, and in which the initial symptoms appear in the form of paralysis, or paresis of the upper or lower extremities. The diagnosis of tabes in such cases may be established on the first examination of the patient from such typical symptoms as disturbances of the pupilary reflex and urination, ataxia, etc. In some cases, however, it is extremely difficult to establish a correct diagnosis. [A. R.]

5.—Preobrazshensky maintains that **chorea may be caused by streptococci.** He reports the case of a girl, 18 years old, who was suffering from a severe form of the disease and in whose blood a pure culture of streptococci was found. The administration of the usual remedies failed to bring about any relief. Polyvalent antistreptococcic serum was then administered with the result that the patient made a rapid recovery. He has observed 2 other cases of chorea with a similar etiology. His conclusions are: (1) St. Vitus dance is not infrequently an infectious disease; it is, therefore, necessary to make a bacteriological examination of the blood in every case. (2) Not rarely the disease is of streptococcic origin. (3) In polyvalent antistreptococcic serum we possess a rational remedy for the treatment of appropriate cases of chorea. [A. R.]

NEUROLOGISCHES CENTRALBLATT.

January 16, 1903. (No. 2.)

1. The Disturbance of the Gait in Walking Sideways in Cases of Hemiplegia. A. SCHUELLER.
2. The Action of Hedonal upon the Animal Organism. Preliminary Communication. P. S. LAMPSAKOW.
3. The Question of Autogenous Nerve Regeneration. A. BETHE.

4. The Question of Autogenous Nerve Regeneration: Reply to Albrecht Bethe. E. MUENZER.
5. Hysterical States of Confusion, and the Symptom of Unintelligent Answers. W. WESTPHAL.

1.—Schüller has observed that, when a **hemiplegic walks** sideways toward the paralyzed side, his gait is not affected. On the other hand, when he walks sideways toward the sound side, it is very difficult for him to advance. This is apparently due to the elongation of the spastic leg. The symptom is readily proved by having the patient walk sideways along a straight line. It may be obscure if there is organic shortening of the paralyzed leg. In cases in which the hemiplegia is so severe that walking without a support is impossible, the patients may advance better toward the sound side. The symptom is valuable because it is distinct in cases so mild that there is no obvious disturbance in the ordinary gait, and because in hysteria the gait is disturbed equally toward both sides. It is easily demonstrated in adults or children without undressing them or preparing them in any way. [J. S.]

2.—Lampsakow has studied the effect upon the circulation and respiration, and upon frogs with reference to its effect upon the reflex action. He reaches the conclusion that it is an active and safe hypnotic. It is 4 times as strong as urethane, has all the good qualities of ethylurethane and does not disturb the action of the heart or respiration. It may be used in large quantities for narcosis and in small quantities before chloroform, in order to render the initial stages of chloroform narcosis milder. In cases of anemia or exhaustion, and in those in which there is disturbance of the heart, hedonal is less dangerous than chloralhydrate. It may be administered in clysters, but not subcutaneously. [J. S.]

3.—Bethe replies to Münzer, who has denied **autogenous nerve regeneration**, that his views were based upon the following experiments: If a portion of the sciatic nerve of a dog is excised, and measures taken to prevent the ends growing together, and at the end of several months the peripheral and central stumps be exposed and stimulated, it is found that the muscles supplied by the peripheral stumps react to electricty, but that there is no reaction on the part of the animal. If the central stump is irritated, there is reaction on the part of the animal, but no muscular reaction. Histological examination of the stumps showed regeneration of the nerve fibers and their sheaths. This experiment has been frequently repeated. Münzer has repeated the same experiment upon rabbits and failed to get a reacting peripheral stump. [J. S.]

4.—Münzer claims that his experiments were performed in essentially the same manner as Bethe's; that he took pains to use young animals, and to avoid the growing together of the 2 ends of the nerves. He claims that Bethe's criticism was based upon a careless reading of his article. [J. S.]

5.—Westphal reports 2 additional cases; one in a woman of 26 years, who, at the age of 21, showed psychical disturbances. There was impaired circulation, salivation, excessive accumulation of fat in the lower half of the body, and it was noted that whenever she was asked a question she answered promptly but in a perfectly irrelevant manner. The other patient was a man of 29, of mediocre intelligence, who, at the age of 21, manifested symptoms of psychical disturbance. He also answered questions irrelevantly. This peculiar symptom may occur in various forms of psychical disturbance, such as hysteria and dementia præcox. In katatonia it is often very pronounced and is probably associated with the katatonic negativism. [J. S.]

DEUTSCHE ZEITSCHRIFT FUER NERVENHEILKUNDE.

Band 22, H. 3-4.

12. The Skin Reflexes and Their Nerve Tracts. MUNCH-PETERSEN.
13. A Contribution to the Knowledge of Tumors of the Spinal Cord. MEYER.
14. Multiple Sclerosis Developing in a Picture of Transverse Myelitis. FLATAU and KOELICHER.
15. Acute Cerebral and Cerebrospinal Ataxia. LUETHJE.
16. Contribution to the Diagnosis of Tumors of the Frontal Lobe. AUERBACH.
17. A Case of Relapsing Bilateral Ptosis With Myasthenic Manifestations in the Upper Extremities. BYCHOWSKY.
18. Cystic Meningitis in Cyst Racemoses of the Central Nervous System. ROSENBLATH.

12.—See Editorial.

13.—Meyer reports the following interesting case: A girl, 14 years of age, developed pain and paresthesia in the left arm. In the course of 10 years the following additional symptoms appeared: Weakness and spastic paresis of the left leg, flaccid paresis of the right arm, spastic paresis of the right leg, tenderness in the spinal column over the fourth and fifth vertebræ, spontaneous pain in the neck and hypesthesia and paresthesia on the ulnar side of both forearms. The area of hypesthesia varied considerably; from time to time there was involuntary flexion of the lower extremities. A diagnosis of tumor of the spinal cord, probably involving the meninges, was made, but as hypertrophic cervical meningitis could not be excluded, an operation was not performed. The patient died, and at the autopsy a fibrosarcoma of the dura was found pressing upon the spinal cord from the sixth cervical to the first dorsal segments. This had produced extensive secondary degeneration and had involved from the fifth to the eighth cervical roots on the left side. [J. S.]

14.—Flatau and Koelicher report as a case of **multiple sclerosis** the following: A woman of 60 years, after waiting in the snow for some time, developed fever and pains in the legs. After the subsidence of the former, the pains persisted, and there was almost total paralysis of both legs. The sensory changes were slight, the reflexes were diminished. The patient died, and at the autopsy the brain and cord macroscopically were normal; microscopically, however, numerous focal degenerations were found in various stages, the earliest showing merely degeneration of the myelin sheaths, and the latter showing involvement of the bloodvessels and neuroglia. The nerve cells and the axis-cylinders were very slightly affected, which was characteristic of disseminated sclerosis. The authors, therefore, believe that this disease is really an inflammation proceeding from the bloodvessels of the central nervous system, especially those of the cord, and they regard it as an illustration that atypical forms of multiple sclerosis may give rise to the picture of transverse myelitis. In an editorial annotation Strümpell states that he regards the case as one of acute disseminated myelitis. [J. S.]

15.—Lüthje reports 3 interesting cases of **acute ataxia** occurring in 3 children of the same family, aged respectively 10, 9 and 6 years. All these children had typhoid fever in the most severe form, during the course of which they became unconscious and later were mentally confused. The symptoms of the ataxia usually commenced with some twitching of the muscles of the face, then rhythmical lateral movements of the head, then ataxia in the extremities, more severe in the arms and sometimes involving the trunk. Speech was affected in a curious way, becoming entirely monotonous, the syllables were pronounced slowly, often with pauses between them, and occasionally explosively. There was sometimes a slight nasal element in the tone. The tendon reflexes were always greatly exaggerated, and in one patient there was ankle clonus. Usually the patients were unable to walk on account of the ataxia, but in one, who was able to stand, the swaying was not increased by closing the eyes. Sensory disturbances were absent with the exception of a distinct impairment of the stereognostic sense in one case in which it was tested; in the other 2 it was not tested. Lüthje discusses the differential diagnosis between spinal, cerebrospinal, bulbar and cortical ataxia, and, although these patients had no signs of hemiparesis or hemiplegia, he is rather inclined to regard the affection as of cortical origin. The symptoms did not begin in the legs; the disturbance of speech was not of the bulbar character, and the disturbance of the stereognostic sense indicated involvement of the cerebral hemispheres. In one patient there was some evidence that the cerebellum was also involved. All the patients recovered in the course of a few months, although in the severest there was still some slight ataxia. In all the speech was slightly monotonous and scanning. He collects 16 cases from the literature, making altogether 19 of acute spinal or cerebrospinal ataxia. [J. S.]

16.—Auerbach reports an interesting case of **tumor of the frontal lobes** occurring in a woman, 40 years of age. The symptoms persisted for about 2 years, and consisted at first of slight lassitude, indisposition to work and an irritability of temper. At the same time there was some increase in the frequency of the attacks of migraine from which she had suffered since childhood. The condition gradually grew worse; she became more and more apathetic, and her memory became imperfect. She finally could not be persuaded to leave her bed. The thyroid was small, and myxedema was suspected, but the patient failed to improve upon thyroid tablets. Later she had an apoplectiform attack, after which choked disks were discovered; there was a tendency to lean forward, and she complained of pain and stiffness in the neck and back. At the same time there was slight paresis of the left facial nerve. The patient gradually grew worse and finally died in a state of coma. At the autopsy a large fibrosarcoma was found springing from the orbital plate and involving both frontal lobes. During the whole course of the disease there had been no disturbance of smell and no tendency to make jokes. Auerbach discusses the significance of the frontal lobes as the seat of the mind, and reaches the conclusion that they are probably important association centers of the brain. [J. S.]

17.—Bychowsky reports an interesting case of **recurrent ptosis** occurring in a young woman. The first attack occurred when she was 15 years old. The ptosis came on gradually in the course of a day and was complete by evening. It disappeared very promptly after a single application of the galvanic current. The second attack occurred when she was 19 years of age. On this occasion it could be determined that there were no contractions of the muscles of the eye and no other obvious paralyses of any other muscles in the body. Galvanization was employed, and the patient awoke next morning without ptosis. The third attack occurred when she was 21 years old. The muscles moving the eyeballs were still free, the pupils reacted readily, but it was noted that the patient became rapidly fatigued when attempting to raise the arms, so that after raising them 5 or 6 times they became paralyzed for a few moments. The myasthenic reaction, however, was not tested. There were no myasthenic phenomena in the muscles of the legs. The patient again recovered promptly after the application of galvanization. The fourth attack occurred a year later; it was essentially similar to the preceding attacks, but on this occasion the myasthenic reaction was obtained in the cucullaris, biceps and extensor digitorum on both sides. In the first 24 hours the myasthenic reaction became more distinct, but later the patient improved, and the ptosis disappeared. Bychowsky believes that his case belongs to the groups of myasthenic paralyses, and has some relation to the vertige paralysant of Gerlier, and the kubisagard of Miura, which is apparently identical with the former condition. The nature of these cases is, of course, obscure. [J. S.]

18.—Rosenblath reports a case of **cysticercus of the brain** occurring in a man, 47 years of age. The symptoms commenced with attacks of weakness and tremor in all the limbs. This disappeared for a time, although he still felt weak and was not able to work for more than a month afterward. The physical examination was at first entirely negative. Later choked disk appeared, and the patient showed distinct mental deterioration, some anxiety and occasional hallucinations of vision. He also suffered intensely from headache, and from time to time had attacks of vertigo in which he would fall to the ground but not lose consciousness. Occasionally there was some tremor of the extremities, and the patient always complained of weakness. The mental deterioration continued; there was agraphia and also alexia, also inability to recognize pictures of objects. He finally had a sort of apoplectiform attack with hemiparesis, rise of temperature, dyspnea, and then he died. At the autopsy multiple cysticercus racemosus of the brain and upper portion of the spinal cord was found with dilatation of both ventricles; involvement of the arteries and of the meninges at the base. Rosenblath attempts to give a clinical picture of this condition which he regards as much more common than is supposed. The course is long, ranging from one to 18 years, although the latter period is exceptional. The earliest symptoms are those of neurasthenia. There is weakness in the limbs, pain and stiffness in the neck, occasionally attacks of extreme weakness with a tendency to fall; often there is tremor of the extremities. There is headache, vertigo and occasionally ataxia. The patients may have clonic cramps and sometimes apoplectiform attacks. These may be followed by paralyses. There is also disturbance of the muscles of the eyeball, sometimes there are delusions and occasionally temporary blindness. Aphasia is a very rare symptom. Vomiting is common. Nearly always there is terminal dementia, although in a few cases patients have been maniacal. It is probable that most of the symptoms are produced by the involvement of the bloodvessels. [J. S.]

THE JOURNAL OF NERVOUS AND MENTAL DISEASE.

February, 1903. (Vol. 30, No. 2.)

1. A Case of Colloid Disease of the Bloodvessels of the Spinal Cord. F. X. DERCUM.
2. Arteriosclerosis of the Spinal Cord. WILLIAM HIRSCH.
3. The Microscopical Findings in Four Gasserian Ganglia Removed for Trigeminal Neuralgia. With a Résumé of Two Previously Examined. SIDNEY I. SCHWAB.

1.—Dercum reorts a case of **colloid disease of the bloodvessels of the spinal cord**, in which a large focus of softening and infiltration was present in the upper cervical portion of the cord. Besides, there were areas of softening and infiltration present in various other portions. Colloid disease of the bloodvessels of the central nervous system, presenting either diffuse or focal lesions, must be regarded as excessively rare and the case reported as unique. During life no definite diagnosis was made. Early in the case syringomyelia and later on tumor of the cord seemed probable. [T. M. T.]

2.—Hirsch gives **certain clinical phenomena** which will enable us to recognize this morbid condition of the spinal cord during life and to differentiate from other diseases of this organ: (1) One of the characteristic features of spinal arteriosclerosis is the fact that the cells of the anterior half of the cord are much more apt to become affected than those of the posterior half; (2) the anterior spinal arteries are much less numerous than the posterior ones; (3) of the anterior half of the cord, it is again the lower part which becomes more frequently the seat of the disease than the upper part; (4) trophic disturbances are much more frequent than sensory symptoms, the latter in fact being rather rare in this affection; the existing manifestations again are more common and more marked in the lower than in the upper parts of the body; (5) the motor symptoms consist in gradually increasing weakness, characterized by fatigue after moderate exertion, combined with a slight tremor of the head and of the upper and lower extremities; (6) the patellar reflexes may be exaggerated at first, then become sluggish and may be lost entirely in the later stage; (7) there are no sensory symptoms; (8) perception to outer stimuli remains unimpaired and there is no pain; (9) the reflexes of the bladder and rectum are normal; (10) sooner or later the other organs become affected in a similar way, and the patient may die of a cerebral hemorrhage or an intercurrent disease. [T. M. T.]

3.—Schwab concludes his article as follows: (1) In 6 ganglia removed for trigeminal neuralgia anatomical changes were found of sufficient importance to bring them in relation with the symptoms of this disease; (2) these changes in the cells do not point to them as the primary cause of neuralgia, but they may be taken to represent the effects of abdominal cell activity, the origin of which we are not able to point out; (3) the Gasserian ganglion is the anatomical seat of the chief symptom of trigeminal neuralgia, that is, the attacks of neuralgic pain. [T. M. T.]

March, 1903. (Vol. 30, No. 3.)

1. Report of Two Cases of Bullet Injuries to the Left Lateral Half of the Upper Portion of the Spinal Cord.
   J. T. ESKRIDGE and EDMUND J. A. ROGERS.
2. A Study of Sensations in Motor Paralysis of Cerebral Origin Based Upon Thirty-five Cases.
   ALFRED GORDON.
3. Report of a Case of Familial Tremor of the Head.
   JOHN K. MITCHELL.

1.—Eskridge and Rogers suggest, after studying the two reported cases, that there may be fibers in the cervical region of the spinal cord that aid in elevating the upper lid of the eye of the same side and in modifying the size of the pupil of the opposite side. [T. M. T.]

2.—Gordon concludes his studies by saying that hemisensory disturbances, probably, always accompany a motor paralysis of cerebral origin, no matter to what extent the latter is marked: paralytic, or even only paretic, symptoms, will at the same time show sensory symptoms. [T. M. T.]

3.—Mitchell reports the above case on account of its familial character. His mother had the same trouble, beginning at twenty-two years of age, and it has continued ever since. It has at times been made worse by illness and then gone back to its standard on recovery from the acute illness. The patient's maternal grandfather exhibited it at seventy, but no details of the trouble in their cases can be had, though they are said to have had no other signs of paralysis agitans. [T. M. T.]

VIRCHOW'S ARCHIV.

Band 169. Heft 3.

16. Idiopathic Congested Liver. P. GRAWITZ.
17. A Case of Double Carcinoma of the Gall-Bladder, and at the Same Time a Contribution to the Knowledge of the Question of Metaplasia. J. MOENCKEBERG.
18. Further Critical Reflections Upon the Present Position of the Plasma Cell Question, and, in Addition, a Consideration of the Histogenesis of the Tubercle.
    A. PAPPENHEIM.
19. Plasma Cells and Lymphocytes. A. SCHLESINGER.
20. The Chemistry and Physiology of Goiter. A. OSWALD.
21. Adrenalin Glycosuria Produced by the Action of Reducing Substances and Other Poisons Upon the Cells of the Pancreas in Experimental Glycosuria.
    C. A. HERTER and A. WAKEMAN.
22. The Position of the Production of Warmth in Fever Produced by Puncture of the Brain. E. ARONSOHN.
23. Brief Communication: The Benda Reaction in Fat Necrosis. W. LIEPMANN.

16.—A boy, 22 months of age, had, at the age of 9 weeks, gastro-enteritis, later he had an attack of whooping cough, but otherwise was fairly healthy. He walked at one year and six weeks, but soon stopped. At the age of 21 months his abdomen, which had always been larger than normal, began to increase rapidly in size; there was dyspnea, impaired appetite and obstinate constipation. When examined, a hard tumor was found in the right side of the abdomen, with smooth surface and otherwise resembling the liver. The spleen was also enlarged. There was evidence of an abundant ascites without edema of the legs. About 3 liters of ascitic fluid were drawn off, having a specific gravity of 1011. In the course of 3 weeks there was a distinct caput medusæ. The patient was removed from the hospital, but again brought by his parents for paracentesis, and 3 or 4 liters of fluid were removed. There was tenderness over the abdomen, and the liver was found to reach to the level of the umbilicus. An operation was performed for the purpose of promoting the collateral circulation. The liver was found to be in a state of extreme congestion, and the patient died in about 3 days. Examination of a portion of the liver, excised during the operation, showed extraordinary dilatation of the central veins and a very slight increase in the connective tissue. At the autopsy the chief lesion found was the extraordinary contraction of the left and right hepatic veins. There was also evidence that the branches of these veins had also been greatly reduced in size. Many of them were occluded by masses of fibrin. The wall of the vena cava was thickened, but otherwise it was normal. The remoter ramifications of the hepatic veins were distended, and the radicles were also greatly distended. The condition evidently represents an extreme hyperemia of the liver caused by obliteration of the hepatic veins at the point at which they enter the vena cava. The umbilical vein had remained patulous and had, in part, served for the establishment of collateral circulation. Grawitz collects 11 cases from the literature, in all of which there was apparently a primary connective tissue hyperplasia that caused a more or less complete obliteration of the vein. These patients varied in age from 16 to 52 years, and often there were complications, as peritonitis, carcinoma, etc., that interfered with a satisfactory interpretation of the condition. In the twelfth case, however, occurring in a child, 17 months old, there was ascites which rapidly re-accumulated, and at the autopsy obliteration of the hepatic veins was found. In his own case he believes that there was a congenital anomaly causing the condition. [J. S.]

17.—A woman of 77 had had paroxysmal attacks of pain in the hepatic region for a period of 6 years. There was never jaundice. Finally, she developed a tumor in the right side, just below the border of the ribs, which was apparently connected with the gall-bladder. An operation was performed, and the gall-bladder found enormously enlarged and nodular. Examination of this specimen showed proliferation of the mucous membrane which contained masses of cylindrical epithelial cells. In other places there were masses of squamous epithelium, and a diagnosis was made of cancroid and adenocarcinoma of the gall-bladder. The patient died some days after operation, and at the autopsy some metastases were found in the liver, and a stone in the ductus choledochus was also discovered. Tumors were also found in the wall of the stomach, and these, upon microscopical examination, proved to be myomata. True metastases were found in the lymphglands; in one case these were found to be composed almost exclusively of the cancroid tissue, and, in the other, of the adenocarcinoma surrounded by a zone of cancroid tissue. It appears that this case commenced as an adenocarcinoma, and by the irritation gave rise to the formation of stone, the transformation of the cylindrical into the squamous epithelium and the development of the cancroid tissue. [J. S.]

18.—Pappenheim discusses plasma cells, continuing the article that he published in a previous number of the *Archiv*, answering various criticisms that have been made, and discussing the views of other persons who have written upon the subject. He summarizes his opinions as follows: In granulation tissue only the multinuclear leukocytes are derived from the blood: all other round cells are derived from the connective tissue cells. Among these granulation cells the extremes are represented by the young fibroblasts with vesicular nuclei, and the round cells that resemble leukocytes. It is not always possible practically to distinguish between these 2 forms sharply. Among the round cells resembling leukocytes, however, 4 types may be recognized: (1) The large lymphocytoid young mother cell; (2) the large leukocytoid achromophilic pseudoplasma cell; (3) the typical large plasma mother cell; and (4) the small lymphocytoid daughter plasma cell. He believes that the interesting problem is to determine under what circumstances these various cell bodies are formed. He concludes with some remarks upon the staining technique. [J. S.]

19.—Schlesinger has carefully investigated the tissue from 80 different organs, often removed at operations, often some time after death. These included carcinomata, inflammatory processes, syphilis, tuberculosis, etc., and leukemia, both acute and chronic. He discusses the literature critically and reaches the following conclusion: That the Unna method of staining is not specific for any form of plasma cell; that the plasma cells described by Unna and those described by Marschalko are merely different forms of the same type; that in normal intestinal mucous membrane the cells of the lymphoid tissue often become changed into plasma cells by absorbing plasma; that the large and small nuclear plasma cells are at least different stages of the same type, and this development is particularly distinct in the lymphglands or bloodvessels in acute leukemia. Finally, that the plasma cells, at least the majority of them, are nothing but large and small lymphocytes of somewhat altered form. [J. S.]

20.—Oswald has made a careful study of **the physiology and chemistry of the goiterous thyroid gland.** Determination of the total quantity of iodine in a variety of specimens showed that it varied from less than one to 50 milligrams, and that this variation was entirely independent of the size of the gland, but appeared to bear a close relation to the quantity of colloid substance. The same relation apparently holds true of the thyroid glands of calves. As a result the colloid goiters contain a large quantity of iodine. Of course, in cystic goiters the contents of the cysts is not necessarily colloid substance, and, therefore, the quantity of iodine is not increased. Colloid substance is a mixture of 2 albuminous bodies, one containing all the iodine in the gland. It has the qualities of globulin, and Oswald names it thyreoglobulin. From this the iodothyrine can be separated. This substance resists certain chemical destructive agencies, as pepsin, boiling mineral acids, etc. It can only be obtained by the destruction of the albuminous molecule. The other albuminous body does not contain iodine, but does contain phosphorus, and is, therefore, a nucleoproteid. It has no influence upon metabolism. In colloid goiters there is an absolute and relative increase in the amount of thyreoglobulin, and, therefore, in the quantity of iodine. There is also reason to believe, as a result of the investigations of Kocher, that they contain more nucleoproteid. It appears, however, as a result of some careful determinations, that the relative quantity of iodine in the total amount of thyreoglobulin was diminished when colloid degeneration was advanced. The colloid appears to be formed inside the cells of the follicles. Physiological investigations of the thyreoglobulin of goiter show that it irritates the vagi, but to a less degree than normal thyreoglobulin. As the only difference is in the quantity of iodine that the former contains, this must be the active principle. In order to determine whether other structures could assume the functions of the thyroid gland, Oswald tested 2 preparations of a hypophysis and found that neither influenced the heart, the metabolism or the excretion of phosphorus. He believes that his investigations indicate that goiter is not the basis of Basedow's disease, because it causes a diminution of the normal functions of the thyroid, that is to say, it produces hypothyria, and the goiter of Basedow's disease gives rise to hyperthyria. He discusses the arguments for and against the thyroid theory, and believes that there is more evidence in favor of an irritation of the sympathetic than anything else, but that even this cannot be regarded as established. He holds to the position originally taken by Virchow, that the goiter in exophthalmic goiter is only one of the manifestations of the disease. [J. S.]

21.—(See abstract of article in *American Journal of Medical Sciences*, January, 1903).

22.—Aronsohn has performed a series of experiments for the purpose of determining **the source of heat-generation in fevers.** He found that, when the temperature of an animal was elevated by a brain puncture, a hypodermic injection of curare caused a reduction of temperature of about 2 degrees in the first hour, or about 0.3 of a degree for every minute, although the animal was not in a paralytic condition. Animals without fever also showed a reduction of temperature, and animals to whom curare had been given could not develop the febrile temperature. As soon as the effect of the poison ceased, the fever reappeared. It seems, therefore, as if the muscles played an important rôle in the production of heat. Aronsohn, however, undertook a series of experiments upon the blood in order to determine whether this also could play any part. These consisted essentially in producing fever in rabbits, then withdrawing large quantities of blood and replacing it by physiological saline solution. There was usually an immediate fall in the temperature, but the brain puncture still produced fever, and sometimes fever appeared spontaneously from unknown causes. Therefore, the blood cannot be the cause of the increase in temperature. Some experiments were also made by Ito upon the effect of pancreatic activity. They are rather inconclusive, and, therefore, Aronsohn concludes that the elevation of the body temperature in natural or artificially produced fever is produced in the muscular tissues, chiefly those of the skeleton, but possibly also, in those of the intestines. The blood takes no direct part in the formation of heat, and it is doubtful whether the glands do. [J. S.]

23.—Liepmann has tested **the Benda reaction for fat necrosis.** This consists essentially of hardening the tissues in formalin, then placing them in Weigert's glia mordant for 24 hours. This produces a greenish discoloration in all parts that have undergone necrosis. He found that necrosis does not occur in the pancreas after death, and that this method, therefore, is a very delicate reaction for vital fat necrosis. [J. S.]

ARCHIV FUER EXPERIMENTELLE PATHOLOGIE UND PHARMAKOLOGIE.

Bd. XLIX., Heft 1.

1. Further Contribution Concerning the Active Substances in the Secretion of the Skin Glands of the Lizard. FAUST.
2. Comparative Pharmacological Investigations Concerning the Action of Poisons upon Unicellular Organisms. KORENTSCHEWSKY.
3. On Milky Effusions that Do Not Contain Fat. A Clinicochemical Study. BERNERT.

1.—Faust insists that the substance he has isolated and termed bufonin is not cholesterin, and gives various reasons for making this statement. The importance of this substance in metabolism is, as yet, unknown. The author notes, however, that at certain times he has found no cholesterin present, but only its derivative, bufonin. [D. L. E.]

2.—The observations reported were carried out chiefly on paramecium caudatum; although, to a certain extent, other unicellular organisms were also employed. The microscopical and macroscopical alterations in these organisms, after the use of a large series of substances, were observed in detail. The most important conclusions are as follows: **Increase of temperature increases the rapidity of action of various drugs;** reduction in temperature has the contrary effect. The characteristic effect of any individual drug can be observed only if this substance is used in diluted solution. With almost all the drugs used, some characteristic effects of that drug could be observed; but the drugs were divisible into certain classes, the members of each class exhibiting similar effects. **Two chief groups were observed.** The first contains those drugs that cause **paralysis of the excretory apparatus.** There was a development of vacuoles, resulting from paralysis of the pulsating vacuoles; also of nutrition vacuoles, due to stoppage of the digestive process. The second group includes those **substances which do not limit the excretion of metabolic products from the protoplasm.** The metabolic products were sometimes not cast out entirely from the organism; but they were cast out from the protoplasm, so that they could have no further damaging effect upon the vital processes of the organism. **The first group consists of drugs which have a paralyzing effect upon the nervous system of vertebrates; the second of those substances which act as excitants to the muscles and nerves of vertebrates.** This interesting correspondence between the effects upon higher and upon lower organisms does not seem to be accidental. The author decides that the excitation of the muscular and the nervous systems is dependent upon the rapid removal of metabolic products. If these substances are used in paralyzing doses, it may be observed that the period of excitation is followed by a period of paralysis of excretion. With the substances that produce paralysis one is justified in stating that there is a lack of the proper excretion of water and metabolic products. Korentschewsky believes that these effects **explain some curious pharmacological facts;** for instance, the different effects of caffeine-sodium-salicylate and theobromine-sodium-salicylate as compared with those of pure caffeine and theobromine. The author was also able to observe that some of the infusoria as compared with others act peculiarly toward some special drug. This is an evidence of what we are accustomed to call idiosyncrasy. [D. L. E.]

3.—Bernert reports 2 cases of milky effusion into the peritoneal cavity with very extensive chemical studies of the composition of the effusion, and with a critical discussion of the literature of the subject. In both instances the condition was associated with malignant growths; and, in both, the substance that caused the milky appearance was found to be a globulin that was present in large amount. The author suspected that the **reason that it gave this peculiar milky appearance to the fluid** was that it had entered into more or less firm combination with lecithin and had, therefore, become modified in some of its characteristics. **The fluid was apparently not chyle. It was serous fluid, possibly not a pure transudate,** and perhaps associated with some inflammatory change. This was indicated by the amount of dry residue, of chlorides, of sulphates, of alkaline earths and the amount and character of the fat. The fat was also found to have the characteristics of degeneration fat, which makes it all the more probable that it was not simply chylous fat. Its amount was so small that this point speaks strongly against the chylous nature of the effusion. [D. L. E.]

REVUE DE MEDECINE.

February 10, 1903. (23 me. Année, No. 2.)

1. The Articulomotor Nerves of the Limbs. J. GRASSET.
2. On the Lesion Called Congenital Stenosis of the Aorta in the Region of the Isthmus. L. M. BONNET.
3. Note on the Precursory Dreams of Ophthalmic Migraine. CH. FERE.
4. Cardiac Epilepsy and the Phenomena *de Rappel.* L. RUEFF.
5. Some Cases of Juxtalaryngeal Abscess. M. DEGUY.

1.—According to Grasset, when one flexes the forearm, one shortens the flexor muscles; but one also, and just as actively, by a cortical influence, lengthens the extensor muscles. For all simple movements there is a double motor, cortical action: An action of contraction and shortening of one group of muscles and an action of relaxation with lengthening of the antagonistic group of muscles. The nerve of shortening of the first group and the nerve of lengthening of the antagonistic group take their origins from 2 points of the cortex very near each other, if not from the same point. In the general examination of paralytics it is essential to study each articulation successively. Furthermore, it is necessary to study each simple movement of each joint and, of each simple movement, the force of contraction, the force of resistance and the force of stabilization should be determined. Thus, if a patient finds it difficult to sit down, see if supporting the knees makes the act easy. If it does, there is weakness of the muscles of the knees and of the foot (stabilization); if it does not, there is weakness of the flexors of the thigh upon the pelvis. When the subject is in the sitting posture and one tries to depress the thigh when the patient holds it up strongly, one can judge the force of stabilization of the flexors of the thigh. The author reports a case in which he was able to analyze the muscular groups successively paralyzed and then freed from paralysis after a gunshot injury to the skull. It was noted in this case that the groups of muscles alternately paralyzed and restored to function did not correspond to the nerves of the anatomists, but to simple movements of this or that joint. The author gives tables of the muscle groups for the various limb movements and the nerves supplying them. He calls the nerves supplying these muscle groups the **articulomotor nerves,** and says that each nerve has an origin in the perirolandic zone. It descends in the pyramidal tract to the relay neuron (*neurone de relais*) which is situated in the anterior horn of the gray matter of the spinal cord. Another part of the same nerve passes from the same cortical area and turns off to the nuclei of the pons and the cortex of the cerebellum, first relay nuclei, and then passes down in the anterior gray matter of the spinal cord to the second relay nucleus: This is the nerve of stabilization of the joint. From the second relay nucleus in the cord the articulomotor nerve goes to the other nuclei which are the true origins of the motor nerves, which pass out through the anterior roots. [J. M. S.]

2.—Bonnet reports the case of a man, 27 years of age, who had excellent health until he was 25 years old; he had particularly never complained of breathlessness nor of palpitation. When he was 25 years old he had an attack of acute articular rheumatism, and the next year he began to complain of slight palpitation. After some military manoeuvers he had a marked attack of dyspnea with cough and blood-tinged expectoration for 8 days. A diagnosis of heart disease was made at that time. He recovered promptly, however. His present illness was marked by dyspnea on exertion and edema of the feet. There was a systolic murmur at the apex, a diastolic murmur behind the entire length of the sternum, and a soft systolic murmur at the aortic area. Posteriorly, along the vertebral border of the left scapula, there was a vertical artery as large as the radial; in this region there was an intense systolic murmur. On the right side there was an artery which was similarly placed, but which pulsated less strongly than the left one. There was no murmur on the right side. An X-ray examination showed a voluminous heart, an aortic arch undilated and no aneurysm. At autopsy there was a marked **narrowing of the aortic arch,** beginning at the end of the ascending portion. Beyond the left subclavian artery there was a distinct **stricture at the** point known as the **isthmus.** The stricture was formed by a circular diaphragm, one millimeter thick, with a central orifice. The heart was hypertrophied and dilated, and the aortic semilunar valves were insufficent. The arteries in the upper half of the body of this patient pulsated strongly during life; those in the lower half were felt pulsating with difficulty. The phenomenon is regarded by Lépine as diagnostic of stricture of the aortic isthmus. Abstracts of 15 cases from the literature are given. The paper is unfinished. [J. M. S.]

3.—Féré reports 2 cases that illustrate **precursory dreams in ophthalmic migraine.** He regards dreams as a true premonitory sign of migraine. They announce the approach of the neurosis, and they announce the beginning of each attack. In the 2 cases reported, the phantoms persisted, which Féré believes was an index that the migraine was always present in a latent state. [J. M. S.]

4.—Will be abstracted when concluded.

5.—Deguy reports 7 cases of **juxtalaryngeal abscess** following diphtheria. The cases showed the possibility of retropharyngeal abscess migrating to the front of the larynx, although such a condition is very rare. They also show the possibility of the migration of the juxtapharyngeal abscess around the larynx so that it becomes a perilaryngeal abscess. Finally, a pharyngolaryngeal abscess may develop in the areolar tissue, which, commencing above in the aryteno-epiglottic folds, separates the posterior wall of the larynx from the laryngeal mucous membrane. These abscesses should be opened as soon as possible through the mouth, when they project into the pharynx. If syncope occurs at this time, do not waste time in washing out the mouth, but do a tracheotomy at once and establish artificial respiration. When normal respiration is resumed, the toilet of the throat may be attended to. [J. M. S.]

BULLETINO DELLE SCIENZE MEDICHE.

January, 1903.

1. Modifications in the Composition of the Saliva From Alterations in the Blood Crasis due to Endovenous Injections of Neutral Sodium Phosphate. R. FINZI.

1.—Repeated observations have shown that variations in the velocity of salivary secretion, brought about experimentally through stimulation or section of the nerves of the salivary glands or through the influence of drugs, induce variations in the composition of the saliva. Similarly, variations in the blood crasis produce corresponding variations in the saliva's composition. Finzi has studied experimentally the influence upon the salivary secretion of endovenous injections of sodium phosphate. He sums up the subject as follows: (1) The cells of the salivary glands have a marked affinity for sodium phosphate: the salt being absorbed and eliminated by them after the slightest increase of it in the blood. (2) When the cell work is augmented through more rapid secretion, there is even more marked increase of the salt in the saliva. (3) When the concentration of the sodium phosphate in the blood is greatly increased, there is a disturbance and partial arrest of the secretory process, so that the salt is no longer found in the saliva in greater quantity than normal. Hence the influence of sodium phosphate is quite different from that of sodium chloride, indicating that the action of the salivary glands is not uniform toward all salts; some being readily absorbed and eliminated by them, while others are found in but scant quantity in the saliva after their injection into the blood. This qualitative and quantitative elective faculty of the gland cells accounts for the inconstancy in the relations between the concentration of the blood and the composition of the saliva; and also offers proof of the autonomy with which the cells are endowed. [R. L. F.]

REVISTA MEDICA CUBANA.

February 1, 1903.

1. Therapeutics of Tuberculosis. Landerer's Method. A. G. MENDOZA.

1.—Mendoza contributes a paper embodying a plea for the further trial of endovenous injections of cinnamic acid in tuberculosis after Landerer's method. The latter claims that by this method of treatment healing of tuberculous lesions takes place after Nature's own way; the process being, however, more rapid and energetic under the influence of cinnamic acid. Preference is given to the salts of this acid, sodium cinnamate being considered the most effectual. An active leukocytosis is said to set in 2 hours after injection of the salt, reaching its maximum at the end of 8 hours. The leukocytes penetrate the tuberculous foci, connective tissue and new bloodvessels form, resorption of the caseous masses occurs, and the tuberculous foci are eventually encapsulated. Owing to the advanced stage of the disease, early abandonment of treatment, etc., the 6 cases reported by Mendoza do not show the brilliant results obtained by Landerer, but the author feels that his experience with the drug has been a useful one, proving the harmlessness of the remedy and demonstrating its power to effect a certain amount of improvement even under unfavorable conditions. As many as 30 injections were practised by Mendoza in the same vein, (the cephalic), and at no time was there evidence of local reaction or other untoward symptoms. Treatment was commenced with injection of sodium cinnamate, ½ mg., the amount being slowly increased till 25 mg. were used. The solution of the salt was sterilized for 5 minutes before injection. [R. L. F.]

LA RIFORMA MEDICA.

February 11, 1903.

1. Upon the Course of Autolysis in Some Forms of Nephritis. U. MINERBI.
2. Contribution to the Surgical Deviation of the Portal Vein in Hepatic Cirrhosis. E. ARCOLEO.
3. Concerning a Case of Venous Murmur Audible Over the Hepatic Area in a Patient With Cirrhosis of the Liver. V. GAMBARATI.
4. Hemoglobinuria in Malaria. M. LUZZATO.

1.—Minerbi has conducted a series of experiments for the purpose of studying the progress of autolysis in kidney sections from animals suffering from various forms of intoxication, chemical and infectious. For this purpose, injections of diphtheria cultures and rabies as well as poisoning with sublimate and ammonium chromate were resorted to in dogs and rabbits, 7 animals in all being subjected to such treatment. From the work done the author concludes that the inflammatory condition produces retardation of the autolytic process occurring in the kidney outside of the body; and especial resistance being noticed in the nuclei of such specimens as compared to healthy organs. [R. L. F.]

2.—The enthusiasm with which the surgical treatment of cirrhosis of the liver through the formation of a collateral circulation by favoring anastomosis of the gastro-epiploic vein with the vena cava by means of fixation of the omentum to the abdominal wall, was greeted, has of late been somewhat checked. One more evidence of the tendency of the pendulum to swing back is shown in the report of Arcoleo, who, after treating surgically 8 cases of hepatic cirrhosis, of which number 3 died shortly after operation, 2 were not at all improved and 3 showed but slight improvement, concludes that a positive opinion for or against operative treatment in such cases should be withheld until a wider experience has placed it upon something like a firm basis. [R. L. F.]

3.—The rarity with which the venous hum is heard over the liver makes the case reported by Gambarati of more than usual interest. The patient, a man of 49 years, was affected with atrophic cirrhosis of the liver, narrowing of the right side of the chest with retraction of the lung from an old pleurisy, hydrothorax and ascites. The murmur, heard all over the sternum and hepatic area, was continuous, although consisting of 2 phases of intensity and duration, comparable to the passage of a strong wind through a fissure. Generally speaking, its greatest intensity corresponded with cardiac diastole; and it became more distinct as the ensiform appendix was approached, though not audible directly over that point. Up to the fourth intercostal space the murmur was heard solely over the sternum; but at that point it could be heard about 2 cm. to the left; and to the right, starting at the insertion of the fourth cartilage, it could be followed to the midaxillary line, thence to the costal arch, and at the mammary line its inferior limit descended to the eighth cartilage. The author believes the murmur in this case to be due to a contraction of the vena cava in the hepatic sulcus, owing to the atrophic process in the liver. [R. L. F.]

4.—Luzzato gives the case-histories of 2 sisters affected with malaria, in whom hemoglobinuria followed administration of quinine; a like history being obtained concerning their deceased father. Upon continued use of the quinine treatment, hemoglobinuria subsided in both cases. The author believes that these cases demonstrate the probability of a congenital predisposition to hemoglobinuria and quotes Koch as holding a like opinion concerning a similar case occurring in his own experience. The author, therefore, concludes that in malarious countries there may exist a congenital and family predisposition to hemoglobinuria, which predisposition is made evident either upon parasitic invasion or after administration of quinine. [R. L. F.]

February 18, 1903.

1. Experimental Contribution to the Study of the Function of the Hypophysis. D. PIRONE.
2. Upon the Serum Diagnosis of Typhoid. G. CACCIALANZA.
3. Some Cases of Friedreich's Disease. C. MANNINI.

1.—To be abstracted when concluded.

2.—As the result of a somewhat extended experience in the use of **Widal's test**, Caccialanza finds that it is of no value in the early stages of typhoid, and that a positive reaction is obtained only after the clinical symptoms are well defined; so that a confirmation of the diagnosis is the sole advantage to be derived from its use. Out of 24 mild cases, agglutination was obtained in 22; but the author found the test unreliable in grave cases, agglutination lacking altogether or only appearing when the diagnosis was unmistakable. In a case of tuberculosis, simulating typhoid, a positive reaction to the Widal test was obtained; and thus the diagnosis was further confused. [R. L. F.]

3.—Mannini reports the case-histories of **2 brothers affected with Friedreich's disease**, in one of whom it developed after an infectious disease at the age of 17. The author draws the following conclusions from his study of the condition: (1) The malady may follow infectious diseases and may appear after the fifteenth year without retarding sexual development. (2) The gait reproduced the type seen in drunkards (3) The attitude of the patient in standing is characteristic; the lower extremities being spread apart, feet turned inward and trunk bent forward. (4) Many of the symptoms of the disease, such as ataxic movements, disturbances of speech and position in standing, are due to asthenia, atony and neuromuscular ataxia. (4) Nystagmus is not an essential feature. (5) Skeletal deviations, trophic disturbances and paraplegias are secondary phenomena and many appear late. (6) Romberg's sign, and abnormalities of mentality, similar to those seen in degenerates, may complete the clinical picture. [R.L.F.]

February 25, 1903.

1. Rhythmical Movements of the Head in Hypertension with Arteriosclerosis. M. BUCCO.
2. Contribution to the Pathology of Meckel's Diverticulum. G. BENDANDI.
3. Experimental Contribution to the Study of the Function of the Hypophysis. D. PIRRONE.

1.—Four cases in which **hypertension, arteriosclerosis and hypertrophy** of the vesicle were accompanied with **rhythmical movements of the head** came under Bucco's observation; the movements being up and down and from left to right. These oscillations closely simulated true pulsations; being composed of an abrupt vertical ascent and a like vertical descent, followed by secondary oscillations of minor amplitude; and the principal ascent was synchronous with the carotid diastole. Treatment with iodides and Trunecek's serum injections brought about a decided diminution of the movements; the author believes, however, that hypertension alone was not responsible for the phenomenon; but rather that the movements were attributable to direct transmission of the pathologically exaggerated heart thrust; such transmission being favored by arteries rigid from repletion and arteriosclerosis. A full review of the literature of this interesting subject is given by the author; the etiological factors hitherto invoked in most instances being aneurysm of the aortic arch, aortic insufficiency and pleuritis. [R. L. F.]

2.—Bendandi reports, in detail, 6 cases in which, during operations for the radical cure of hernia, and laparotomies for intestinal occlusion, he met with **Meckel's diverticulum.** In one patient a tuberculous diverticulitis was present; in another the diverticulum was found in a large inguinoscrotal hernia in company with loops of the small intestine and adherent to the sac; in a third it was found alone in a nonstrangulated crural hernia; in 2 cases of diverticulitis it was adherent to the lower part of the pelvis, strangulating a mass of the small intestine; and in the last patient it was adherent to the parietes in the region of the umbilicus, here also strangulating loops of the small intestine and causing, as in the former patient, intestinal occlusion. [R. L. F.]

3.—Pirrone **has studied in animals the function of the hypophysis** through partial and complete ablation of the gland, and draws the following conclusions from the work done: (1) Not all the phenomena consecutive to hypophysiectomy are attributable to abolition of the function of the pituitary gland. (2) The expressions of suppression of the function of the hypophysis are disturbances of motility, weakness, psychical depression, rapid emaciation, cachexia and death. (3) Phenomena pertaining to the vascular system, respiratory apparatus and modifications of temperature are referable to trauma. (4) Total ablation of the hypophysis does not modify the chemical composition of the urine. (5) Although the mechanism of the pituitary gland's function is not understood, it is an organ of the highest importance in the economy. [R. L. F.]

Society Report.

PHILADELPHIA OBSTETRICAL SOCIETY.

Meeting held March 5, Dr. J. M. Fisher, president, in the chair.

Dr. L. J. Hammond read a paper on a case of **postoperative tetanus, with special reference to the focus of infection**, in a woman of 23, a farmer's daughter, who had already had an attack of peritonitis. A few days later she suffered from an alveolar abscess, from which much pus was evacuated. Two days after this had healed, abdominal section was done for bilateral pyosalpinx, with ovarian abscess on one side and a multiple cystic ovary on the other. The abscess sacs were removed without rupture. Tetanus developed 6 days after operation, death occurring 27 hours after the first symptoms, in spite of treatment. He believed that the tetanus bacilli had probably been concealed in her carious teeth. Dr. Joseph Sailer discussed **antitoxin in the treatment of tetanus.** He quoted Roux, saying that chronic cases generally recovered, while acute cases did not. Dr. Hammond's patient had already had 1,000,000 units when seen by Dr. Sailer. At this time the case appeared hopeless. He believes that there is probably no germ more difficult to destroy than the tetanus bacillus. He agreed with Dr. Hammond that the bacilli had probably been lodged in her teeth, and that, perhaps, this latent focus had been aroused by the alveolar abscess. Dr. F. C. Hammond quoted two cases of tetanus following aseptic celiotomy, reported by Coe in 1901. Dr. H. D. Beyea referred to some cases of tetanus following operation, in which sterilized water was used which had not been properly sterilized. Dr. B. C. Hirst referred to several similar cases. Dr. Hammond, in closing, said that this was his only case of tetanus after operation. Especial care was then taken to prevent any other cases in the same institution. As the water was properly sterilized, he does not believe that it furnished the infection.

Dr. M. H. Bochroch read a paper on **birth palsies.** These injuries, as a rule, only receive attention several years after birth, at the hands of the neurologist. He believes that prolonged pressure, such as occurs in primiparæ, is more often the cause of birth palsies than improper use of the forceps. The treatment of the separate palsies was then described. Dr. G. M. Boyd has not seen such a case resulting from the application of forceps. He believes that many of these injuries are due to too early interference or to injudicious or faulty use of the forceps. Dr. Stricker Coles described a case of brachial palsy. He had also seen facial paralysis, following forceps delivery, with recovery in 6 days. Dr. W. S. Stewart reported a case of brachial palsy which he traced back to maternal impressions. In this case there was nothing to indicate injury at delivery, nor has this case responded to any method of treatment. Dr. E. P. Bernardy referred to his article on the use and abuse of obstetrical forceps. He believes that the forceps are the main cause of this injury. Dr. F. C. Hammond said that, prophylactically, it would be well to apply forceps just as soon as the fetal head fails to recede between pains. Dr. Bochroch, in closing, noted the curious fact that facial palsy usually disappears in a few days. That the forceps are not used early enough and prolonged pressure, especially in primiparæ, are the frequent causes of these palsies.

By request, a paper on **the modern maternity hospital**, its equipment, clinical material and influence upon specialization in American surgery, by Dr. B. C. Hirst, was read by title.

Acute Rheumatic Endocarditis in the Aged.—Parisot and Hoche report in full the case-history of a man of 75, who had frequent attacks of rheumatism, affected by acute articular rheumatism complicated with endocarditis, bronchopneumonia and death in asystole. Such a complication is rare in elderly persons, since the arteries and cardiac valves have generally undergone senile changes, sclerosis especially. The condition is most serious on account of the degeneration of the myocardium common to old age, so that therapeutically but little can be done. (*Revue Médicale de l'Est*, December 15, 1902.) [M. O.]

Original Articles.

THE SYPHILITIC NATURE OF TABES AND GENERAL PARALYSIS.

By DR. LEREDDE,
of Paris, France.
Translated by MAURICE OSTHEIMER, M. D.

I. THE QUESTION FROM THE ANATOMOPATHOLOGICAL STANDPOINT.

In his remarkable article[1] Renaut concludes that the lesions of tabes and general paralysis may be syphilitic without necessarily conforming to the ancient classic table. In the future, then, we can admit that a certain number of the medullary lesions of tabes and general paralysis may be directly of syphilitic origin. Neurologists have made no attempts, to my knowledge at least, to discover whether the lesions of general paralysis were syphilitic in nature or not.

But this is not the case with tabes. Nageotte's recent article[2] deserves especial attention, on account of the great amount of material studied and the conclusions drawn. According to Nageotte, tabes is characterized anatomically by an inflammatory lesion attacking any number of sensory or motor roots where they leave the subarachnoid space, accompanied with a generalized syphilosis of the meninges. The radicular lesions only cause appreciable symptoms in certain conditions, the anatomical being more extensive than the clinical limits of tabes. The lesions of the cord and roots are degenerative in character. At the level of the pia mater the histological characteristics of subacute and chronic inflammations are identical with those produced in the nervous system by syphilis, and, if we reflect upon the clinical facts demonstrating the syphilitic origin of tabes, we are convinced, Nageotte says, that this meningitis is a syphilitic meningitis.

The importance of the initial lesion is confirmed by the existence of lymphocytosis of the cerebrospinal fluid, which is commonly found, constituting one of the first symptoms of meningitis due to intramedullary lesions, causing obliteration of the regions occupied by the radicular nerves, the districts lying between the points where the roots reach the dura mater and the spots where the posterior roots join the ganglia (interstitial radicular neuritis, Nageotte). The discussion leads to this anatomical conclusion; the lesions of tabes and general paralysis may be syphilitic in nature, omitting secondary degenerative lesions which are only of syphilitic origin, to which no objection can be made on account of the absence of the usual histological lesions of syphilis, a fact formerly insisted upon. The meningitis accompanying these lesions, minutely studied in tabes at least, may be found greatly to resemble ordinary syphilitic meningitis, in accord with Nageotte. In many cases of general paralysis, also, at autopsy, classical lesions of syphilis, gummata, have been noted, beside the lesions of the disease. Further, lesions of tabes have been found coinciding with gummata of the meninges.

The syphilitic nature of tabes and general paralysis was made plain to me by their recovery upon mercury; but is it sufficient, because mercury cures certain lesions, to conclude that those lesions were syphilitic? This is admitted by dermatologists, who see lesions of the skin in syphilitic patients recover regularly upon mercurial treatment, establishing the nature of a doubtful cutaneous lesion by the therapeutic test, as, for example, an injection of calomel in the buttock. Among neurologists, this idea has not led to the same deductions. They admit mercury among the therapeutic agents in tabes and general paralysis, but on an equality with other remedies. Many neurologists have noted improvement because they all know that cases of recovery under mercurial treatment have been published, but the logical consequences have escaped almost all, not one having interpreted facts that cannot be denied. If there is any affection of the nervous system the nature of which can be decided by mercury, that affection is syphilitic in origin.

Before enumerating the cases which have been cured, I should explain what is meant by recovery in tabes and general paralysis. To the patient recovery means the disappearance of all morbid symptoms; but to the physician, who knows that every disease leaves its traces, the meaning is different. A tubercular patient who has been cured believes that his lungs have recovered their normal structure and function. The physician knows that this is not so, and should recall the fact that, in every affection of the nervous system, incurable, degenerative lesions may supervene. The word recovery in tabes and general paralysis means, for the physician, nothing but arrest of the disease. Certain phenomena may disappear, possibly, if not yet due to degeneration. But, as examination of the case-histories shows, many symptoms of tabes and general paralysis may not only be arrested but may even retrocede.

The notion of the curability of tabes is not new, having been expressively stated by Fournier[3] in his book, in 1882. At that time Fournier believed locomotor ataxia to be of syphilitic origin and curable; later he stated that he had only cured one case. The action of the treatment was noticed at all stages of the disease. In old cases of tabes recovery is impossible, yet certain symptoms may be modified, even dissipated, such as the lightning pains and urinary disturbances. In recent cases of tabes certain symptoms may be influenced, the pain, ocular paralyses, urogenital troubles, etc. Sometimes the evolution of the disease is not modified, at other times it is definitely checked. Fournier quotes a case in which the disease was stationary for 16 years, with treatment. Finally, in incipient tabes, the action of the treatment may be so decided that the physician is ignorant, later, whether the case was really tabes or not. In patients with ocular paralyses, treated regularly, tabes fails to develop.

In 1882, also, Fournier quoted a large number of cases showing notable improvement and even recovery, reported by Tessier, Dujardin Beaumetz, Carré, Moore, Bourdon, Reder, Dreschfeld, Drysdale, Hammond, Berger, Erb, Mayer, Gowers, Reumont, Rumpf, Spillmann and Tenneson. Of the more recent observations I will only mention the most important. Albert Robin[4] reported the case of a man, diagnosed locomotor ataxia by Gubler and Charcot, all of whose symptoms (pains, oculomotor and urinary disturbances) had disappeared after some years of treatment. Dinkler[5], in 1893, published 71 observations of patients with tabes treated with mercurial inunctions. After treatment, 58 showed great amelioration of one or more symptoms, not only the lightning pains, but anesthesia and analgesia also. Visceral crises seem very rebellious to treatment. Motor inco-ordination may be diminished or disappear completely. The knee jerks re-appear in some cases, and external ophthalmoplegia, affections of the iris, vesical and genital disturbances may show considerable improvement. Finally the general condition of the patient becomes strikingly better.

In 13 years Bockhart[6] treated 95 patients with tabes by inunctions, 72 at the beginning of illness, 23 when already ataxic. Of the 95, 22 could not be followed, and 4 died. Of the 69 remaining, 58 were early cases, with Argyll-Robertson pupils, absent knee jerks and paresthesia. In 10 patients the disease made slow progress; in 33 improvement was noted, and in 12 the disease retroceded. In 11 cases with inco-ordination there was no noticeable result, except in 2 patients in whom vesical disturbances disappeared and the troubles of inco-ordination did not increase. This work is important on account of the number of cases reported. Unfortunately, the case-histories are incomplete or absent, and cannot, therefore, be criticized. That was probably the reason which made this demonstration insufficient, not forcing those denying the syphilitic nature of tabes and general paralysis to reflection; on the other hand, the classical treatment by inunctions is not energetic enough, in many cases, to give results similar to those obtained by injections of calomel, or, even better, injections of insoluble salts in high doses. More important are the cases of tabes observed by Leduc[7] and Lemoine[8], recently published in France, though other writers have also reported similar cases.

Leduc's Cases.—CASE 1.—Syphilis in 1886: in 1892 lightning pains and beginning inco-ordination in lower extremities: in 1894 Argyll-Robertson pupils, complete ataxia, absent reflexes. Treatment by injections of 1/6 gr. bichloride, 15 days of each month, with rapid disappearance of inco-ordination. Six years after beginning treatment gait was absolutely normal. Reflexes are still absent and some lightning pains persist.

CASE 2.—Tabes of rapid evolution. Eight months after the first lightning pains there were marked inco-ordination of lower extremities, Romberg, Argyll-Robertson and Westphal signs, and violent gastric crises. Injections of 1/3 gr. bichloride were given daily during 6 months, with periods of repose. Recovery, with some pains persisting and reflexes absent.

CASE 3.—Complete tabes; lightning pains in extremities, ataxic gait at night, Romberg's sign, absent reflexes. Recovery upon bichloride injections, with return of reflexes. During 4 years no new symptoms have appeared.

CASE 4.—In 1895 lightning pains, followed by ataxia of both upper and lower extremities, the patient being unable to eat unaided. There were laryngeal crises, threatening asphyxia, intermittent heart movements and dyspnea. Bichloride, 2/3 gr., was given daily for 3 weeks of each month. The laryngeal symptoms, cardiac arrhythmia, respiratory disturbances and inco-ordination disappeared. The motor ataxia was but little changed. The disease remained stationary for 4 years, when death occurred suddenly.

Lemoine's Cases.—CASE 1.—Tabes of slow evolution, with vesical disturbances and lancinating pains. Some years later complete tabes, walking impossible except with 2 canes, Romberg, Westphal and Argyll-Robertson signs, lightning and girdle pains. Mercuric benzoate given, 1 gr. daily. On the fortieth day diminution of the pains; on the fifty-third day he walked without a cane. The patient, a professor of dancing, gradually got back to work. Pains have disappeared almost entirely; reflexes have not returned.

CASE 2.—Tabes lasting 3 years, with lightning pains, Romberg and Westphal signs; walking only possible with a cane. The pains disappeared after 15 days treatment, 1/3 gr. mercuric benzoate daily, which was given 15 days of each month, for 6 months. After 5 months, the patient walked over a mile. He could also stand. Pains and vesical paralysis disappeared.

CASE 3.—Complete ataxia, inco-ordination, weakness of lower extremities, and ataxic gait. From 1896 to 1897 the motor symptoms grew worse, walking forward becoming almost impossible. There were urinary disturbances, ataxia of upper and lower extremities and, in 1899, almost absolute impotence, with retention of urine. Injections were given, 1/2-2/3 gr. mercuric benzoate, for 20 days out of each month, during 8 months. Pains disappeared at once. One year after treatment had begun the patient walked a mile without fatigue or stumbling. Vesical disturbances and ataxia of upper extremities disappeared. In 1902 he could walk 3 or 4 miles daily.

CASE 4.—Tabes of rapid course. In 1893 lightning pains, with locomotor disturbances. In March, 1894, he could not stand or walk; reflexes had disappeared. A week later vesical and intestinal disturbances, inco-ordination, stumbling, girdle pain and severe lightning pains in upper and lower extremities; in May cardiac and respiratory troubles appeared. Mercury was given by inunction up to salivation, and all symptoms disappeared, only some lightning pains and slight inco-ordination in the extremities remaining, with blunting of general and muscular sensation.

CASE 5.—In 1899 troubles in walking, lightning pains in the legs, vesical disturbances and abdominal pain. In 1900 ataxia of the lower extremities, ocular troubles and Argyll-Robertson pupils. From 1/3 to 1/2 gr. mercuric benzoate was injected 15 days of each month; the pain disappeared, followed by disappearance of motor and vesical disturbances. His sexual power returned.

CASE 6.—Tabes began in 1898. In 1900 extreme inco-ordination, diminution in muscular sensation, lightning pains in the legs, vesical and rectal disturbances. Mercuric benzoate was given in injections for 20 days each month. In June, 1900, the pains disappeared. In 1901 he walked much better. In the end of 1901 he walked well without a cane.

The classical dogma states that general paralysis is incurable. But Lemoine, Devay and Cassaët have published truly remarkable case-histories of patients with general paralysis who have recovered.

Lemoine's Cases.—CASE 1.—Syphilis in 1890. In 1896 headache, disturbances of memory, character and speech, with apoplectiform attacks. In 1897 there were tremors of the lower lip and tongue, pupillary inequality and melancholia, the diagnosis made by Raymond being general paralysis. In 1897, for 2 months, 1/3 gr. mercuric benzoate was given daily, in injection, with improvement in speech and memory at once. In 1898 all the psychical disturbances were better, the labial tremor having decreased. In 1899 all symptoms had disappeared except a slight pupillary inequality.

CASE 2.—Syphilis in 1892. In 1899 disturbances in character, diminution in memory, hesitating speech, an apoplectiform attack, incoherence in ideas, lingual tremor, tendency to megalomania, etc., were noted. Mercuric benzoate injections were given, 1/3 to 1/2 gr., for 15 days each month. After 5 months all symptoms had disappeared except some embarrassment in speech, which disappeared later. In 1900 he had an apoplectiform attack which necessitated a new period of treatment, followed by complete recovery, in 1902.

CASE 3.—Syphilis in 1891. In 1898 disturbances in memory and speech, intellectual dulness, myosis, hebetude, lingual tremor and melancholia were noted. After making the diagnosis of general paralysis, ½ gr. mercuric benzoate was injected daily for 15 days each month. In July, 18 speech disturbances grew less marked and memory returned. In 1901 the only signs left were pupillary disturbances and slight tremor of upper extremities.

CASE 4.—In 1898, irritability, crying without cause, disturbances of memory and speech, pupillary inequality, tremors of the tongue and lips and increased reflexes were observed. In 1899, ¼ gr. mercuric benzoate was given in injection, 15 days each month, with immediate improvement, the memory returned, tremors, psychical troubles, etc., all disappeared, and the patient returned to work.

CASE 5.—Syphilis in 1897. Excitement, megalomania, disturbances of memory and speech, lingual tremor and visual disturbances were observed. Treatment by injections of mercuric benzoate for 20 days of each month. In October, 1899, apparent recovery, all symptoms, even visual disturbances, having disappeared. When the treatment stopped, the symptoms re-appeared. But recovery was brought about again by repeating the treatment.

CASE 6.—Syphilis in 1899. In 1900, severe psychical disturbances, delusions of grandeur, disturbances of speech and writing. In 1901, Argyll-Robertson pupils, pupillary inequality, tremor of the tongue and lips, increased reflexes. Benzoate of mercury, ¾ gr., for 20 out of every 40 days, by injection, caused improvement, disappearance of the delusions of grandeur, Argyll-Robertson pupils and disturbances in writing. In 1902, the treatment having ceased, he had an apoplectiform attack. Treatment was continued. In December, 1902, the only sign left was slight embarrassment in speech.

Lemoine also had several negative cases, details of which are not given. It seems that these patients were not treated by injections of soluble salts of mercury in high doses. Aubery, in his thesis, reports 10 cases of general paralysis cured or improved upon mercurial treatment. Most of these cases, observed by Devay[9], are entirely demonstrative. Some have been omitted.

Devay's Cases.—CASE I.—In 1899 weakness of the lower extremities, loss of memory, vertigo, falling without unconsciousness, increased reflexes, disturbances of speech and writing and tendency to satisfaction without delirium were noted. Injections of ¾ gr. of calomel were given weekly, with improvement, return of memory, normal writing, normal mental state. In 1902 complete recovery.

CASE 3.—Epileptiform attacks, vertigo, tremors of tongue and hands in 1897; in 1898 disturbances of memory, tremors, delirium; in 1901 exaggerated reflexes, troubles in writing and speech. Calomel injections, with gradual improvement, disappearance of tremors, vertigo and disturbances in writing. The patient returned to work.

CASE 4.—In 1901 depression, loss of memory and intelligence, ideas of persecution, nocturnal agitation, tremors, exaggerated reflexes, embarrassment in speech. Gradual recovery followed calomel injections. In 1902 the only symptoms persisting were increased reflexes.

CASE 5.—In 1900 troubles of speech, convulsive crises, loss of memory and insomnia, followed soon by depression, loss of intellect, characteristic disturbances of speech, tremor of tongue and pupillary inequality. With injections of calomel memory returned, convulsions ceased and speech improved.

In the rest of Devay's cases the treatment consisted of the administration of iodides, together with injections of calomel.

CASE 7.—General paralysis with a tendency to delirium of persecution in 1899. Loss of memory, pupillary inequality, fibrillary tremors, mental confusion and hypochondria. In 1901, after treatment, remission occurred, followed, later, by the disappearance of all physical signs except pupillary inequality and tremor of the hands.

CASE 8.—An attack of maniacal irritation occurred in January, 1901, followed by disturbances of intellect, loss of memory, exaggerated talking, increased reflexes and tremors of the hands. In October, after treatment, all symptoms had improved, and the patient went back to work.

CASE 9.—In 1901 tremor of tongue and hands, delusions of grandeur, loss of memory and intelligence, disturbances in writing and embarrassment in speech were noted, all of which symptoms disappeared almost completely, after treatment, the patient being able to return to work.

Cassaët reports 3 cases of general paralysis treated with mercury.

CASE 1.—Old syphilis. Failure of intellect, loss of ideas of time and places, irregular pupils and extension of the disease were noted. But for 5 years progress of the general paralysis was stopped by mercurial treatment. Then the patient died suddenly.

CASE 2.—General paralysis with serious intellectual disturbances, troubles of memory, mental confusion and agitation. The patient had to keep indoors. There were tremors of lips, tongue and hands, with involuntary evacuation of urine and feces. Great improvement followed injections of calomel. The urine and feces were again under control, memory returned, and the patient, an engineer, was capable of directing his business. The only symptoms left were slight speech disturbances noticed on some days only.

CASE 3.—General paralysis, characterized by tremors of the lips and hands, pupillary irregularity, dulness of memory, mental confusion, with loss of control of the vesical and rectal sphincters. Mercurial inunctions were followed by rapid improvement at first, slower afterward. Gradually the mental state became normal, the patient, a merchant, returning to business. Five years after the disease had developed, recovery was complete.

By making more researches, I might increase this list of cases, but the German articles of Dinkler and Bockhart and recent French cases offer sufficiently numerous and precise details to permit of true criticism. I have only given a résumé of the cases, grouping the essential facts with great impartiality. Omitting the observations of Dinkler and Bockhart, I have collected 26 cases which may be considered as showing recovery from general paralysis and tabes. The existence of these cases cannot be denied: the only thing left is to attempt to find some other interpretation of them than the conclusions drawn by their writers. After mature deliberation I can conceive of but one other possible diagnosis, outside of the diagnosis of true tabes and true general paralysis, syphilitic tabes or abortive tabes, and syphilitic pseudogeneral paralysis or abortive general paralysis.

II. SYPHILITIC PSEUDOTABES AND SYPHILITIC PSEUDOGENERAL PARALYSIS.

Fournier created the term syphilitic pseudogeneral paralysis in 1879, in his lessons upon brain syphilis. He declared that syphilis often produced a pathological ensemble, only analogous in symptoms and lesions to that of general paralysis, not identical. At that time he did not admit syphilis as the common cause of general paralysis, the latter being but a coincident affection, when it was not pseudogeneral paralysis, which differs from the true type by details which make confusion impossible (Fournier, 1879). The analogy is due to the presence of disturbances of intellect (as in the mental form of cerebral syphilis), of motion, tremors, jerks, uncertain movements. To these are added the symptoms of the common form of cerebral syphilis, especially congestive disturbances, vertigo, disturbances of vision and hearing, epileptiform convulsions and apoplectiform attacks. The characteristics which make confusion impossible are the absence of delusions of vanity and grandeur, pseudogeneral paralysis being accompanied with depression; inconstant tremors, never so characteristic as in general paralysis; the presence of true paralyses in syphilitic pseudogeneral paralysis, the paralyses and apoplectic attacks preceding mental disturbances, just the opposite of what occurs in general paralysis. Finally, true general paralysis is absolutely incurable; pseudogeneral paralysis is not often cured, but recovery is not strictly impossible.

Now what has become of this morbid type since 1879? In 1894 Fournier declared, in his book on the "parasyphilitic affections," that he had wrongly included authentic cases of general paralysis under pseudogeneral paralysis. Is that not as much as stating that the differential characteristics which he indicated in 1879 were no longer differential? Ballet and Blocq[10] declare that true general paralysis begins with disturbances of intellect, motor disturbances, hemiplegia, aphasia or paralysis of cranial nerves. As we noted, Fournier stated just the contrary. According to Ballet and Blocq, too, the tremors are usually inconstant in true general paralysis. Thus the diagnosis grows more difficult; and, from a nosological standpoint, we are now obliged to find a new description for a morbid type which had already changed between 1879 and 1894.

Nor is that all. In Germany and even in France many observers do not admit the existence of syphilitic pseudogeneral paralysis. Raymond and Sérieux[11], for example, accept syphilitic dementia only as cerebral syphilis resembling general paralysis in its clinical aspect. The former frequently occurs in young individuals, the latter is a disease of adult age; the former begins with a rapid prodromal stage, in the latter this is slower; in the one, psychical and motor disturbances vary in nature and intensity, in the other, the morbid picture is more regular; in the one, mental disturbances are slight and less general, in the other, they are marked and generalized. Delirium may be the same in general paralysis and syphilitic dementia. Besides, no differential sign has absolute value, since there are hardly any symptoms which general paralysis cannot simulate. Raymond and Sérieux declare that some of the observations called syphilitic pseudogeneral paralysis by Fournier are cases of syphilitic dementia, others being true general paralysis.

It would be easy to prolong this comparison, until one would ask whether, among the cases of typical cerebral syphilis and general paralysis, there were not some cases in which psychical and motor disturbances differ from the clinical type of either morbid condition. Morbid types should first be established; secondarily only should care be taken to make their study easy. Attempts to create a pathological anatomy for pseudogeneral paralysis have not given conclusive results, the lesions being localized to the same regions as in general paralysis. According to Fournier, the meninges are less affected than the cortex in general paralysis, and the contrary is noted in pseudogeneral paralysis, in which there is, above all, meningeal sclerosis. Now Ballet and Blocq note that the meningeal lesions are extremely important in general paralysis; Raymond and Sérieux find that they are accompanied with a fibroplastic meningitis, *i. e.*, sclerosis.

Is there, then, a syphilitic pseudogeneral paralysis? If it exists, it has no precise limits, no pathological anatomy. But, admitting that the cases already cited may be cases of pseudogeneral paralysis, two things are plain: that there is a clinical type of cerebral syphilis, identical with, and impossible to differentiate from, true general paralysis, contrary to Fournier, and that this type is singularly frequent. Lemoine alone observed 6 cases in 4 or 5 years. On the other hand, this pseudogeneral paralysis, which Fournier declares to be seldom curable, is often cured, since three writers alone (Lemoine, Cassaët and Devay) collected a dozen cases of recovery in as many years.

Thus we reach the following practical conclusion: Among syphilitic patients a morbid type is rather frequently found which, in its symptoms, exactly simulates common general paralysis. Differential diagnosis is absolutely impossible. This type is curable upon injections of large doses of mercury. As the diagnosis is impossible, all cases of general paralysis should be treated, from the beginning of the disease, with mercury. By this means patients will recover who did not recover formerly, because we were ignorant that true general paralysis could be simulated by syphilis. The existence of an affection, the lesions of which are identical or almost identical, syphilitic in origin but not in nature, becomes extremely doubtful. We are led to believe that general paralysis in a syphilitic patient is always syphilitic in nature, and may be cured if treated correctly. The neurologists may, if they wish, modify nosological conceptions and call general paralysis a disease which is syphilitic neither in nature nor origin, is incurable and simulates syphilitic pseudogeneral paralysis, the etiology of which, though it includes at least 90% of the old cases of general paralysis, has never been determined.

Unlike syphilitic pseudogeneral paralysis, syphilitic pseudotabes is a conception of German origin, established in a totally different manner. At society meetings, when any one spoke of recovery from tabes, some one rose to state that the speaker must mean pseudotabes. The latter, therefore, seemed to be a common affection, constantly under discussion. Yet the German observers who tried to construct this morbid type were able to collect but a few cases. In all of them the effect of the mercurial treatment was positive. There were no distinctive symptoms, and meningitis, gummata and the cord symptoms of tabes were found at autopsy. In other cases, beside the symptoms of tabes due to lesions of the posterior tracts, there were symptoms due to lesions of other tracts; at autopsy complex changes were found in the cord, gummata being always or almost always associated with meningitis.

Until we have autopsies upon tabetic patients in whom the evolution of the disease has been stopped by mercury, we are unable to determine what lesions could exist in the patients whose histories have been given. But if they had pseudotabes, this affection must occur very often, Leduc reporting 4 cases, Lemoine 6 cases, without mentioning the cases of recovery observed by Fournier in 1882, which must also be included under pseudotabes. Clinically the diagnosis is impossible. Reading over the case-reports leads to the conclusion that, among syphilitic patients, there is a frequent morbid type, exactly like common locomotor ataxia, curable on large doses of mercury. The impossibility of diagnosing these cases from other cases of tabes obliges us to employ mercury in all cases of tabes, thus curing patients who never used to recover. Theoretically these conclusions are exactly the same as for general paralysis. One asks whether all cases of tabes, in syphilitic patients, are not purely and simply syphilitic in nature.

III. ABORTIVE TABES AND ABORTIVE GENERAL PARALYSIS.

The question of abortive tabes is new, the term not yet having a precise definition. It means tabes with few, unimportant symptoms, of slow evolution. The number of cases has grown now that the diagnosis of tabes is made from the presence of some symptoms only, and it will increase still more if we admit that Argyll-Robertson pupils and lymphocytosis of the cerebrospinal fluid are alone sufficient for the diagnosis of tabes. It is true, also, that, in a patient with those two signs alone, the diagnosis might as well be abortive general paralysis. The question has been asked, at the Société de Neurologie, Paris, whether the frequency of abortive tabes was due simply to better diagnosis nowadays; some observers stated that the evolution of tabes was no longer the same as formerly; others, Marie and Babinski, most disposed to modify the classical notions of the pathogenesis of tabes, wondered whether antisyphilitic treatment, given in most cases in an incomplete manner, could not have produced a change in the disease which was formerly considered very serious. I admit the first and third hypotheses, but can say nothing about the second hypothesis.

But if you look over the cases reported, you realize that the term abortive tabes is unsuitable, and it is useless to insist upon it. We must, however, determine whether tabes may be arrested spontaneously in its evolution. In the abortive as well as in the common forms, the disease may certainly be arrested. When any one publishes a case of recovery from tabes, those who do not believe in the syphilitic nature of the disease object, believing the disease spontaneously arrested. Yet this objection may be answered decisively. That one observer should attribute a case of arrested tabes wrongly to mercurial treatment is possible, but, when physicians like Leduc and Lemoine have seen several cases, the question changes. Such a coincidence could only be noted by men who treat hundreds of cases. It should be added, too, that arrest of the disease, retrocession of the symptoms, follows periods of mercurial treatment; that this evidently affects only the symptoms which are due to irritation of certain regions, not to degeneration, the curative effect of mercury upon the lightning pains having been observed a very long time ago.

Concerning abortive general paralysis I have but little to say. This morbid type is not as yet known; but it may soon be created, by a syphilitic patient with Argyll-Robertson pupils, lymphocytosis of the cerebrospinal fluid and some mental symptoms. The cases reported above are certainly not abortive general paralysis. Should any one contend that these cases might be general paralysis arrested in its evolution, I would answer as I have done upon tabes, and I would add that, even in 1903, to most neurologists, general paralysis is an incurable disease.

IV. GENERAL REFLECTIONS.

The value of a logical demonstration can always be contested when a writer does not express himself sufficiently strikingly. The longer the article, the greater becomes the difficulty of making himself understood. In interpreting the cases published as cases of recovery from tabes and general paralysis, it seems to me impossible to accuse the men who reported them of being mistaken; what they called tabes and general paralysis would have been called tabes and general paralysis by every one; there was no error in diagnosis. If several observers were able to publish a number of cases of recovery, it is certain that tabes and general paralysis in syphilitic patients are diseases of syphilitic nature. I add that they are frequently curable, without doubt wholly curable, if the treatment is begun before degeneration occurs, under certain therapeutic conditions, to be indicated later. Anatomopathological objections have no foundation and cannot prevail against facts observed.

It seems preferable that, from now on, we should modify our notions of the affections termed tabes and general paralysis. The neurologists have constructed anatomoclinical frames for study and description; their work was necessary temporary, and we can now understand how our former notions should be changed. The disease no longer consists only of resulting lesions or of symptoms. In place of the old nosological conventions we ought to substitute new conceptions. Syphilis produces lesions of the nervous system with great frequency, diffuse, slow in evolution, apparently beginning in the meninges, either in the brain or cord. The lesions vary sufficiently from the classical table of syphilitic lesions, but we realize nowadays that this table may be enlarged. Between the symptoms caused by these lesions and symptoms caused by other forms of cerebral or spinal syphilis there are, symptomatically, all grades of transition and association.

Antisyphilitic treatment, in patients with tabes or general paralysis, should necessarily begin early. The diagnosis of tabes and general paralysis should be made as soon as possible; I would add that, when doubtful, treatment should be given as though the diagnosis were certain. For, if we wait, irremediable degeneration may occur. While studying the "parasyphilitic affections," trying to explain cases which did not recover, I wondered whether mercurial treatment had really been correctly given to patients with tabes, general paralysis and many who suffered from severe syphilis. For there was still one natural explanation for frequent failure in treating tabes and general paralysis by mercurial treatment. The words mecurial treatment mean nothing if the details of the treatment are not specified. Inunctions were and still are the common mode of administering mercury in syphilis. In this manner no one knows how much mercury is absorbed; from one to 5 drams of Neapolitan ointment being ordered. It seemed to me that the remarkable effect of 1½ grains of calomel, injected weekly, was due to the large quantity of mercury absorbed by the organism, and I was led to study the intensive treatment and to seek to regulate it with precision.[12]

I saw that some writers could employ higher doses of certain salts of mercury than was commonly done, and I sought to regulate the treatment on new lines, admitting that mercury in itself was alone the curative agent in syphilitic lesions, and that the nature of the salt introduced into the organism was important only from the standpoint of facilitating its injection or absorption; that recovery from obstinate syphilis was subordinate to the quantity of mercury introduced into the organism, thus explaining the effect of calomel injections; and that, in cases of grave syphilis or syphilis of unknown severity, the dose of mercury given should be raised to limits compatible with the integral resistance of the organism. To obtain this result, injections of the soluble salts of mercury are necessary. These opinions I have expressed in recent articles.[13],[14].

In a healthy, vigorous adult, ½ to ¾ grain of either mercury benzoate in normal salt solution or the biniodide in water, to which a slight amount of sodium iodide is added, may be injected daily. These salts contain about 45% of mercury, so that 1¼ m. may be injected daily. This dose should not be given at first, the injections beginning with ½ or ¾ m. only, which is well borne except by persons who cannot tolerate mercury in any form. This is gradually increased, the temperature, weight and digestion of the patient being carefully watched. If fever, loss of flesh or indigestion develops, the maximum dose has been reached. The condition of the mouth is unimportant, so long as the gums are carefully cleansed when treatment begins, and the mouth is kept clean during treatment. The dangers of the treatment with high doses of mercury are overcome in this way. If any one should speak of the dangers of the mercurial treatment in syphilitic patients with tabes or general paralysis, the dangers existing if it is not administered should be made equally plain. This makes one decide exactly what these dangers are and how to overcome them, which cannot be done with precision, so vague are the actual observations of patients with tabes and general paralysis.

In patients with tabes mercurial treatment is not dangerous. It offers, perhaps, dangers for patients with atrophy of the optic nerve, but even ophthalmologists do not agree on this point. As it is admitted that these patients necessarily become blind, I would have no scruples against energetic treatment in a patient with tabes and beginning optic atrophy. Nothing in the case-histories reported allows us to affirm with certainty that the evolution of the disease becomes more rapid, while, on the other hand, we have no other way of hoping to cure the patients.

Very rarely in general paralysis do high doses of mercury seem able to accelerate the evolution of the disease. But here, too, we have no other means of bringing about recovery; and we have so many reasons, nowadays, for hoping to cure these patients upon mercurial treatment that we should, I believe, always give it when the patient remains under observation. By very gradually increasing the daily dose, in general paralysis, preventing any sudden action of the mercury, I believe we may almost always avoid therapeutic accidents. These therapeutic accidents are very simply explained; in regions as delicate as the central nervous system, sclerosis, the process of cicatrization due to the mercury, may cause alterations in the nerve cells and fibers, the injurious effect of the mercury in some cases being the result of its specific action.

The dangers of potassium iodide in some cases of general paralysis are undeniable. Whether they cannot be overcome by giving very small amounts at first, gradually increasing the daily dose, still remains to be discovered. But there is no actual difficulty in treating general paralysis with potassium iodide, an unreliable drug in syphilitic processes, particularly in slow scleroses. In tabes, potassium iodide does not seem dangerous. Besides, there is no reason for using it in the routine treatment of tabes.

REFERENCES:

1. J. Renaut, Philadelphia Medical Journal, January 17, 1903, page 128.
2. Nageotte, La Presse Médicale, December 10, 1902.
3. E. Fournier, "L'Ataxie Locomotrice", 1882.
4. Albert Robin, Gazette Médicale de Paris, 1882.
5. Dinkler, Berliner klinische Wochenschrift, April 10, 1893.
6. Bockhart, Monatshefte für praktische Dermatologie, 1902.
7. Leduc, Congrès de l'Association Française pour l'Avancement des Sciences, 1902.
8. Lemoine, Revue Neurologique, July 30 1902.
9. Thèse Aubery, "La Paralysie Générale", Lyons, 1902.
10. Traité de Médecine, Charcot, Bouchard, etc., Volume VI.
11. Traité de Médecine, Brouardel et Gilbert.
12. Leredde, Philadelphia Medical Journal, January 10, 1903.
13. Leredde, La Semaine Médicale, April 23 1902.
14. Leredde, Journal des Praticiens, February, 1903.

PULMONARY ABSCESS PRODUCING DEXTROCARDIA; A CASE-REPORT.*

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The following case, which I am enabled to report through the courtesy of Dr. James Hendrie Lloyd from his service at the Methodist Episcopal Hospital, presents some features of more than ordinary interest. In the absence of satisfactory history, and on account of the advanced morbid condition in which the patient was admitted, the complete diagnosis was obscure. The possibilities from the symptoms presented were perplexing, while the findings at autopsy were sufficiently unusual to merit your attention.

C. W., aged 24 years, a farm-hand of magnificent physique, was brought to the hospital in the ambulance on October 26, 1902. Dr. Harlan Shoemaker, the medical resident, found him markedly cyanosed and pulseless. Intensely foul-smelling pus was pouring from his mouth and nose. Physical examination revealed the presence of a large cavity in the upper lobe of the left lung. This was filled with bubbling and gurgling rales. Amphoric breathing could be heard. The lower lobe was clear, as was the right lung. However, over the ninth, tenth and eleventh ribs at the posterior axillary line on the right side there was a dull red edematous area, evidently a recent injury. No crepitus could be obtained. The patient was turned to the left side and resuscitated with oxygen. The temperature was 99.2°, heart-beats 96 and very feeble, respirations 12. After a few hours his respirations and pulse improved, and the patient became conscious, although he was profoundly intoxicated. He stated that he had been troubled with a hard, dry cough for several months, for two weeks he had not been able to sleep, and the cough had been more distressing. He had not suffered from night-sweats or observed any loss of weight, and had been able to work until just prior (24 hours) to admission. An examination of the pus discharged from the mouth and nose showed elastic fibers and encapsulated diplococci. The patient's general condition continued to show improvement. The heart's action became normal and the pulse strong. He expectorated frequently, hard, nummular plugs of sputum in which encapsulated diplococci were constantly found. No tubercle bacilli were present. The areas of hepatic and splenic dulness were somewhat increased (exact increase not noted). The urine examination showed a specific gravity of 1010 and the presence of albumin and hyaline, epithelial and granular casts. On October 29, three days after admission, the right lung became filled with moist rales, especially marked in the region of the superficial edema. When questioned, the patient complained of pain over the region and gave a history of having slept in a hay-mow from which he fell during sleep or delirium, and in falling received the trauma described.

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On October 30, the next day, there was an area of absolute dulness and absence of breath sounds involving the base of the right lung. On this day the patient also developed tympanites which from this period became persistent. The area of dulness in conjunction with the pain of which the patient complained and the evidences of trauma at first gave color to the possibility of a traumatic abscess of the liver. The condition proved, however, to be a pneumonia, resolution setting in in due course and the right lung clearing up. The lower lobe of the left lung, previously clear, as noted, now became solid, resistant, and flat on percussion. No breath sounds could be heard. Traube's semilunar space was tympanitic, but the presence of abdominal tympany which has been mentioned must be remembered in this connection. Repeated attempts have been made to establish a movable area of dulness on the left side, but always without result. On November 4 and 5 the patient passed a large quantity of dark, clotted blood by the rectum. The stools contained almost no fecal matter. A thorough rectal examination revealed no pathological condition. The patient's mental condition was not clear, and his statements were frequently contradictory. He gave a history of having had hemorrhages from the bowel at intervals during the past six months. He also stated that on several occasions, when sick at his stomach, he had vomited material of a black, tarry appearance. A bloodcount made at this time showed hemoglobin 70%. white bloodcorpuscles 30,200 and red cells 4,000,000. A stained specimen showed marked increase in the polymorphonuclear elements. The patient's voice, since his admission, had been hoarse, and for a number of days he was not able to speak above a whisper, and a metallic character, similar to that heard in aortic aneurysm, had been present. Laryngoscopic examination showed that the patient had a chronic laryngitis, but no paralysis of the vocal cords. An important note made on the 5th. instant states that the heart had been displaced to the right side and tilted somewhat upward. The apex could be felt in the fourth interspace on the right side, two inches from the right edge of the sternum. The normal heart area was tympanitic as high as the fourth rib, and below the tympanitic note was continuous with that of the greatly distended abdomen. The heart sounds were fluttering, but there were no appreciable valvular lesions. The patient now suffered from great dyspnea, precordial pain and loss of power in the left arm. He coughed but seldom, and the expectoration was scanty. The upper left lobe was then tympanic (November 9). On November 10 Bell tympany was elicited over the base of the left lung by Dr. J. P. C. Griffith, who saw the patient in consultation. The area of dulness could at this time be demonstrated to be movable. Pyopneumothorax had developed, therefore, about November 9, the right lung was full of coarse rales, and the splenic and hepatic enlargements were marked. The patient died at 7.15 P. M., November 12, 1902. The autopsy was performed at 2.30 P. M., November 13, 1902, by Dr. C. B. Farr, the pathologist of the institution to whom I am indebted for the following notes. Body had been embalmed. Rigidity was not marked. There was slight jaundice. On opening the abdomen the liver was observed to extend about four inches beyond the costal margin. It had a healthy appearance. The spleen extended to the level of the umbilicus. The omentum was healthy and nonadherent. The intestines were not distended. Peritoneum healthy. The colon was contracted. The appendix pointed down. There was a very short meso-appendix. The organ was sharply kinked at its lower end. The lower border of the stomach did not extend below the umbilicus. The lower bowel was markedly collapsed. The glands in the gastrocolic omentum were slightly enlarged. The highest level of the diaphragm was at the fifth rib on the right. It was markedly depressed on the left side, bulging downward as low as the level of the xiphoid. The spleen was adherent to the diaphragm, so that the capsule tore when it was removed. It was greatly enlarged, about seven inches in its greatest length and five inches transversely. It was friable and pulpy, but contained no infarcts. The left kidney was slightly enlarged. The capsule stripped readily. Pyramids slightly injected and cortex somewhat yellowish and pale. Condition in right kidney similar.

On opening the thorax there was an escape of intensely fetid gas from the left pleura. There were no adhesions of the right lung except at the apex where it was firmly adherent. There was considerable fibrinous exudate throughout the pleural cavity, especially over the lower lobe where it formed a thick layer with a rough honeycomb-like surface. The upper portion of the upper lobe crepitated normally. The lower lobe did not crepitate freely; it was firm, not friable, did not sink in water. There was a small cavity at the apex containing suspicious material. An examination of the ribs showed the absence of any fracture, a condition which was at one time suspected during life.

On the opening of the left pleura there was an escape of thin pus, yellowish-white in color. The pleura, though not completely filled, contained a large quantity of this material. The pus-sac occupied almost the whole pleural cavity, the lung being pushed upward and inward and occupying a position in the anterior part of the chest from the second rib upward and extending to the midclavicular line laterally. The upper part of the pleural cavity adjacent and internal to the upper lobe was shut off from the remainder of the pleura below and posteriorly by the wall of the abscess cavity. The lower lobe was entirely collapsed, carnified. The upper lobe was also collapsed, but to a less degree. There was a superficial depression on the base of the lower lobe, nearly an inch in diameter and about one-half inch deep. There was no pus in the bronchi. The pericardium was normal. The heart was somewhat hypertrophied and was pushed to the right by the purulent effusion. The left heart was firm, the right heart was relaxed. All of the valves were normal. The esophagus was normal, there were no signs of ulceration. The liver was much enlarged and the right lobe appearing to be especially affected. It was very friable. No pathological lesions were discovered. There were no marked changes in the stomach. There was considerable congestion here and there throughout the small bowel, though this was much more marked in the large bowel and, above all, in the cecum and ascending colon. In the later situation the veins were much distended, presenting almost a varicose condition.

The incomplete history secured from the patient was not of very material assistance in the study of the case. The fact that he had suffered on admission from a recently ruptured pulmonary abscess occupying the upper lobe of the left lung, was evident. The further fact that encapsulated diplococci were found in the material which was raised after the rupture of the abscess, indicated that this was the result of a pneumonia. Yet we were not free completely to ignore the possibility of injury as an etiological factor, since there was distinct evidence of trauma over the ninth, tenth and eleventh ribs posteriorly on the right side. For many days the patient complained of pain over the seat of injury and did not localize it elsewhere during this time. The general causes of abscess of the lung are pyemia, embolism, tubercle, acute pneumonia, the presence of foreign bodies in the bronchi and pressure on the bronchi by tumors and aneurysms. The lung may be perforated by abscesses external to it, such as liver abscess, subdiaphragmatic abscess, mediastinal abscess or suppurating bronchial glands. In this particular case the site of the abscess and the fact that it contained diplococci were in favor of its pneumonic origin. The increased area of dulness over the liver, the signs of injury there, as well as the patient's complaint of pain in that region, pointed to the possibility of an hepatic abscess which in all probability was somewhat increased by the signs of consolidation which appeared in the base of the right lung five days after admission. On November 4, five days later, the patient passed a large quantity of blood by the bowel. The lower lobe of the left lung was now solid, flat on percussion, and no breath sounds could be heard. With the increased area of dulness the heart became displaced, and the apex could be felt in the fourth interspace on the right side, two inches from the right of the sternum. On the fifth of November the normal heart area was tympanitic as high as the fourth rib. The tympanitic note in the downward direction fusing with that of the stomach and abdomen. The degree of tympany was so great that the physical signs of any possible abdominal complication could not be determined. At this date, despite the fact that the area of dulness over the base of the left lung had given way to tympany, bell tympany could not be obtained. The possibility is that the effusion ruptured into the pleura at about the time the tympanitic note was heard over the collapsed and compressed left upper lobe, the day previously.

From the clinical notes which I have read you will recall that the passage of blood per rectum began on the fourth of November and lasted about seventy-two hours, disappearing from the stools gradually. The possibility of subdiaphragmatic involvement could not be ignored. We could not explain the cause of these hemorrhages during life. The records of the autopsy show that there existed a varicose condition in the veins of the cecum and ascending colon. The dextrocardia is readily accounted for by the massive pulmonary abscess. The pressure symptoms exerted produced the aphonia, stridor, the loss of power in the left arm and a clinical picture similar to that seen so frequently in cases of aortic aneurysm.

The temperature-curve showed an irregular fever, ranging from normal or slightly subnormal to 102°. With the onset of the pneumonic process on October 29 there was a significant increase in the respirations, from 18 to 30.

This case is noteworthy (1) in that the patient worked daily throughout his initial attack of pneumonia and until a few hours before the rupture of the abscess; (2) on account of the size of the abscess and (3) the complete dextrocardia produced by it, and (4) from the point of view of differential diagnosis.

METHODS OF RŒNTGEN-RAY TREATMENT OF MALIGNANT DISEASES OF THE UTERUS, RECTUM AND BLADDER, WITH DESCRIPTIONS OF TUBES.

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of New York.

Much of the treatment of internal malignant growths has thus far been done by means of external applications of the X-ray energy. It[1] is reasoned that, as the X-rays produce an image on a screen at a very considerable distance from the source of energy, it must, therefore, by its penetrating power, be equally efficacious when applied therapeutically. This is incorrect (1) on physical grounds; it has been pointed out[2] that the chemically disorganizing action of the X-rays in the tissues of the human body, assuming that the chemical substances have equal stability, should diminish with the depth, partly by reason of the increased distance from the radiant source or anticathode, and partly by reason of increased absorption and attenuation at each successive layer of traversed tissue. It follows, therefore, that, the nearer the seat of the lesion the X-ray energy is expended, the better the result. (2) On physiological grounds; whenever the tissues of the body, no matter what the locality, are subjected to an external X-ray application, such toxic products of diseased tissue as are released in consequence of the treatment are thrown into the general system, and there may result—and in many cases there has been reported—a toxemia from which the patient has not been able to recover, and a fatal result has ensued because of this empoisonment.

Hyde, Montgomery & Ormsby[3] state that they have seen not only in their own experience, but in the experience of others, cases of surface carcinoma in which the usual swelling and reaction produced by successive treatments have been followed by a complete disappearance of the growth, with a subsidence of the reaction, but that after a few weeks' rest there has been rapid extension of the growth into the neighboring tissues, producing in several instances, within two or three weeks' time, a larger tumor than that for which the patient was orginally treated. The growth has been more rapid than anything they have ever seen in unmolested carcinoma, and presents all the clinical symptoms of the disease. Sections taken from the doubtful tissue showed it to be a typical carcinoma. It is their belief that metastases have occurred during the successful treatment of the primary growth. They have had this experience in the treatment of surface carcinomata involving the deeper tissues. This being the case it follows that in internal growths the danger of dislodgment of carcinoma cells which have not succumbed to the action of the rays, and the establishment of foci of disease elsewhere, and also the danger of profound toxemia, is greatly increased. Therefore, external applications of the Röntgen-rays to malignant growths, approachable by accessible mucous cavities, and especially when the natural course of drainage is such as to prevent, to a very great extent, the danger of systemic absorption, as in the female pelvis, should not be made. From clinical observations in extensive and inoperable malignant growths of the uterus, adnexa and adjacent organs in women, the writer believes that the danger of the establishment of metastases in the liver and peritoneum, as well as of a general toxemia, is very great from external applications and that the approach should be by way of the accessible mucous cavities, just so far as it is possible to devise the means of conveying the X-ray energy within these cavities. If in treating such growths, and especially of the uterus, the natural accessible mucous cavities are utilized, there follows, not only an expenditure of the energy directly at the site of the disease, but also where the number and distribution of the lymphatics are such that drainage is obtained without the danger of unloading the poisonous material into the general system. It is, therefore, much more within the possibility of the patient to withstand the effects of the toxemia. It is not only that this is the natural way of drainage, but it is also true that the pelvic peritoneum is more tolerant to violent usage and less susceptible to infection than the abdominal peritoneum.

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[1] Medical Record, November 15, 1902, page 799.

[2] The Roentgen Rays and Ultraviolet Light in the Treatment of Malignant Diseases of the Uterus, with report of an Inoperable case, Med. Record, Dec. 13, 1902.

[3] A contribution to the subject of Radiotherapy and phototherapy in Carcinoma, Tuberculosis and other diseases of the skin. Hyde, Montgomery and Ormsby, Jour. Am. Med. Ass. Jan. 3, 1903.

The uterus is abundantly supplied with anastomosing channels, and numerous ducts discharge into the lumbar glands. There can be no question that the depth, at which alterative changes occur as the result of X-ray treatment, is such that only the lymphatics or the general circulation can carry the effete matter away. It follows, therefore, that whenever possible the X-ray energy should be so localized as to minimize the possibilities of systemic infection, facilitate the best drainage, and that, in addition, no known effort should be spared to keep the patient in the best fighting trim. Malignant diseases of the uterus are not regarded as constitutional primarily by the best pathologists, and they offer, therefore, if secured sufficiently early, a specially favorable class for treatment. The adjoining cavities, rectum and bladder also, by reason of their anatomical position, lymphatic circulation and easy accessibility, can be advantageously treated locally.

Whenever the disease can be removed surgically, it should be done and the X-rays used both before operation and subsequently.

The writer's experience has been with the most desparate cases; cases in which the destruction of tissue, the involvement of the adnexa and the cachexia have been so great that nothing could be done surgically, not even curettement. In one inoperable case the rectovaginal septum was involved to such an extent that perforation took place, and gas and feces escaped through the vagina. This was completely and promptly healed by vaginal applications of the X-rays.

In a recurrent schirrus, in which the whole pelvis was filled with a stone-like mass, the rectum was so encroached upon as to limit function, even under the influence of strong laxative medicine and enemata. By intravaginal and intrarectal X-ray applications in six weeks' time over one-half of the mass in the pelvis has gone, and the bowels act well with but from 10 to 15 minims of fl. ext. cascara sagrada, while the pain, which was constant, sword-thrust-like, has disappeared.

In a case with destruction of two-thirds of the cervix, enlargement and involvement of the body of the uterus, only a shell left, involvement of the broad ligaments and of the bladder, uterovaginal fistula, enlargement of lumbar and inguinal glands, intravaginal and intra-uterine X-ray applications have been made, with the result of arresting, in two months, hemorrhage and discharge, controlling odor and pain, diminishing the size of the uterus and of the remains of the cervix to about normal.

In addition, intravesical X-ray applications have been made, securing marked modification of the vesical uneasiness and pain upon urination which was almost unbearable, and also securing better vesical control, small quantities of urine being voided in the natural way without uneasiness or pain.

These applications have been made with the tubes shown in the following cuts:

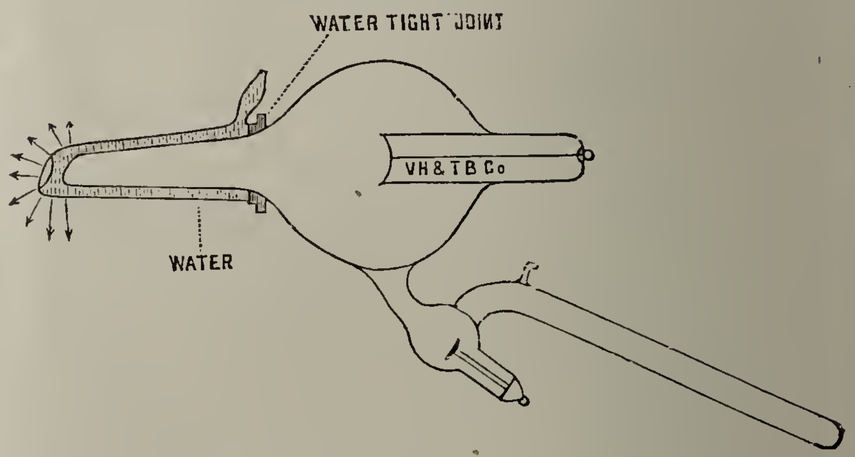

Fig. 1.

Fig. 1 shows the vaginal tube devised by Mr. E. E. Caldwell for the writer, which has a water-jacket with concave end, adapting it to the cervix as suggested by the writer. The writer has also had a tube constructed for rectal work upon the same principle and which is also provided with a water-jacket. It has a diameter of about one-half of the vaginal tube. It has also been used for intra-uterine applications in a patient with a uterovesical fistula, in which case the constant oozing of the urine served to do away with the necessity of the water-jacket.

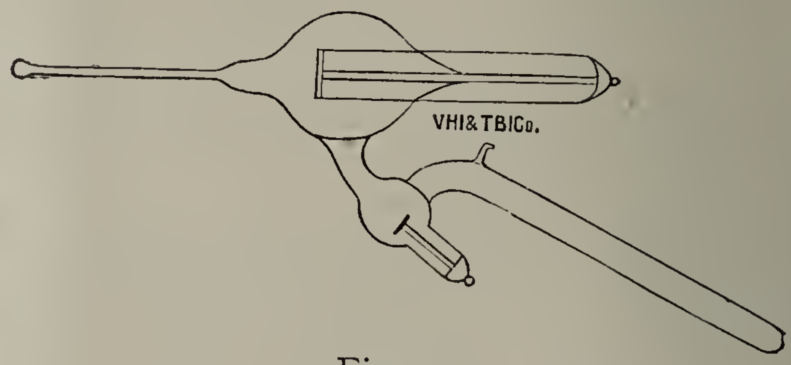

Fig. 2.

Fig. 2 shows a tube for intravesical, and which may also be used for intra-uterine, applications when a tube of lesser caliber than the rectal tube is desired. It was designed, however, for vesical use, primarily, and is in use in cases of vesical involvement. In the bladder the urine serves to prevent burning from the heating of the tube, providing the urethra is protected. The handles with which these electrodes are provided were added at the writer's suggestion. With them it is possible to make the applications without the operator being exposed to the activity of the rays, and ease of holding the tube during treatment is also facilitated.

By reason of the distance of the distal prolongations of the smaller tubes from the impact of the cathode stream as well as their lessened caliber, they are necessarily of low vacuum, but in view of the fact that soft tubes are better adapted to the treatment of mucous membranes than hard ones, this does not militate against their usefulness.

Because of the intense heating of the target in the original Caldwell tube, heat burns were produced, and, moreover, the radiance did not proceed in a straight line ahead as well as to the sides of the tube. In the treatment of the pelvic organs it is necessary to expose all the tissues, the sides and vaginal vault as well, to the action of the rays.

If it should be proved that in inoperable cancer, which tends to be rapidly destructive, a vigorous attack with a high tension tube is better, then the method which was used in the writer's first pelvic case should be selected. A high tension tube contained in a tube-box was adjusted directly over the mouth of the vaginal speculum. There is some risk, however, of deep burns which may result fatally, but less than with skin resistance. Thus far the writer has never produced an X-ray burn in any application she has made. Moreover, in a case with extensive destruction of the vaginal mucous membrane of the posterior cul-de-sac, healing did not take place with the use of such a high tube adjusted as described, but promptly followed the use of the tube for vaginal applications.

In order to avoid the use of the water-jacket, which minimizes to a slight extent the activity of the X-ray energy, a focusing[4] tube may be used. These tubes are constructed upon the same principles as the tubes for external use, but are made entirely of lead glass, save the prolongation which is to be carried into the mucous cavities or applied to a part, as in the axilla, for example, and which is of ordinary flint glass.

The patient is not exposed to the action of the rays save at the active part of the tube. This remains cool, while the heat, which is generalized in the middle of the tube, is absorbed by the insulating bulb of lead glass. The only objection to these focusing tubes is that there is a slight electrical discharge at the junction of the different kinds of glass. This is not serious, however. The prolongation with its "glass window," as it has been called, may be of any shape or size desired, compatible with the physical laws governing their construction. The writer has had one constructed for vesical work, which she has also used for intra-uterine applications. The glass tubes which cover the terminals are still further protected by rubber caps permanently connected with rubber-covered conducting cords, about two feet in length, in order to make the connection with the coil or influence machine beyond the possibility of contact with the patient. This is only necessary in gynecological work, as the slightest shock from the electrical discharge is very trying to these patients. This tube has given excellent satisfaction in the class of cases under care. Tubes of the same type have also been used in vaginal and rectal work. The technique and time of administration is the same with both types of tubes described and both do good work.

In his original experiments Röntgen[5] observed that some metals, particularly zinc, reflected X-light in an angular manner. Tesla also published a table showing the proportions of transmitted and reflected light.

These observations have been utilized by Rollins[6] who has made zinc cones with a curved end, for the treatment of malignant growths of the mouth. The tube is covered with lead in order that no light may escape save through the open end, and is secured by the large or proximal end to the opening of the diaphragm in the tube. In pelvic cases in which it is not desirable to expose the entire vaginal mucous membrane to the action of the X-ray energy, this device of Rollins' might be adapted.

THE SURGICAL TREATMENT OF TUBERCULAR PERITONITIS.*

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Intra-abdominal tuberculosis presents many points of interest, both from a medical and a surgical standpoint. Without stopping to consider the various avenues of entrance of the infection, the results of treatment will depend, to some degree, upon the elements involved in the individual case. The fact, that the disease may involve primarily the pelvic organs, the appendix, the intestines or some of the mesenteric glands, and extend secondarily to the peritoneum, or commence primarily in the peritoneum, is not without its influence in determining the course of procedure and the results to be obtained. There are without doubt certain intra-abdominal affections of a tuberculous nature that cannot be definitely diagnosed until the abdomen is opened, and which, if allowed to go untreated by surgical means, infect the peritoneum, giving rise to a more or less extensive involvement of that membrane. In view of the fact that it occasionally happens that pelvic and intra-abdominal diseases appear, the nature of which cannot be absolutely determined, and if it be a tuberculous affection, it is not without reason that the disease may extend to the peritoneum and be later recognized as a tubercular peritonitis, the tuberculosis of the peritoneum standing in a secondary relation to a primary focus in some organ or tissue more or less closely related to the peritoneum and which constantly furnishes a dosage of infection.

It is an interesting fact in connection with a pure tubercular infection that the bacillus has but a small resistance to the reaction processes of the tissue, and until a mixed infection occurs or a degenerative process develops the tendency to destructive changes is not great. When the focus of tubercular infection of the peritoneum is in the tubes, the appendix or the intestines, the tubercle bacillus is often associated with germs of other kinds, and we have to deal with other than pure tuberculosis of the peritoneum, and hence the problem involved in the treatment becomes more complex, difficult and uncertain.

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[4] Archives Roentgen Ray, London.

[5] Wuerzburg, Physicalisches Institut der Universitaet, December, 1895.

[6] Notes on X-light by Wm. Rollins, Electrical Review, March 14, 1903.

*Read before the Western Surgical and Gynecological Association of St. Joseph, Mo., Dec. 29-30, 1902.

A primary unmixed tubercular infection of the peritoneum with choked lymphatic spaces and ascites and without much elevation of the temperature has so often been cured by accident when the abdomen has been opened for some other purpose, or by intention when a complete diagnosis had been reached, that some misconception has arisen as to the curative value of abdominal section in tubercular peritonitis. I shall make no attempt to present a scientific classification of the different forms of tuberculosis of the peritoneum which may determine the question of operative or medical treatment, but content myself with observations on conditions which, in my judgment, may properly influence the conduct of the surgeon in the management of cases of this disease.

The views presented by the late Dr. Fenger in the general condemnation of the operative treatment of tubercular peritonitis were no doubt extreme, but were probably useful in influencing surgeons to take a more conservative view of the treatment of the disease. It seems difficult or impossible to employ statistics in any useful way in determining the relative value of surgical and medical treatment of tubercular affections of the peritoneum on account of the many possible sources of error in determining the exact similarity of cases, the ability of the forces of the individual to resist the disease and the activity of the infecting germs. There can be no certain guide; however, nothing is better than the intuition of the surgeon founded on the logic of experience. It is, however, a recognized fact that any localized tubercular process is an element of danger to be met by carefully considered surgical procedures to relieve distressing symptoms and to prevent a more general infection. On these grounds an obscure intra-abdominal affection which presents the least suspicion of a tubercular nature should at once be considered from the standpoint of a possible local process which may furnish the elements of a more general disease. In the absence of positive diagnostic evidence, an exploratory operation should be made to clear up the doubt, and it may be the means of preventing a widespread infection of the peritoneum by a judiciously selected procedure. There is much recorded evidence to establish the wisdom and advantages of this course of action.

In a widespread tuberculosis of the peritoneum, determined either before or after the abdomen is opened, the condition found will influence largely the result, independent of the fact of the operation. If there is ascites and an absence of extensive adhesions, even if the peritoneum is well studded with tubercular granulations, a marked improvement or perhaps a cure may be expected in quite a percentage of cases; in how large a percentage there are no safe statistics to show. It is quite probable, however, that in these most favorable cases additional operations will be necessary before the patient may be said to be cured.

If it is found that extensive adhesions have been formed by which the abdomen is divided into recesses containing fluid, the probabilities of a cure would appear to be less, for the reason that more or less extensive areas of diseased peritoneum could not be exposed to the influences which effect the beneficial result. It is true that temporary improvement may be obtained, but it may be expected that the reaction influence exercised upon the exposed areas would not permanently protect the membrane from the extension of infection from undisturbed areas of disease.

If the intestines are matted together by extensive adhesions, with or without pure tubercular pus or mixed infection, and the process is extensive and requires the breaking up of the adhesions to expose the diseased tissues, immediate unfortunate results may be expected with the least possible prospect of accomplishing good. If, however, the process is limited, and tubercular pus of a pure culture or a focus of the mixed infection is found, an operation and proper drainage may accomplish excellent results.

The fibrinoplastic form of tubercular peritonitis of extensive involvement would seem to be but little affected by operation, although John J. Bottomly, of the Boston City Hospital, reports seven cases with three recoveries, a percentage about equal to that obtained in the ascitic form. This is better than could be expected, but it may be assumed that the disease was not extensive.

Scattered through the medical literature are to be found isolated cases of remarkable recoveries from operative procedures; for instance, Robert G. LeConte, of Philadelphia, relates a case of operation for tubercular peritonitis in which a piece of gauze, five feet long and a yard wide, was extracted through a sinus. The entire intestinal contents were now discharged through the opening. The fistula was closed by a resection of the bowel. Both tubes and ovaries were removed. When the fistula was closed, fifteen months after the operation was performed, it was found that the peritoneum was practically free from tuberculosis. LeConte was of the opinion that this was a potent factor in the cure of the case. This case may be taken as one of the curiosities in surgery rather than establishing a lesson in the treatment of tubercular peritonitis.

We are not of the opinion that the treatment of tubercular peritonitis should be wholly handed back to internal medicine, but we are of the opinion that the cases for surgical treatment should be carefully selected. Our own opinion, based on personal experience and on the experience of friends, is that tuberculosis of the peritoneum attended with ascites, which has resisted medical and hygienic treatment, should be treated by opening the abdomen. This should not be done too early or too late. If early, the possibilities of cure by less radical means will be lost, and it is found that, if the operation is employed early, recurrences are much more frequent on account of the probability of the antitoxin, which has experimentally been proved to have something to do with the cure, not being formed until the tubercles are mature. If the operation is too late the patient will have become exhausted. In the fibrous form the same attention to early medical treatment should be considered. If, however, surgical treatment is deferred too long and degenerative changes have occurred, but little may be expected from opening the abdomen. According to Gattis: "The operation of laparotomy has a healing influence only in cases of fibrous tuberculosis, while in cheesy degeneration good effects are rarely noticed.

"The cure of fibrous tuberculosis by laparotomy is not due to an inflammatory reaction and active proliferation of the connective tissue stroma as is commonly believed, but is caused by a slow degeneration and subsequent absorption of the epithelioid cells (hydropic degeneration). The round cells and bacilli disappear simultaneously, leaving only the pre-existing tissue stroma with its bloodvessels. This process is also observed in cheesy degeneration, but only in those cells situated in the connective tissue zone."

The conclusions we have reached are as follows:

(1) If an intra-abdominal focus of tuberculosis is diagnosed or is suspected, an abdominal section should be made with the view of efficient treatment.

(2) If a chronic tuberculosis of the peritoneum with ascites is diagnosed or believed to exist, laparotomy is indicated as soon as it is found that medical and hygienic treatment has failed.

(3) In fibrous tuberculosis of the peritoneum the same course should be pursued, and if cheesy degeneration has not commenced or progressed too far, a certain percentage of recoveries will follow. In acute tubercular peritonitis with ascites and high temperature, laparotomy is useless. In extensive adhesive tuberculosis with matting of the intestines, laparotomy is useless, and the attempt to separate the adhesions is dangerous in its immediate results.

THE OPERATIVE TREATMENT OF LARYNGEAL TUBERCULOSIS.

By LORENZO B. LOCKARD, M. D.,
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In the treatment of laryngeal tuberculosis we are confronted by two questions of great practical importance:

(1) Have we any remedy or procedure competent to arrest the incipient lesions?

(2) Is it possible by local treatment to alleviate the suffering consequent upon advanced or incurable processes?

To both questions, with certain limitations, an affirmative answer may be given. Early tubercular lesions of the larynx and epiglottis, and by early I do not refer to the pathologically incipient, but to those surgically so, are sometimes, though rarely, amenable to medicinal treatment, but surgical intervention, in certain carefully selected cases, offers a fair prospect of eventual cure.

Clinically four types of the disease may be differentiated, as follows: (1) Infiltrations; (2) tumors; (3) ulcers and (4) miliary tubercles.

This classification, though scientifically correct and clinically important, is not satisfactory in affording a practical outline upon which a system of treatment can be based, in that it considers the various pathological conditions existent rather than the extent to which each lesion, or a combination of the different ones, has developed. Prognosis and treatment both depend more upon the extent of the process than upon its essential character.

For this purpose the following types, despite their manifest defects, are preferable: (1) True incipient; (2) surgically incipient and (3) advanced.

A lesion to be considered incipient from a surgical standpoint must first of all be localized, that is without wide or deep infiltration of contiguous tissues; it must be accessible to manipulation, and there must be no general inflammation of a virulent type.

Such lesions are commonly seen as localized infiltrations, tumors and ulcers of the interarytenoidal sulcus, false cords, ary-epiglottic folds, posterior wall and epiglottis; as granulations upon the true cords or as circumscribed swellings in the subglottic space. The difficulty of holding these processes in check is such that they are ordinarily considered incurable, and we are all cognizant of the general inefficiency of medicaments like lactic acid, creosote, guaiacol, iodoform, etc.

In the true incipient lesions, *i. e.*, general or local congestions and beginning infiltrations, improvement is the rule, providing the pulmonary process be not far advanced, but in the more complicated lesions, such as I have enumerated, eventual destruction is the usual result. I do not claim that recoveries do not occur, for even in advanced cases spontaneous healing has been known, but, that a cure effected by any procedure short of radical extirpation of all diseased tissues is anything but an occurrence of extreme rarity, I am not prepared to admit.

Statistics claiming large percentages of cures are published from time to time, but, if from these reports could be stricken all cases truly incipient, and, on the other hand, all in which a period of four years has not elapsed since the cessation of treatment, I believe the number of professed cures would be decidedly lessened. It is a well-known fact that, even after seemingly perfect resolution, recurrences are distressingly common, sometimes as late as the third or fourth year, and, therefore, until after this time has elapsed, they should not be classed under any head but "improved."

That active surgical intervention is warranted in such individuals I am firmly convinced, not alone because it offers a better chance of immediate improvement, but because recurrences are less common.

The cases for operative treatment must, however, be carefully selected, and, if the methods to be enumerated are reserved for those in which they are indicated, the results will be good. Unfortunately this class is small.

(1) The lesions must be localized.

(2) They must be accessible; that is, they must be in such a location as to permit of entire or almost complete removal of the affected areas.

(3) A pulmonary process incipient or quiescent.

(4) Good general health; absence of hyperpyrexia, cardiac weakness and involvement of other organs.

(5) A favorable moral and mental temperament.

(6) Local without constitutional susceptibility to cocaine.

The last point is of great importance. It sometimes happens with tubercular individuals that cocaine, in quantities sufficient to produce complete anesthesia, plays havoc with the nervous and digestive systems, and in such a contingency it would be foolhardy to continue its use, for the loss in general vigor occasioned would more than outweigh the advantages accruing from the local improvement.

In an individual, then, who fulfils all the above requirements, immediate and as complete removal as possible of the involved area or areas is always indicated, provided a fair trial has been made of simple medication without avail. While the patient should usually be given the benefit of the doubt, it will rarely be found that the operative treatment is rendered unnecessary.

To the true incipient lesions and to certain cases with limited ulceration or vegetations, as has already been stated, this sweeping statement does not apply, for with such cases we frequently get the happiest results from the use of various remedies. Of these, in my estimation, none can compare in general efficiency with formaldehyde, used both as a spray and, in stronger solutions, as a local application. I have repeatedly seen marked improvement result when this agent has been substituted for lactic acid, guaiacol, iodoform, etc., in cases in which all of these later agents had signally failed.

The choice of operation depends upon the preferences of the individual operator and upon the location, size and consistence of the growth, but in general it may be said that the use of cutting instruments, whether they be double or single curettes, knives or scissors, is far preferable to electric or chemical cauterization.

The latter agents may supplement, but cannot supplant, the methods that aim at complete removal rather than the destruction of the diseased tissues, and complete removal should be our object no matter how extensive the operation demanded, provided always that the general health is such as to warrant these heroic measures.

The reaction from electric cauterization is fully as great as that from the cutting operations, and a dozen sittings will not accomplish more than one when fearless use is made of the double curette. Electric or chemical cauterization should, however, always succeed the radical operation, to destroy any remaining tissue that may have escaped and to protect against a possible recurrence in the stump or along the line of incision.

It is not in the province of the present paper to describe the various operations and the difficulties encountered, for I simply desire to advocate the general principle. Certain indications, however, guide us in our choice and these indications, as given in the "Handbuch der Laryngologie und Rhinologie" are as follows:

The single curette in (1) removal of circumscribed nonulcerated infiltrations; (2) removal of granulations, and (3) cleaning or removing from superficial or deep ulcerations the hardened edges and sluggish surfaces.

The double curette in (1) circumscribed infiltrations of the epiglottis, false cords, posterior wall and ary-epiglottic folds; (2) ulcerations of the epiglottis, ary-epiglottic ligaments and arytenoid cartilages, and (3) all ulcerations, infiltrations and granulations so tough as to resist the simple curette.

Lastly, the knife or scissors in the generalized infiltrations of the posterior wall.

The pain is seldom severe and lasts no longer than one or two days, and is readily controlled by local anesthetics, particularly cocaine and orthoform.

Ordinarily, decided improvement will be manifest by the end of a week or ten days, when further operative procedures may, if necessary, be instituted. Otherwise we return to some one or more of the previously mentioned medicaments.

Contrasting the results obtained in this way with the published statistics of other methods, it would seem that in no other way do we give our patients the best chance of recovery. Personally I can point to four patients whom I consider absolutely cured, all of whom, I am fully convinced, would have succumbed had radical extirpation not been practised. In a number of other patients I anticipate the same result, but the period elapsed, not more than two years, is too brief to allow of definite conclusions.

Each of these four patients was operated upon during the winter or spring of 1896, and now, after six years, there has been no recurrence.

The first, a woman, 27 years of age, had an ulceration, the size of a ten-cent piece, upon the under surface of the epiglottis, a particularly unfavorable location, and an interarytenoidal tumor occupying about one-third of the rima glottidis.

For over four months various remedies had been tried, but the lesions progressed and the general health was deteriorating when I removed the entire epiglottis and the interarytenoidal tumor, with the result recorded.

One patient, a man of 42, with consolidation of the right upper lobe, had an ulceration over the right arytenoid cartilage, some infiltration of the posterior wall and a small cluster of granulations on the right cord. At the first operation the entire arytenoid was removed, two weeks later the vegetations of the cord were cleared away and all the thickened tissue on the posterior wall was extirpated by means of the double curette, an unusually extensive and difficult operation.

Of the two remaining patients, both males, one had a hard growth occupying at least one-half of the space between the cords, springing from the interarytenoidal sulcus, and the other a shallow ulcer on each ventricular band with infiltration of the left ary-epiglottic fold. In both cases an attempt was made to remove all the diseased tissue. In each of these patients all the ordinary remedies had been unavailingly used over periods ranging from two to five months. It must be admitted that such results are rare, for a case that fulfils all the essential requirements is uncommon, but in not one of these patients were there advanced pulmonary changes.

To the second question: "Can operative procedures relieve the pain of incurable lesions?" I answer that they can usually do more than any other method at our command. This of itself means little, for we usually stand almost, if not entirely, helpless.

The difficulty of lessening to an appreciable extent the dysphagia of advanced tubercular laryngitis is attested by the great number of remedies brought forward each year.

Cocaine in strong solution is ephemeral; solutions of menthol in oil are, to a slight degree, more enduring; formaldehyde and ethereal solutions of iodoform act no better, and orthoform, probably the most efficient of all, lasts in many cases but a few hours. It has been claimed by many observers that orthoform, thoroughly insufflated or injected in an emulsion, will produce an anesthesia of from twenty-four to sixty hours' duration, but in my experience it has rarely endured more than three or four. In some cases it does cause immediate and lasting relief, in others it fails absolutely.

Thus, with the methods at our command, we can do little more than make possible the taking of small quantities of unirritating food, and the constant use of a remedy soon establishes a tolerance that makes necessary a constant shift of the various remedies. Frequently we fail to meet even this small requirement, and our patient succumbs. In consequence, any method that can give relief, even though momentarily severe, must be accepted as a boon. This we sometimes have in one or more of the various radical operations to be considered. I do not wish to be understood as claiming that cocaine, formaldehyde, orthoform, etc., are entirely inefficient in relieving all cases of advanced tuberculosis, for I have seen many instances of prolonged and almost complete relief. A recent patient with widespread ulceration of the epiglottis, ary-epiglottic folds, vocal bands and false cords remained free from pain to the end under the daily use of these agents. Without suffering he was able to eat solid food for twenty-four hours after treatment. In all ulcerative lesions formaldehyde and orthoform are wonderfully efficient, but they fail to relieve the dysphagia of the pronounced cases of infiltration of the posterior wall and ary-epiglottic folds, or of those in which there is a co-existing perichondritis.

In such instances complete division of the affected tissues is usually indicated. Even though the requisite operations shortened life, they would still be advisable, but in practice they are found to prolong it, and occasionally remarkable cures result, such as those reported by Morris Schmidt.

According to location, nature and general condition, a choice is made of the following operations: (1) Division of the pharyngolaryngeal wall; (2) division or complete removal of the epiglottis; (3) tracheotomy, and (4) laryngofissure.

The first operation is indicated in diffuse infiltrations and ulcerations of the posterior wall and ary-epiglotidean folds with dysphagia not controlled by other means.

With a pair of angular scissors, one blade in the pharynx, the other in the larynx, an incision is made connecting the two passage ways, down to and including the interarytenoidal sulcus. The section should follow the median line, usually the point of greatest swelling.

Under 20% cocaine the pain is not unendurable and will commonly disappear within two or three days. For a week rectal feeding is required, by which time union will be sufficient to permit eating in the usual manner. Relief is usually marked with, occasionally, a subsidence of all inflammatory signs that lasts for months or years. A falling forward of the flap into the larynx and hemorrhage are the only accidents to be apprehended. The former can be guarded against by a maintenance of the recumbent posture. If this fails, the projecting part can be removed with the double curette of Heryng.

When the pain comes from an involved epiglottis, we divide the organ from edge to base or make a complete amputation. The results are striking, not alone in the immediate relief afforded but in the influence exerted upon the further progress of the disease, permanent improvement sometimes resulting.

Theoretically these operations are contra-indicated in that a recurrence along the lines of incision would seem probable. In practice this does not occur, and the parts even exhibit a marked tendency toward uneventful recovery.

Without preventive treatment, such as cauterization with lactic acid or electricity, healing is usually prompt. These then are the two primal operations, but yet another remains which has a much more limited field, but which gives favorable results in certain carefully selected cases. I refer to tracheotomy. Of laryngofissure I will not speak, for with it I have no personal experience.

The most common indication for tracheotomy is threatened asphyxia, occasioned by edema, perichondritis, abscess or subglottic swelling.

In addition to this indication, which is imperative and in which our sole object is immediate relief, there are others in which the operation is performed with the hope of holding stationary the various lesions.

These indications are the following:

(1) Gradually increasing stenosis.

(2) Severe laryngeal tuberculosis with slight pulmonary involvement.

(3) When new ulcerations and infiltrations occur subsequent to the institution of treatment.

(4) When local treatment cannot be given, either because of lack of skill or too widespread involvement.

In no case should the operation be performed until we have demonstrated the inefficiency of all other methods.

Schmidt claims that by this operation he has been able to subdue otherwise uncontrollable pain and to effect absolute cures when done sufficiently early. He reports seven such cases, and I have had one patient who was living in comparative comfort one year after the operation, of whom I had not believed he could live more than a few weeks. The essential cause of the improvement is the complete rest afforded the parts.

The operation has been advocated for the cure of the early lesions, but the reports are, on the whole, very unsatisfactory.

In all cases we may anticipate as a result: (1) Some lessening of pain; (2) increased facility in eating, and (3) some subsidence of swelling and inflammation.

When the pulmonary condition is not in itself fatal, we may also anticipate (4) some resolution in the diseased tissues; (5) a favorable influence upon the lungs; (6) considerable prolongation of life and (7) a rare cure.

In conclusion, I desire to express my earnest belief that the treatment of tubercular laryngitis should usually be the same as that addressed to tuberculosis of the tongue, bones or skin—complete removal of the affected parts at the earliest possible moment, provided we have previously given a conscientious trial to the more conservative methods.

PERNICIOUS ANEMIA FOLLOWINC THYROID ENLARGEMENT.

By V. S. MERRITT, M. D.,
of Haydenville, Mass.

Mrs. E. C., aged 43, occupation housewife, consulted me on April 5, 1902, complaining of marked dyspnea on exertion, weakness and enlargement of thyroid gland.

Family history.—Father died after fracture of the leg, multiple sarcoma probably developing at site of lesion, and on frontal and parietal bones. Her mother is living and well at the age of 84. One brother died at 35, of chronic nephritis, one living and well, but I am told is mentally deficient.

Past medical history.—Menstruated first at 14, always regular until one month ago, when menstruation ceased. The last period was characterized by the menstrual flow being very pale in color. Has had no miscarriages. Had one child, 18 years old, and in good health. Labor was normal and recovery uneventful. Four years ago she had nervous prostration due to overwork and worry. Patient was exceedingly jealous in disposition, manifested especially toward her husband. In June, 1899, the patient was in a runaway accident, thrown from a carriage and badly frightened, but not physically injured. In August, 1900, she first noticed the enlargement of the thyroid gland.

Present illness.—Began one year ago, as dyspnea on exertion, with palpitation. After treatment, continued for some months, these symptoms subsided, but for the past few weeks there has been a recurrence with progressive increase in severity. There never have been any subjective ocular symptoms.

Present condition.—Patient was a tall, well-formed woman, of light complexion, blue eyes, not emaciated. Countenance cheerful, skin white, some anemia present. Examination of lungs was negative. Examination of heart showed apex-beat in normal location, strong and forcible in character. On auscultation a rough murmur, presystolic in time and not transmitted, was heard at mitral area. Liver dulness normal. Above the clavicle, on the right side of median line, was a noticeable enlargement of the thyroid, of about the size of a hen's egg, moving with deglutition, of marked density and without sense of fluctuation. Patient's speech was markedly slow, but deliberate. Tonic treatment instituted. On April 20 I called at patient's house and found that she had progressively lost strength. At this time her skin had assumed a lemon-yellow tint, and the ocular conjunctivæ were markedly anemic; constipation was marked and she slept badly. On May 4 I examined the blood microscopically and found the red cells apparently less than normal in number, marked poikilocytosis, the pear-shaped forms, the rod-like, together with megalocytes and nucleated cells were present. The white cells were apparently smaller in size than normal but not diminished in number relatively. Not having facilities for blood counting I was unable to obtain knowledge which would no doubt have been of interest. At this date weakness was pronounced, gastric symptoms had supervened, and there was marked dyspnea and palpitation even upon the slightest exertion. Pulsation of the carotids was very noticeable, as well as epigastric pulsation. Hemic murmurs at the base of the heart were very pronounced. By use of Fowler's solution with beef extract the gastric symptoms were somewhat alleviated. May 8. Dr. George D. Thayer, of Northampton, Mass, saw the patient with me and confirmed the diagnosis of pernicious anemia. Prognosis was considered to be grave. For the next few days following there seemed to be some improvement, slightly better color in the face and less dyspnea upon exertion and better rest at night. The thyroid enlargement was progressively growing less, and patient stated that she experienced no disagreeable symptoms from it. The hemic murmurs and carotid pulsation were less pronounced. Following this period of apparent improvement there were a few days when condition seemed stationary, then weakness and dyspnea became more pronounced, restlessness and nervousness at night very annoying and gastric symptoms distressing. May 29 patient began to menstruate, period lasting for 3 days, color and quantity normal. From this time to June 21 the course was progressively downward. On this date she had persistent vomiting of fluid, greenish-yellow in color and odorless. At this time she was unable to speak above a whisper. Following this she had increasing rapidity of respiration, slightly stertorous, usually 36 to the minute, continuing to the end, which came on June 22.

During the first part of her illness the pulse-rate was 100, later becoming 108 and 112. Temperature usually from 99° to 99 2/5°.

During the progress of the case there never was at any time edema of the exremities or of the face, and the urine was negative. A few days before death there was numbness and inability to use the left arm, continuing for a few minutes only, and at times there was slight involvement of facial muscles of left side.

Interesting points are: (1) Fright as a possible etiological factor; (2) co-existing goiter, which became less pronounced as disease progressed; (3) menstruation again established after cessation for two months.

There might be a question as to whether this was a case of exophthalmic goiter followed by anemia. I cannot say as to presence of retinal hemorrhages, as the eyegrounds were not examined, but the objective symptoms of Graves's disease, other than the presence of goiter, were not distinctive. There might be a question as to the apparent menstruation, but as there was no hemorrhage from other mucous membranes the inference that menstruation was actually re-established seems to be justified.

The treatment was Fowler's solution in ascending doses, together with beef extracts.

JOURNAL DES PRATICIENS.

February 14, 1903. (17me. Année, No. 7.)

1. Some Visual Disturbances in Diabetes Mellitus. F. TERRIEN.
2. Hoffmann's Balm of Life. LIEGEOIS.
3. Psoriasis. DU CASTEL.

1.—There may be **functional ocular disturbances with diabetes,** either of accommodation, refraction or visual acuity. It may be paralysis of accommodation, yet it is always partial, probably toxic in origin. Myopia is not uncommon, or cataract, or diminished refraction; or there may be disturbed central or peripheral vision, amblyopia, hemianopsia, etc. Separate muscle may be paralyzed, there may be diplopia, etc. [M. O.]

2.—Liégeois describes that complex preparation called **Hoffmann's balm of life,** and mentions its many indications, hysteria, neurasthenia, headache, angina, vertigo, dyspepsia, colic, etc. [M. O.]

3.—**Psoriasis** has a tendency to heal, never leaving a scar. Its localization is characteristic; its course regular. It may be due to emotion and may be general or local. Etiology and pathogeny are unknown. Treatment consists in internal medication (arsenic, potassium iodide, etc.) and various applications, tar, chrysarobin, pyrogallol, etc. [M. O.]

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The Present Status of Serum-therapy.—The average mind prefers fact to theory, concrete to abstract thought. An idea must be clothed in something tangible and reduced to a material image before it will be accepted; a scientific hypothesis must be presented as a demonstrable fact. The hypotheses explaining immunity are as complex and in many aspects as transcendental as life itself, yet, judging from the graphic representations of a few enthusiastic popularizers, they seem as simple as the fact that hydrogen and oxygen, when combined in certain proportions, form water. Unfortunately, the present state of our knowledge does not justify the reduction of the theories of immunity to so simple a basis. Whether plasmolysis, or phagocytosis, or side-chain affinities, or any two, or all the three combined, are the factors concerned in the production of immunity, is not definitely known, and we must for the present content ourselves with theories which serve the purpose of working-hypotheses and no more.

The unwarranted simplification of the problem of immunity led to a similar misrepresentation of the theory and practice of serum-therapy. The extremely complex subject is made to appear so simple, indeed, that a school boy can fathom it. Here is the whole thing in a nutshell. We want a specific remedy for a certain infectious disease. We inject the specific germ or its products into a horse and in due time tap that animal for its health-restoring serum. The latter, containing the specific antidote, counteracts the toxins in the body. What could be simpler than this universal formula? And if serums can be obtained to neutralize the toxins generated by pathogenic germs, why not have serums to counteract the effects of alcohol, morphine and what not? Indeed, the range appears to be almost boundless. We may, perhaps, have also a serum for the cure of laziness, if the germ of that pandemic affection ever be discovered. And, if not, it need not disconcert us either, for we might find the laziest animal in the world, grind it up and inject the expressed juice into a horse, the serum of which will cure laziness. Such are the absurdities which may result from a free interpretation of the highly complex theories of immunity. While it is true that some such simple process takes place in the production of antidiphtheritic serum, this is at present the only instance of the simple working of biological forces. Antitetanic serum, practically the only other antitoxic fluid, is similar in its mode of action, although the latter seems to be governed by somewhat different laws of biochemical affinity. On the other hand, the serums obtained after immunization with germs which do not possess soluble poisons, and they are in the majority, are most complex and baffle our understanding. Antistreptococcic, antipneumococcic and similar serums are of unknown virtues and uncertain in their action. It cannot even be said that their right to existence as therapeutic agents has been definitely established by laboratory experiments. Each of the micro-organisms in question presents wide variations in pathogenicity, the disease-producing power varying from a local abscess to a generalized fatal septicemia or pyemia.

There is no telling what a given micro-organism will do in a given case, and the only way we have of judging of the pathogenic power of a given germ, belonging to this group, is *a posteriori*, i. e. after the disease has entered into an advanced stage. At such times any serum would practically be worthless. Besides, there is no way of testing the strength of such a serum. Laboratory animals differ widely in their susceptibility, and the establishment of a standard unit is an impossibility. In the immunizaton of horses for the production of the serum, as well as in the experiments on laboratory animals, the results obtained by various investigators are so discrepant that even an approach to uniformity is out of the question. The best results obtained by some investigations with antistaphylococcic serum, for instance, represent a protective value of twice the minimum fatal dose. Such a serum, when used on man, would have to be employed in doses of 350-700 cc. (Petersen).

The general principles underlying passive immunity have been satisfactorily formulated, but the details are still obscure, and, until experiments in the laboratory establish with absolute certainty the therapeutic value of a given serum, the physician is not justified in jumping at conclusions. We can well afford to bide our time and let the scientist clear up the path for us to follow. Nothing will be accomplished by the wild rush after newfangled specifics.

An Attempt to Raise the Standard of Medical Education.—The defeat (only temporary, we hope) of the Ray bill in the Pennsylvania Legislature recently, is cause for comment. The object of the bill was two-fold; first, to make obligatory a preliminary education equivalent to a full high-school education, and, secondly, to require a full four years' course of at least eight months each. The motives that led to the shelving of this bill in the State Senate are not hard to fathom. They evidently have been inspired by persons who are interested in cheapening medical education.

We cannot see anything in the provisions of this bill, as summarized above, that is unreasonable or unjust. The four years' course is now universally adopted in our best medical schools. We have always been rather in favor of an arrangement that would allow a student in the collegiate department, or department of arts, to elect in his fourth college year to take courses in biology, anatomy and physiology, so that he could, as it were, dovetail his collegiate and medical courses, and thus save a year. We believe that this might be a practicable thing to do, and would help to solve the problem of a higher education for physicians. We do not understand that the Ray bill was inimical to this. It is a matter that could be left to the various schools and universities to work out practically, and we understand that it is thus solved in some, or at least one, of them.

The provision of the bill requiring the equivalent of a high-school course is in harmony with the demand for a better preliminary education for medical students. No man who has the best interests of the profession at heart, can well object to this provision. If it seems to bear hard upon some deserving and ambitious young men who have not enjoyed the advantages of a good education, the sufficient answer is that the welfare not only of the profession but also of the public demands it. The rule is that the welfare of the many is superior to the claims of the few. This is an inexorable law of society. We trust that the Ray bill is not dead, but only sleeping.

Still Abolishing the Neuron.—New discoveries regarding the functions of various structures in the body are constantly being made. In the last year we have learned that the suprarenal bodies may, under certain circumstances, cause glycosuria. Herter, however, has shown that this is a chemical effect rather than a vital phenomenon. Dr. Sajous has suggested that the suprarenal secretion is the real oxygen-carrier of the blood. The nerve cell has always been a more or less mysterious body, and, as a result, numerous theories have been suggested regarding its nature and function. Since the neuron doctrine of Waldeyer, in which its function is described not merely as motor and sensory, but also as trophic, Apathy and Bethe have endeavored to deprive it of everything but the trophic function. The theory of the neurofibrils, however, has not gained universal acceptance.

It has remained for Kronthal (*Neurologisches Zentralblatt*, February 15, 1903) to tell us that the so-called nerve cell is not a cell at all, that it has neither motor nor sensory functions, and that it does not influence the nutrition of the nerve fibers. We naturally inquire: What has Kronthal left? How does he explain the existence of the bodies that are so readily stained, and have such a characteristic morphology? This, for Kronthal, is a very simple matter. The nerve cell—as he believes he is able to show by microscopical investigation—consists of a mass of dead leukocytes. The proof that it is not a living cell is that it does not divide. Therefore, it must consist of dead tissue, and, as he found in a cell—or on a cell, he is not quite certain which—a body that he assumed was a leukocyte, therefore, all the rest of the cell substance must also be composed of leukocytes, the nuclei of which form the chromophilic bodies of Nissl. The protoplasmic processes and the peculiar morphology of the cells in different situations, he unfortunately has not apparently had time to discuss. Neither does he explain the nucleus and nucleolus that are so readily demonstrable. He does, indeed, speak of the nucleus without nuclein, but this is because he probably has never stained the nerve cell with hemotoxalin. What, now, are the functions of these masses of dead leukocytes? To a man with such a brilliant imagination the answer is easy. The functions of the nervous system are accomplished by means of currents of nerve force that pass through the neurofibrils. These neurofibrils, however, are insulated from one another. In order to overcome this insulation, to act, in fact, as the key of the telegraph transmitter, the nerve cells are formed. Just how they act is not clear. One would suppose that, being dead and presumably immovable, the effect of their presence would be continuous.

The only way that we, personally, can conceive that they should produce the various phenomena manifested by the central nervous system is by very active movements, so that they hop from one point to another in the mesh-work of neurofibrils, managing, excepting in cases of insanity or ataxia, to find just the proper point for overcoming the insulation. How a mass of dead leukocytes could have this extraordinary activity, and what would be the guiding force of their movements, is another feature of this theory that is left to the ingenuity of the reader. We fear that Herr Kronthal's theory will be a long time in finding general acceptation. In the meantime neuropathologists will probably be satisfied to explain many of the changes that they find by the application of the old neuron doctrine.

An Odd Argument Against Cremation.—The arguments in favor of cremation have been fairly unanimous among men of science. The sources of objection have arisen, on the one hand, from the Roman Church on grounds of dogma, which must be respected; and, on the other hand, from those who have reasons which are merely sentimental to urge against the practice, and these are scarcely entitled to consideration. Professor G. Bunge is one of those who sounds a note of warning against cremation as adding to the total destruction of fixed nitrogen. The formation and destruction of fixed nitrogen are not mutually dependent processes. An increase in destruction does not imply an increase of formation, and the sum of life is therefore diminished, states Bunge boldly. According to this authority, the items which have been brought forward against burial are really only applicable to interments in limited spaces, and have no weight against the only rational mode of disposal of the dead, their distribution as widely as possible over the woods and fields. It is curious how often men of deep learning give expression to opinions against which such cogent opposition may be urged. A number of years ago a learned statistician figured out indubitably, according to his own firm conviction, that with the increase of population the wheat yield of the world would be insufficient to meet the demand after a date which has now been passed, and during which time we have seen no appreciable difference in the *pro rata* wheat-supply. It is, of course, a well-known fact that free nitrogen plays a much less active part in the vital processes than combined nitrogen, and, if the combined nitrogen were destroyed in great disproportion, animal- and plant-life would undoubtedly suffer. However, the process of combustion does not release the total amount of combined nitrogen in the material burned. On the other hand, ammoniacal compounds and other products are given off to the atmosphere. We must add to this the possibility of the absorption of free nitrogen with much more freedom than is generally allowed. Further, the surface of the globe is not thickly inhabited, and the ravages of man upon elements so vital to his own existence may be counterbalanced in a far more satisfactory manner in the vast unpeopled portions of the world, than Professor Bunge surmises. Still another phase of the question demands mention, and that is the progress of chemical studies which will even enable us to produce artificially combined nitrogen in large quantity, from the free element in the atmosphere. This has already been done by the aid of electricity at Niagara Falls.

The Plague in India.—During his recent tour Mr. Jonathan Hutchinson, the English surgeon, saw more things of interest in India than leprosy; and, in a letter to the *Polyclinic*, he describes some aspects of the plague that are most instructive. We prefer to let Mr. Hutchinson speak for himself:

> The absolute freedom from anything like panic as regards the presence of plague in the cities of India is a very remarkable feature in all classes of the population. I am writing this in Amritzur, where last week, out of 1,076 cases, 731 persons died of the disease. In Lahore, which city I left last week, the mortality was 390 out of 833 cases. Nor is there any indication in either place that the worst is passed. We drove yesterday through the little town of Taran-tara (4,000), a resort of pilgrims and possessing a shrine. In its narrow streets many houses were closed and marked with a long bar of white paint, implying that deaths from plague had occurred in them. We were told of instances in which whole families had died, and were assured that the town was comparatively deserted. One medical informant told me that, of the recognized cases, not fewer than 95% had died. Practically the disease had been almost universally fatal. Yet business was going on as usual, and, on the day that I was there, a long string of pilgrims, on foot, in carriages, or mounted on camels or asses, was passing slowly through its narrow streets. The procession was miles in length and took the whole morning to get through. It had very properly been forbidden by the Government, but the authorities had not felt themselves strong enough to prevent it. The natives are absolutely careless as to precautions, though willing enough to run out of the house when the disease shows itself. It is greatly to be feared that before long the disease will have established itself all over India.

Mr. Hutchinson goes on to say that such is the veneration for life in that benighted country that the natives will not even destroy the plague-infested rats, but they can be induced to catch these rodents alive and take them to a sort of public rat-pound on condition that the creatures be not killed. Mr. Hutchinson graphically calls this place a "rat's hell," and he wisely concluded not to visit it, for he regarded the risk of contagion by means of fleas in such a place as not slight. "Such are the absurdities," he says, speaking of the prejudice of the natives, "into which overscrupulosity of conscience may lead its votaries."

We cannot but ask whether Mr. Hutchinson, having had such a striking object lesson of the Hindoo veneration for life in every form, will find cause to modify his oft asserted belief that these people eat fish *on* *the sly,* and thus acquire leprosy? To such extremes will men go in support of a theory that Mr. Hutchinson may argue on this question somehow as follows: No fish, no leprosy; no rats, no plague; *ergo,* the Hindoos eat fish, although they refuse to kill rats.

We have always supposed that the Brahminical veneration for all forms of life was one of the deepest-seated religious prejudices to be found in India, and we are much interested in this most striking exhibition of it which Mr. Hutchinson has described for us. It is no cause for wonder that the British Government finds such insuperable difficulties in the way of proper sanitation in the peninsula. Mr. Hutchinson says that it is greatly to be feared that before long the plague will have established itself all over India. The cast-iron prejudices of worn-out creeds are today, as they have always been, the greatest obstacles to science and to human progress.

Metastatic Adrenal Tumor of the Brain.—Dr. Walter Channing and Dr. H. M. Knowlton describe, in the *American Journal of Insanity,* Vol. LIX, No. 3, 1903, an interesting case of tumor of the brain secondary to a malignant growth in the kidney. The patient, a man aged 48, had been in failing health and had had hematuria. Dr. A. T. Cabot performed nephrectomy, removing a large tumor involving the left kidney. On section the kidney substance was found to be largely replaced by a neoplastic tissue, which existed in nodules of a deep-yellow color. This tissue had infiltrated or penetrated the kidney substance extensively, but its origin in the adrenal body is nowhere indicated in the report.

About two months after the operation, when the patient had largely regained his health, he was suddenly seized with epileptiform convulsions. These seizures marked the onset of a cerebral lesion, which was of rapid progress. There was paresis of the right side of the face and of the right eyelid, with symptoms of aphasia. In time these symptoms, both of aphasia and of right-sided paralysis, increased. The speech defects were those of motor aphasia and paraphasia. The mental reflexes in the course of time became very sluggish, and were of a kind to suggest a frontal lesion. Tactile sensation and pain sensation were not involved, nor was there astereognosis. An examination of the eyegrounds was not made. As may be seen, the case presented the well-recognizable symptoms of a brain tumor, and the authors call special attention to the characteristic changes, marked by slow cerebration and intensified in appearance by the speech defects, as indicating the location of this tumor in the frontal region.

At autopsy the tumor was found to be of carcinomatous tissue, and to occupy a position in the left midfrontal and ascending frontal convolutions, about 6 cm. from the longitudinal fissure; 6 cm. posterior to the anterior tip of the brain; and 5 cm. above the base of the brain.

Dr. Channing and Dr. Knowlton see in this case an instance of a metastatic tumor from a primary adrenal growth. They were able to find on record only one case of tumor of the brain of similar origin, the case of Jores, in which a primary sarcoma of both suprarenal capsules was the cause of metastasis to the brain. Dr. Mallory, who made the pathological examination in the present case, writes that "pathologists are not agreed whether tumors of adrenal origin should be called sarcoma or carcinoma. Hypernephroma, a term recently introduced, obviates the use of either." It is also pointed out that supernumerary adrenal bodies are sometimes found in the vicinity of the kidneys. Occasionally strayed germs of suprarenal substance give rise to small tumors in the kidney or just beneath the capsule. Virchow believed that the medullary part of the suprarenal capsule is allied to nerve tissue. Our only criticism of the very interesting case of Dr. Channing and Dr. Knowlton is that their report does not indicate very clearly that the primary tumor in their patient was of suprarenal origin.

The Münchener medizinische Wochenschrift.—The history of the birth of a medical journal is always interesting to medical journalists. To those who have had no practical experience in this branch of medicine it must be difficult to realize how many apparently insignificant details must be considered, how many plans of action must be thought out, modified, rejected or carried through in the face of seemingly insuperable difficulties. The *Münchener medizinische Wochenschrift,* one of the most successful and best of the German weeklies, has recently celebrated its semi-centennial, and as an appropriate part of this celebration it has printed a series of articles relating to its history. It has always been—under various names and various forms—the organ of the Bavarian physicians, and as such has enjoyed a certain element of authority and support that would have been denied an independent publication. Its beginning was as the *Medizinisches Korrespondenzblatt bayerisher Aerzte,* founded in 1840 by Heinrich Eichhorn. This continued until the revolution of 1848 created such a disturbance in all forms of life, that it was necessary first to make the publication irregular, and finally to abandon it. After this there were a series of attempts, most of which were unsuccessful until 1853, when the *Intelligenzblatt für bayerishe Aerzte* was founded. It is interesting to note the financial difficulties under which it labored.

The government allowed the journal 500 florins per year. The editor-in-chief received a salary of 180 florins, and the assistant editor apparently received nothing. The cost of the journal to subscribers was 4 florins per year. In 1854-55 the number of subscribers varied between 500 and 800; in 1903 the subscription list is 9000; not an excessively large number according to American standards, but enough to make it considered one of the most successful weeklies in Germany. As late as 1884, however, the number of subscribers was less than 1000, and in 1891 they were less than 2000.

German Medical Journals.—From the time of Doctor Theophraste Renaudot, the first number of whose Gazette appeared in 1631 in Paris—a political journal conducted by a physician—until 1847 when the first number of Virchow's Archiv appeared, the history of medical journalism is largely a history of failures. It is true that in Paris some of the medical journals lasted for more than ten years, but the majority died in the year of their birth. In 1717 the earliest German medical journals appeared: one the "Acta Medicorum Berolinensium" and the other the "Sammlung von Natur und Medicin, we auch hierzu gehörigen Kunst- und Litteratur-Geschichten." The first lasted until 1730; the other is known to have lasted as long, and there is a tradition that it lasted even longer. But the great majority of German journals died in the first two or three years of their existence. Of all that appeared before 1850 but two, in addition to Virchow's Archiv, still exist, and none had the effect on medical literature produced by that publication. It seems to us that this unintentional testimony to Virchow's greatness is only another evidence of the multifarious ability of the man, and how his services to pathology have overshadowed his work in other branches that would have made another man famous.

The Index Medicus Not Yet Assured.—We have received a letter from Professor W. W. Keen, of this city, calling attention to the fact that the *Index Medicus,* which was supposed to have been put upon a permanent basis by the appropriation from the Carnegie Institution, is not yet assured. Dr. Keen writes as follows:

"I was in Baltimore on Saturday night, and I learned to my astonishment that up to that date only 251 members of the *entire profession abroad and at home* had subscribed $5 each to the new *Index Medicus.* This would be only an income of $1255. It will cost about $12,000 a year, the first year being the most expensive. We cannot expect the Carnegie Institution, which has generously devoted $10,000 a year for three years for the re-establishment of the *Index,* to continue this indefinitely. If the profession do not support it, the *Index* will die again and *finally.*"

This is a most unfortunate state of affairs, and it should be brought instantly and emphatically to the notice of the profession. It is hardly credible, and certainly not creditable, that only 251 members of the medical profession have thus far been willing to subscribe for the continuance of this invaluable publication. The *Index Medicus,* as we have stated before in these columns, is a most important organ for those members of the profession who are doing the real scientific and literary work of medicine and surgery, and we trust it will be sufficient to call attention to this fact in order to secure at once a prompt and ample response. The *Index Medicus* should not be allowed to perish. There is now an opportunity offered by the Carnegie Institution to revive it and keep it alive, but it is evident that the profession also must come to its assistance. We trust there will be no further lack of funds for this most beneficent purpose.

Current Comment.

A SLOW CORONER.

The Coroner's office of Philadelphia still declines to give hydrophobia official recognition as a legitimate cause of death. An official of that office turned down a certificate of the kind with the statement that "every physician should know better than to issue a certificate giving hydrophobia as a cause of death." It cannot be concluded from this that the average Philadelphian is too slow to die from so rapid a disease, but is rather an indication that Philadelphia is no better off in respect to the mental caliber of the incumbents of her mortuary department than are some other cities.

—*The Clinical Review.*

VIRCHOW'S SARCASM.

According to the Westminster *Gazette,* the political success of Virchow rested largely on the wide dissemination given the following statement made while speaking of hereditary ailments: "I know of a family, a very exalted one, in which the grandfather had softening of the brain, the son a hardening of the brain, and the grandson no brain at all." It was generally understood that this referred to Frederick William II., III., and IV., of the Prussian royal house.

UNAWARE OF PREGNANCY UNTIL BABY WAS BORN.

A few days ago I was sent for in urgency to remove a placenta which had been retained *in utero* for a period of about 3 hours. The placenta gave me no trouble, but the story of the mother, who is a very respectable woman, took me by surprise. She informed me that her first baby, now 16 months old, was still on the breast; that she did not know that she was carrying a second child; and that about an hour and a half before the baby was born she felt a little uncomfortable, but had no pain. She thought that her discomfort was due to wind, and did not for one moment suspect anything in the shape of labor. Not until baby announced his arrival did she realize for the first time that she had been pregnant. Her husband stated that he "heard no word of anything" till he saw the child. The baby was to all appearances a full-time child.

—*Dr. E. H. Jones, in The Glasgow Medical Journal.*

Correspondence.

THE TESTS FOR INDICAN.

By A. ROBIN, M. D., Wilmington, Del.

To the Editor of the **Philadelphia Medical Journal**:

Without entering upon a discussion of the mootpoints relative to the significance of indicanuria, I will only point out the urgent necessity of an extensive clinical investigation of this condition both in health and disease. While indican is present in traces in normal urine and under conditions of perfect health, excessive excretion seems to depend on the degree of intestinal fermentation which takes place through bacterial activity. Since a certain amount of fermentation is physiological, it is difficult to place the exact limit between the normal and abnormal. This difficulty is aggravated by the fact that even a larger amount of indican in the urine may be the result of diet. The factors which probably enter into the production of indcanuria are (1) diet, (2) intestinal motility, (3) state of digestion and (4) condition of the excretory organs. As these factors vary both in health and disease, the necessity for normal standards is self-evident. Work in this direction can only be successfully performed on condition that a simple and accurate test, which could be readily performed even by the untrained, be available. No such tests have been devised. Those commonly described in text-books are either too complicated or qualitative only. In 1900 I described, in the December number of the *International Medical Magazine*, a test for indican which seems, after additional experience of over 3 years, to meet all the requirements, and the reason I venture again to call attention to it, is that I have not seen it mentioned in the works on urinology which appeared since, and which I have had the opportunity to see. On the other hand, I noticed in the current literature the description of a number of tests for indican none of which is superior to the older tests nor equal to the one I described.

The following is a description of the test as it appeared in the journal mentioned. I reproduce it for the benefit of those of your readers who may not have access to the original:

"*Approximate quantitative test, for indican.*—Prepare the following solutions: (1) Obermeyer's reagent which is made up strong hydrochloric acid, C.P. and 2 gm. of ferric chloride for each 1,000 cc. of the acid; (2) a 25% solution of lead acetate; (3) a solution of potassium chlorate containing 1% of available Cl or 34.6 gm. of the salt per liter.

"To 10 cc. of the urine add 1 cc. of the lead acetate solution and filter through a double filter. Put 5 cc. of the filtrate into a test-tube, add 5 cc. of Obermeyer's reagent and 2 cc. of chloroform and invert the test-tube about ten times or until the color of the chloroform ceases to become more intense. The latter will assume a violet blue color, according to the amount of indican present. Now add from a dropper the potassium chlorate solution, drop by drop, shaking the mixture after each addition until the blue color of the chloroform disappears. The potassium chlorate liberates chlorine in the presence of a strong mineral acid and oxidizes the indigo formed after the addition of Obermeyer's reagent. If the amount of indican is normal, one to two drops will cause discoloration. In making your memoranda, mark down 'discolored by X drops of $KClO_3$ solution.' This will give you exact information as to the increase or decrease of indican in a given case.

"The advantages of this method over similar ones are: (1) A special oxidizer is used for converting the indican into indigo. (2) There is no danger carrying the oxidation beyond the point of the appearance of indigo, as is the case when the chlorine solutions are used, since ferric chloride does not oxidize the indigo formed. (3) By employing potassium chlorate instead of the chlorides, we have a permanent solution of definite strength which is easily prepared. (4) The final oxidation of the indigo introduces a fixed point far more accurate than the intensity of the coloration of the chloroform upon which most of the other methods depend. (5) The determination can be made in a few minutes, only small quantities of urine being required."

Reviews.

Encyclodedia Medica. Under the General Editorship of Chalmers Watson, M. B., M. R. C. P. E. Volume V. Herpes to Jaws. Volume VI. Joints to Liver. New York. Longmans, Green and Company. 1900.

While the theory and practice of medicine do not lend themselves to stereotyped compilations, a work for ready reference as the one under criticism will undoubtedly prove a valuable adjunct to the medical library. The prominence of specialists having charge of individual departments of a work of this kind, will often give to the reader a feeling of security which is not always substantiated by the contents of the work. The article on "Herpes" is exceptionally well written, concise and modern. For "hiccough" oil of amber as well as chloroform inhalations might have been mentioned for treatment. The writer of the article on "Hydatid Disease" fails to refer in his literary comment to some important American literature on hydatid disease of the liver, namely the noteworthy article by Keen read at Johnstown, Pa., and another important article by Loux, read before the Academy of Surgery in Philadelphia. The subject of hydropathy is such a large one that its author has overcome this obstacle with brevity and precision. The article on hypnotics is barren of much scientific accomplishment: at least the physiology of sleep might have been entered into more thoroughly in a book which is intended to be a work of reference, and the physiological action and therapeutic value of the more important drugs should have been discussed at a greater length. We fail to see the consistency of referring the reader to oxaluria when he wishes to consult the subject of hypochondriasis. It appears to us that a subject should not be classified under one of its symptoms. The article on "Immunity" is a credit to its author. We note a typographical error on page 253, where the word "tumor" is spelled "tumo." We must also necessarily look askance upon the recommendation of proprietary remedies, the nature and exact quantity of each ingredient being unknown. The classification of "Insanity," being still somewhat in the state of confusion itself, cannot be quite fairly criticized in a reference work. That the supervisors of this department of the book have labored conscientiously in the narrow scope allotted to them, the article will show. The department on "Invalid Feeding" is a valuable one, but, unfortunately for American subjects, the recipes cannot always be conveniently prepared in the American kitchen. Under the heading of "Iris and Ciliary Bodies," in which the subject of atropine poisoning is considered and duboisine recommended as a substitute, it should be remembered that duboisine may cause similar toxic phenomena, as exemplified in a noteworthy case reported by Veasey of Philadelphia. The article on "Labor" is well written but poorly illustrated, and some of the terms do not conform happily to the American nomenclature. Under the term "leukorrhea" the reader is referred to "Secretions from the Vagina." This reference appears to us to be somewhat misleading, as it conveys the faulty impression to the student that this symptom is always of vaginal origin. The diseases of the liver are carefully compiled and discussed. The two volumes under consideration may be accepted as a fair representative of the whole work, which, although very valuable for the purposes of quick reference, ought by no means to be accepted as the last court of appeal. The clear and harmonious typography, as well as the stability and quality of the binding, reflect great credit upon the publishers. [M. R. D.]

News and Notes.

AMERICAN

PHILADELPHIA AND PENNSYLVANIA.

Jefferson Medical College Hospital.—Dr. Hans Kehr, of Halberstadt, Germany, will hold a clinic at one o'clock, Saturday, May 9, and Dr. J. von Mikulicz-Radecki, of Breslau, Germany, will hold a clinic the succeeding Saturday, May 16. To both of these clinics members of the profession in and near Philadelphia are cordially invited. Members of the profession who have cases of gall-stones under treatment, who would like to have Dr. Kehr's opinion, will oblige Dr. W. W. Keen, professor of surgery at Jefferson Medical College, if they would communicate with him. Others having cases of carcinoma or other surgical diseases of the stomach or intestines suitable for Dr. von Mikulicz's clinic, who care to have him see them, can also communicate with Dr. Keen, who is seeking cases for both clinics.

Dr. Ravenel Sails for Liverpool.—Dr. M. P. Ravenel, bacteriologist of the State Live Stock Sanitary Board, leaves for Liverpool, April 29, in order to take part in the opening ceremonies of the Johnston Laboratories for Tropical Medicine, Bio-Chemistry, Experimental Medicine and Comparative Pathology. He has been invited to meet with the Royal Commission on Tuberculosis, which will be present on this occasion. Professor Nocard, of France, has also been invited to be present.

Medico-Chirurgical Hospital, Philadelphia.—Fire broke out on the fourth floor of the new laboratory building, in the bacteriological laboratory, in charge of Dr. McFarland, early on the morning of April 19. Sterilizing and incubating ovens were totally destroyed before the blaze could be extinguished. A chemical engine was sent for, but no alarm was turned in and no noise was made, in order that the patients in the hospital building adjoining might know nothing of the fire. The damages, including the destruction of much valuable apparatus, are probably less than $1000.

Philadelphia Hospital.—Henderson and Company secured the contract last week for the erection of the consumptive pavilion to be erected on the grounds of the Philadelphia Hospital at Thirty-fourth and Pine streets. The building, 39 by 68 feet, is to cost $108,000, and will be completed as rapidly as possible.

Berks County Medical Society.—At the April meeting, Dr. George Keihl reported the case of a female infant with imperforate anus. Autopsy revealed the absence of a bladder, the ureters opening directly into the rectum. Death occurred on the fifth day. Dr. Kaufman showed a specimen of an intestinal anomaly. The upper part of the intestinal tract, 71 inches long, ended in a blind pouch in the mesentery. The lower part, extending 40 inches upward from the rectum, also ended in a blind pouch in the mesentery, about 2 inches below the ending of the upper portion. The appendix, about 3 inches long, was otherwise normal. The child lived 2 days, vomiting everything before death.

Jewish Hospital.—$5000 have been given by Louis Rosenberg to endow a bed in memory of his wife. A similar amount has been given by the brothers and sister of Herman Jonas, to found a bed in his memory.

The Health of Philadelphia.—During the week ending April 18, a slight increase in the number of cases of diphtheria and scarlet fever was reported, while there was a marked decrease in the typhoid fever cases and a slight decrease in the smallpox cases, as compared with the previous week. There were 89 cases of scarlet fever with 4 deaths, against 70 cases with 6 deaths in the week preceding; 78 cases of diphtheria with 8 deaths as against 59 cases with 11 deaths during the week previous; 160 cases of typhoid fever with 26 deaths, against 204 cases with 17 deaths in the week before, and 10 cases of smallpox with one death against 16 cases with 5 deaths during the preceding week. The secretary of the State Board of Health reports the finding of 50 cases of smallpox in the village of Tyler, Clearfield county. A serious condition is said to exist among the lumber camps about Williamsport, on account of the prevalence of smallpox there. Quarantine is exceptionally difficult, so that it is almost impossible to prevent the spread of the disease.

Allegheny County Medical Society.—At the meeting held April 14, at Pittsburg, it was decided that, in the future, all advice transmitted by telephone shall be charged at the rate of from $2 to $5 per call. Heretofore no charge has been made for advice by telephone.

Woman's Hospital.—Dr. Sarah H. Lockrey has been elected to the vacancy in the maternity staff of the Woman's Hospital caused by the recent retirement of Dr. Anna E. Broomall. She is a member of the Philadelphia County Medical Society and the American Medical Association, and recently succeeded Dr. Ida Richardson as visiting physician to the West Philadelphia Woman's Hospital.

Society Meeting Next Week.—The Neurological Society, the only society to meet next week, will hold its meeting at the College of Physicians, Philadelphia, Tuesday evening, April 28, at 8.15 P. M.

NEW YORK.

Manhattan Hospital, Blackwell's Island.—Plans have been drawn for the erection of a solarium for poor consumptives, to be used as an adjunct to the tuberculosis ward of the Manhattan Hospital. The plans provide for a one-story pavilion, built of glass and iron, with a metal roof. It will be 200 by 24 feet, with a wide, uncovered porch entirely around the building. The sides can be thrown open so as to leave the whole interior space absolutely unconfined. A tent was erected, April 14, but the stormy weather blew it to pieces. It has been arranged to erect 10 such tents, each one to hold 10 patients, while the solarium is to be used especially on rainy days. The effect of the storm showed that the tents at present used were not strong enough, and the new ones to be erected will be stronger.

Smallpox at Davenport.—On account of the prevalence of this disease, which the patients insist was chicken-pox, the State Board of Health has been caused a great deal of trouble. Houses were barricaded by the families affected, effectually keeping the Health Officer out. Nevertheless, a number of cases were found. The worst case was that of the physician, Dr. Craig. There is no doubt that the disease is smallpox and not chicken-pox.

Tuberculosis in New York City.—The president of the Board of Health recently distributed long, printed circulars, giving advice and warning upon the treatment of consumption. They are printed in 4 different languages, English, French, German and Hebrew, and have been sent especially among the crowded districts of the East and West sides. They advise patients to sleep alone, if possible, in a well-ventilated room, and warn especially against the widely advertised cures, specifics and special methods of treatment. Pure air, out-door life and good food are of value. A bill has been introduced in the Legislature which prohibits the establishment of a sanatorium for consumptives in New York State without the consent of the county supervisors. Should this bill become a law, the plans to establish a camp for consumptives in Central Valley, Orange county, will probably fall through. The Health Commissioner also advocates a special dispensary for the treatment of tuberculosis in New York City, plans for which have already been completed.

Professor Mikulicz in New York.—Dr. Johann von Mikulicz-Radecki, professor of surgery in the University of Breslau, who has received the degree of LL. D. both from Glasgow and Edinburgh, arrived in New York last week, accompanied by his daughter. On Monday, April 20, he held a clinic at Cornell University Medical College, which was attended by a great number of prominent surgeons of New York. He has also given clinics at the Roosevelt Hospital and the German Hospital, New York City. He expects to visit most of the larger cities of the United States, to attend the Congress of American Physicians and Surgons, May 12 to 14, in Washington, and to sail for Europe, May 26.

Supposed Yellow Fever on the Syracusa.—Two deaths occurred from what was supposed to have been yellow fever, on the steamer *Syracusa*, which reached New York, April 17, from Rio de Janeiro. The steamer put in at Bahia, Brazil, March 30, where one of the patients was buried. The other two passengers are both well. The steamer has been held for observation and disinfection.

NEW ENGLAND.

Foot and Mouth Disease.—Dr. Salmon, chief of the Bureau of Animal Industry, Washington, D. C., stated, April 15, that a few new cases of foot and mouth disease had occurred in New Hampshire, but that there had been no further developments in Massachusetts.

New Hampshire Medical Society.—At the semi-annual meeting, held at Nashua, April 16, the following officers were elected for the ensuing year: President, Dr. A. C. Heffenger, Portsmouth; vice-president, Dr. C. R. Walker, Concord; and secretary and treasurer, Dr. N. W. McMurphy, Concord.

Death of Dr. Ayers.—Dr. Chauncey Ayers, who was graduated from the Yale Medical School, in 1831, and was for a long time connected with the U. S. Coast Survey as surgeon, died at Stamford, Conn., April 14, aged 95 years. He was the oldest living graduate of the Yale Medical School.

WESTERN STATES.

Chinatown Unsanitary.—Thirteen affidavits by medical men connected with the California and San Francisco Boards of Health and U. S. P. H. and M.-H. Service were filed in San Francisco, April 6. The affidavit of Dr. A. H. Glennan, U. S. P. H. and M.-H. S., states that the portion of Chinatown affected by the operations of the Health Board is in a worse condition from a sanitary point of view than was either Cuba or Porto Rico before the Spanish-American War. These affidavits are to be used as a defence by the city of San Francisco in a suit recently brought against the local Board of Health to restrain it from tearing down buildings in the Chinese quarter which had been condemned as unsanitary.

Smallpox in Kansas.—In reply to an inquiry from Surgeon-General Wyman, U. S. P. H. and M.-H. S., as to the reported existence of bubonic plague in Rice county, Kansas, the secretary of the Kansas State Board of Health has reported that the disease which broke out there some weeks ago is smallpox, and not bubonic plague.

Leland Stanford University, California.—An epidemic of typhoid fever appeared at Stanford University and Palo Alto, where 100 cases have been reported during the past 2 weeks. But one death has as yet occurred, the majority of the cases being mild in form. The origin of the disease has been traced to milk from one of the Palo Alto dairies. The drinking-water of the university has been examined and was found free from germs.

SOUTHERN STATES.

Cambridge Hospital, Cambridge, Md.—The plans for the new hospital building, changed to reduce the cost from $45,000 to $35,000, to be built upon the Fletcher lot, which was recently purchased on the bluff of East Cambridge, have been given to the contractor. It is expected that the hospital will be ready for the reception of patients by June, 1904.

National Association of U. S. Pension Examining Surgeons.—The second annual meeting will be held in Washington, D. C., May 13 and 14, with Dr. W. A. Howe, of Phelps, N. Y., as President. The association already numbers nearly 500 members. An interesting and varied program has been arranged for the coming meeting, including a paper by Medical Referee Houston. The secretary of the association is Dr. Wheelock Rider, of Rochester, the treasurer, Dr. C. H. Glidden, of Little Falls, N. Y.

Army Medical School, Washington, D. C.—At the graduation exercises, held April 14, diplomas were awarded to 38 graduates, after an address by Dr. John S. Billings, U. S. A., retired. Brigadier-General W. H. Carter presented the Hoff memorial medal. There were 4 honor graduates.

Dinner in Honor of Dr. Fletcher.—Dr. William H. Welch gave a dinner at the Maryland Club, Baltimore, April 18, in honor of Dr. Fletcher and the revival of the *Index Medicus*. The *Index Medicus*, after having been published for 21 years, ceased publication, but has recently been revived through the generosity of the Carnegie Institute, which appropriated $10,000 a year for the support of the journal, the allowance having been procured through the good offices of Dr. D. C. Gilman, formerly president of Johns Hopkins University, and Dr. S. Weir Mitchell, of Philadelphia. Among the guests were Acting Surgeon-General De Witt, U. S. A., Major Kean, U. S. A., Drs. Garrison, King and Yarrow, of Washington, Jacobi, of New York, Chadwick, of Boston, and Keen and Henry, of Philadelphia.

Against Yellow Fever.—In a letter of instruction to the acting assistant surgeons, U. S. P. H. and M.-H. S., assigned to fruit-ports in Central and South America, to inspect vessels, their cargoes and crews bound for the United States, Surgeon-General Wyman calls attention to the spread of yellow fever by the stegomyia fasciata mosquito, and requests that special precautions be taken to prevent the presence of these insects aboard vessels.

MISCELLANY.

Increase in the Medical Corps, U. S. N.—The Fifty-seventh Congress provided for an increase of 150 numbers in the Medical Corps, U. S. N., 25 of which are to be appointed each calendar year for 6 years. By the enactment of this law there is afforded to the young physicians of the country an opportunity to take service in the Navy of the United States and an assurance of the continuance of this opportunity for the next 6 years. The number of vacancies in this Corps occurring from retirements, resignations and casualties average about 10 a year, which, added to the 25 created by new legislation, makes 35 appointments open to young medical men yearly. These appointments are to be made in the grade of assistant surgeon and are within the reach of any well-qualified physician between the ages of 21 and 30 who is a citizen of the United States. Examinations to determine the fitness of candidates for appointment are held in Washington, D. C., and at Mare Island, Cal., and the boards of examiners are in continuous session throughout the year. It is only necessary for any physician of the required age and citizenship desiring to enter the Medical Corps of the Navy to apply to the Secretary of the Navy for permission to be examined. No political or other influence is required, and the only testimonials needed are those bearing on moral standing and citizenship. The examinations to determine the fitness of candidates for these appointments are conducted in the following order: 1, physical; 2, professional; 3, collateral. The physical examination is thorough, and the candidate is required to certify, on oath, that he is free from all mental, physical and constitutional defects. Acuteness of vision, 12/20 for each eye unaided by glasses, but capable of correction by aid of lenses to 20/20, is obligatory. Color perception must be normal and teeth good. If the candidate is found to be physically disqualified, his examination is concluded. If found to be physically qualified his examination is continued, as follows:

(1) Letter to the board describing in detail his general and professional education.

WRITTEN PROFESSIONAL EXAMINATION.

	Written questions.	Percentages required.
Anatomy (2) and physiology (1)	3	80
Surgery	3	85
Medicine	3	85
Pathology (1) and microscopy (1)	2	60
Obstetrics (1) and medical jurisprudence (1)	2	60
Materia medica and physiological action of drugs	2	80
Chemistry (2) and physics (1)	3	60
Hygiene (1) and quarantine (1)	2	80
General aptitude		80
Literary and scientific branches		80
Required aggregate		750

Bandaging; tourniquets; four operations on cadaver; clinical cases (a written report being made in one case, giving history, diagnosis, prognosis, treatment, one prescription, at least, being written out in full in Latin; urine analysis (chemical and microscopical examination of one specimen of urine); practical microscopy, and recognition of five mounted specimens (histological, pathological and bacteriological); recognition of surgical instruments. An oral examination follows the written work in each branch, and the required percentage is made up from the combined results of the written and oral examinations. The percentages given are not absolute, however, as losses in some branches may be made good in others, provided the standard is reached in the cardinal subjects of anatomy, physiology, medicine and surgery. The collateral examination embraces spelling, punctuation, the use of capital letters, grammar, arithmetic, geography (descriptive and physical), languages, history, general literature, elementary botany, geology and zoology. While due credit is given for a knowledge of languages and the sciences, it is not essential except in the case of physics. A knowledge of the common school branches is essential, and deficiency in this respect will cause rejection even though passing marks may be gained in professional subjects. These examinations, while necessarily thorough and comprehensive, are simple and practical, and are not beyond the attainments of any well-educated physician. The oral and written questions are similar to those asked by the best medical colleges in examination for graduation. The future prospects of the medical officer of the Navy, both for promotion and professional opportunity, are very bright, and the plan of enlargement of the Naval establishment already adopted and authorized, as well as that in contemplation, gives assurance that this outlook will grow even more promising. The Medical Corps of the Navy consists of the following numbers and grades: One surgeon general with the rank of admiral (equivalent to brigadier general in the Army); 15 medical directors with the rank of captain (equivalent to colonel in the army); 15 medical inspectors with the rank of commander (equivalent to lieutenant colonel in the Army); 85 surgeons with the rank of lieutenant commander (equivalent to major in the Army); 23 passed assistant surgeons with the rank of lieutenant (equivalent to captain in the Army); 56 assistant surgeons with the rank of lieutenant, junior grade (equivalent to first lieutenant in the Army), with 152 vacancies. There are 27 vacancies in the grade of assistant surgeon for the year 1903. Assistant surgeons, after 3 years service, will be eligible for promotion to the next higher grade, that of passed assistant surgeon, and from a study of the above table it may be observed that the small number of passed assistant surgeons insures promotion to the middle grade, that of surgeon, after a short period of service. The following is the pay table of the Medical Corps of the Navy:

	At Sea.	On Shore.	Allowances per Annum.*
Assistant Surgeons, rank of Lieutenant (junior grade)	$1,650.00	$1,402.50	$288.00
Passed Assistant Surgeons, rank of Lieutenant	1,980.00	1,683.00	432.00
After five years in the Service	2,160.00	1,836.00	432.00
After ten years in the Service	2,340.00	1,989.00	432.00
Surgeons, rank of Lieutenant Commander—			
After ten years in the Service	3,250.00	2,762.00	576.00
After fifteen years in the Service	3,500.00	2,975.00	576.00
Medical Inspectors, rank of Commander—			
After fifteen years in the Service	4,000.00	3,400.00	576.00
Medical Directors, rank of Captain—			
Service	4,500.00	3,825.00	720.00
Surgeon General, rank of Real Admiral	5,500.00	5,500.00	750.00

*Only when quarters are not furnished by the Government. Eight cents a mile is the allowance when traveling under orders.

The professional opportunities afforded the officers of the medical Corps are constantly improving. The first assignment to duty of a newly appointed surgeon is usually to some one of the 14 naval hospitals, where he remains until the opening of the course at the Naval Medical School in Washington, early in October. At the naval hospitals the service is most instructive and valuable, the larger of these institutions having a capacity of from 150 to 200 beds, and at most times carrying a full quota of patients. The Medical School is essentially a postgraduate school, designed to fit the young officer for the intelligent application of his professional knowledge to the requirements of the naval service, and to give him a training in certain specialties peculiarly important to naval work and in which he has not had the opportunity or time to perfect himself in his college course. The course of instruction comprises the following subjects: Military medicine, military surgery, tropical medicine, naval hygiene, its chemistry and biology, quarantine, the duties of medical officers, hospital corps drill and administration, ophthalmology, naval law, manual of the sword and extracts from tactics, instructions in signals. Bacteriology, blood examination and the study of animal parasites form very important branches of this course and are given in one of the most modern and fully equipped laboratories in this country. Five months are devoted to this school work, and after its completion the assistant surgeon is assigned to sea duty. Here, again his work follows the line of advanced medical and surgical procedure. He is provided with the latest and best instruments of precision and operation, and is given every encouragement to perfect himself in the practice of his profession. The most recently constructed battleships and large cruisers are equipped with hospital facilities equal to those found in most of our best-organized small cities. Vessels of this type carry a crew of from 600 to 700 men, and for the care of the sick of these small villages afloat there is furnished for the medical officer a small hospital of from 20 to 30 beds, an isolation compartment, a dispensary and an aseptic operating room. These are equipped with every modern appliance for the prevention of disease, the care of the sick and wounded, for operative procedure and for the prosecution of scientific investigations as far as practicable aboard ship. Other duties to which naval medical officers are assigned are those pertaining to the needs of navy yards, naval stations, receiving ships, and recruiting work. Opportunity frequently occurs also for attendance of medical officers upon the meetings of medical and other scientific societies both at home and abroad as the accredited representatives of the Navy Department and the Government.

Cholera in Turkey.—On February 17 what was believed to have been the last case of cholera was reported in Damascus. Measures were then relaxed, the 10 days' land quarantine imposed at Merijan, between Damascus and Beyrut, being reduced to 5 days and later being abolished. March 18, however, 6 new cases developed in Damascus, in the Jewish quarter of the city, 3 more in the Christian quarter, one at Medan and 2 among the troops near Damascus. Up to the end of March there have been 52 cases with 47 deaths. The cause of the revival of cholera is not known. It may have been due to the importation of infection by means of the traffic in rags from the villages around, or from Egypt, but as the rag trade has been prohibited, and cholera had completely disappeared from Alexandria before the end of January, the latter view finds but little support. It is possible that the disease has been present continuously in some of the villages near Damascus, without this fact being reported at Constantinople. Up to the apparent cessation of the epidemic in February, almost 1500 deaths had occurred in and about Damascus. The infection at this time was probably spread by the water-supply. The annual pilgrimage to Mecca and Medina has passed this year without any appearance of cholera as yet. Up to March 31 the only case of cholera in Arabia occurred on a steamer, February 4, which had left Hodeidah a few days previously.

No Bubonic Plague in Mazatlan.—The last 2 plague patients remaining in the hospital at Mazatlan were discharged April 14, and the hospital has been burned with all its contents. The employés of the hospital have been discharged and sent to the observation station, which is now serving as a final quarantine. There are still 4 patients detained at Villa Union, but they are convalescent and will soon be discharged. From the beginning of the outbreak there have been 230 deaths from the plague. More than 300 houses have been burned, for which $100,000 have been paid. Of the $400,000 spent during this epidemic, over $250,000 were collected in the City of Mexico. Four sanitary officials were murdered during the epidemic.

Yellow Fever in Costa Rica.—The presence of an outbreak of yellow fever in Port Limon has been reported to the Department of State in a despatch dated April 11.

Obituary.—Dr. E. Gallaup, at Santa Ana, Cal., April 5, aged 83 years.—Dr. William H. Price, at Somerville, Mass., April 11, aged 91 years.—Dr. Samuel Kaighn, at Leesburg, Va., April 13, aged 69 years.—Dr. George H. Weiss, at Leesport, Pa., April 14, aged 70 years.—Dr. L. H. Gebhard, at Grandview, Texas, April 3, aged 74 years.—Dr. James D. Craig, at Chicago, Ill., April 13, aged 70 years.—Dr. William F. Smith, at Baltimore., M. D., April 14, aged 39 years.—Dr. Chauncey Ayers, at Stamford, Conn., April 14, aged 95 years.—Dr. Albert Wyckoff, at Belvidere, N. J., April 13, aged 52 years.—Dr. Gustave Sussdorff, at San Francisco, Cal., April 4, aged 61 years.—Dr. Samuel L. Foulke, at Stroudsburg, Pa., April 17.—Dr. Matthew Gardner, at San Francisco, Cal., April 18, aged 56 years.—Dr. Charles Howard, at Indianapolis, Ind., April 18.

The Latest Literature.

BRITISH MEDICAL JOURNAL.

April 4, 1903. (No. 2205.)

1. Lecture on the Prognosis and Treatment of Syphilitic Disease of the Nervous System. WILLIAM R. GOWERS.
2. A Case of Acute Acromegaly. W. MITCHELL STEVENS.
3. A Case of Chronic Acromegaly. C. H. CATTLE.
4. The Meaning of the Term "Neurasthenia" and the Etiology of the Disease. P. C. SMITH.
5. The Knock-Out Blow on the Point of the Jaw. JAMES G. DUNCANSON.
6. The Goulstonian Lectures on Theories of Immunity and Their Clinical Application. Lecture III. A. S. GRUNBAUM.
7. On the Bacteriolytic Power of the Blood, and on Its Relation to the Problems of Antityphoid Inoculation and the Recent Work of Dr. Macfadyen. A. E. WRIGHT.

1.—Syphilitic disease of the nerve centers developing in the adventitial elements produces symptoms through the changes it causes in the nerve elements themselves. Specific treatment has no direct influence on the secondary changes by which the symptoms are produced, but only on the primary lesion. There is an inflammatory and a neoplastic element in all syphilitic processes, and, in proportion as these processes are acute, the inflammatory element predominates. Even if the effects of the inflammation pass away, no structure is ever quite the same as it was before the disease attacked it, and in the gray matter of the brain a slight residual alteration may entail a grave change in function. One of the most important early changes indicative of cerebral syphilis, optic neuritis, is often overlooked because the physician is not familiar with the use of the ophthalmoscope. Syphilis frequently pursues its course for a considerable time unrecognized on account of the belief that the patient under consideration cannot have the disease. It must be remembered, however, that the absence of evidence is of little value when compared with the presence of positive symptoms. Gowers believes that it is not wise to give mercury and the iodides together in full doses, except when the life of the patient is threatened. He thinks that the iodides promote the elimination of mercury and thus hinders the retention of enough of that substance in the system to act upon the disease. Inunctions are much facilitated by the use of mercury oleate. He believes that specific treatment should be energetic, brief and renewed but not continuous. It should stop at the end of 8 weeks or so and be renewed in from 2 to 6 months. The patient should have 3 or 4 weeks' treatment with iodide during the first year after the disappearance of true specific symptoms and every 6 months for the next 3 or 4 years. [J. M. S.]

2.—Stevens reports a case of **acute acromegaly**. The patient was a married woman, 20 years of age, who had complained of severe headaches and failing eyesight 3 years before Stevens first saw her. Her face presented the usual characteristics of acromegaly, and the disease rapidly progressed toward a fatal issue. At autopsy a small round-celled sarcoma of the pituitary body was discovered. The author thinks that the evidence points to the loss of function of the pituitary body as the cause of acromegaly. In the treatment of the disease the indications are to relieve the symptoms due to the presence of an intracranial growth and to treat the symptoms due to a loss of function of the pituitary body. So far there is little to be hoped for from the use of extract of pituitary bodies. [J. M. S.]

3.—Cattle reports a case of **chronic acromegaly** in an unmarried woman, aged 30 years. The disease is still in its early stages so that some of the characteristic symptoms, such as eye changes, oculomotor palsies and glycosuria, are wanting. The patient complains of enlargement of the thyroid gland, rapid pulse and prominent eyeballs, so that it might be considered that the disease is complicated with exophthalmic goiter. Cattle believes that acromegaly is due to disease of the pituitary body. [J. M. S.]

4.—Smith believes that **neurasthenia minor** is often hereditary and congenital. He describes the class of child who is the subject of this disorder. **Neurasthenia major** may be due to shock or to an exacerbation of neurasthenia minor by depressing or toxic influences, such as worry and anxiety, relaxing climate, prolonged illness, prolonged drug intoxications, prolonged auto-intoxication, prolonged malnutrition or prolonged exhaustion. [J. M. S.]

5.—Duncanson discusses the **pathology of the knock-out blow** on the point of the jaw. Although the blow produces unconsciousness, there is none of the usual signs of concussion of the brain or of shock. As a result of the blow the head is violently rotated, and the endolymph in the semicircular canals is lashed against the hair cells, stunning the nerve endings, producing loss of equilibrium and often unconsciousness. [F. T. S.]

7.—Wright contributes an article on **typhoid fever vaccination**, in which he criticizes the recent work of Macfadyen. In undertaking researches in connection with this subject the following propositions must be accepted as axiomatic: (1) The vaccine material must be taken from a culture of the bacillus typhosus; (2) the vaccine should consist of a sterilized culture or of a constituent isolated from such a culture; (3) the vaccine material must be free from contaminating organisms. The essential immunizing element in a vaccine is a constituent of the bacterial protoplasm and the amount of this protoplasmic constituent will determine the potency of the vaccine. There is nothing novel in the vaccine prepared by Macfadyen except that it was prepared with liquid air. Wright is of the opinion that there is no outlook for the successful practical exploitation of an antitoxic serum against any disease unless the quantity of antitoxin contained in the few cubiccentimeters of foreign blood which can be inoculated into the patient is sufficiently considerable to neutralize at least a substantial fraction of the bacterial toxin generated in his system. [J. M. S.]

LANCET.

April 4, 1903.

1. An Address on the Existence of Organic Disease in the Absence of Obvious Symptoms. J. R. BRADFORD.
2. Goulstonian Lectures on Theories of Immunity and their Clinical Application. Lecture III. A. S. F. GRUNBAUM.
3. Further Observations on the Treatment of Smallpox by the Serum of Immunized Heifers. R. S. THOMSON and JOHN BROWNLEE.
4. Ethyl Chloride as a General Anesthetic. W. J. McCARDIE.
5. On Some Operations for Rectifying Crooked and Depressed Noses. W. J. WALSHAM.
6. On the Use of Iodipin in Cases of Uterine Fibroid. JOHN A. SHAW-MACKENZIE.

1.—Bradford contributes an article **on the existence of organic diseases in the absence of obvious symptoms**. He divides this group of diseases into 2 classes, the first consisting of those instances in which latent diseases occur as complications of other and obvious maladies, and the complication produces either no obvious symptoms, or else the symptoms produced by it are erroneously interpreted as dependent on the initial malady. The second group, which is equally, if not more, important, consists of the instances in which the latent disease is not detected until complications have developed, the original latent malady being overlooked, either owing to the complete absence of symptoms or, in some instances, owing to their equivocal character. He then presents examples which deal particularly with the second class. He points out that the important lesson to be learned from the occurrence of latent diseases is the one that most of them can be detected or, at any rate, suspected, by a complete physical examination. [F. J. K.]

2.—Will be treated editorially.

3.—Thomson and Brownlee present **further observations on the treatment of smallpox by the serum of immunized heifers**. In 1897 these observers set forth some observations on the treatment of smallpox by the subcutaneous injection of serum obtained from heifers immune to vaccinia, the results of which were most unsatisfactory. In this communication they set forth an account of 13 cases in which large doses of serum were administered. Analysis of these cases has led to the following conclusions: (1) No action of any kind was observed in the hemorrhagic cases treated with serum. In Cases 1 and 2, as the serum was administered only 24 hours before death, there was probably too little time for it to exercise any influence; but in the third patient, who died a week after the injection, there was probably sufficient time for the influence of an immunizing agent to become apparent, had the serum contained such substance in sufficient amount. (2) In certain cases in which the serum was administered from 8 to 18 days before death or commenced dessication, no influence whatever seemed to be exercised upon the course of the disease, though in these cases there was ample time for the serum to act. (3) In the remaining 6 cases the serum was administered from 4 to 7 days before dessication commenced. In all of these the course was modified, and there was probably sufficient time for the serum to exercise an immunizing influence, but as all, with 2 exceptions, were undoubtedly vaccinated, it is impossible to determine whether the modified course resulted from the primary vaccination or from the treatment. (4) Case 13 shows that the serum completely failed to modify the course of a revaccination. (4) It is possible that the eruption, which appeared on the eighth day after the serum was administered, may have been due to the presence in the serum of some agent identical with, or closely resembling, substances present in the blood of variolous patients. (6) That the serum in case 13 did exercise some influence upon the tissues, though none so far could be determined on the vaccination, is suggested by the development of the cutaneous erythema on the eighth day after the administration of serum was begun. Details of this eruption and of its distribution have already been given, but it may be observed here that the characters and distribution were precisely those so frequently present in the erythematous and some other of the prodromal eruptions so commonly found in variola and varicella and exceptionally after vaccination. This suggests that some active body may be present in the serum in sufficient quantity to produce a distinct reaction in the absence of variola—that is to say, when the individual has not been immunized by passing through the earlier stage of smallpox against the toxins presumably present in the serum. [F. J. K.]

4.—McCardie discusses **ethyl chloride as a general anesthetic,** basing his remarks upon an experience of 620 cases. Heyfelder, in 1848, successfully used ethyl chloride as a general anesthetic, and others followed him. About 1880, however, the agent was tried as a general anesthetic on animals by a committee of the British Medical Association, and its use condemned because it was said to produce convulsions and arrest of respiration. About 1895 or 1896 the question of using ethyl chloride for general anesthesia was again introduced by Carlson and Thiesing. Other Europeans took it up and used it extensively, particularly in dental work. Seitz, of Konstanz, in 1892 reported 16,000 cases of ethyl chloride narcosis collected throughout the world. Among these there was but one death, and that in a very unfavorable subject. This writer is a strong advocate of its use, stating that it is the safest of all the anesthetics with the exception of nitrous oxide, and that the death-rate might be put at one in many hundreds of thousands. Owing to its great volatility ethyl chloride is quickly absorbed and almost as quickly eliminated. From a large personal experience McCardie has satisfied himself that arterial tension, as a rule, is lowered during the administration of ethyl chloride, but that the pulse during deep narcosis becomes rather slower than normal and usually preserves its regularity. Respiration is markedly stimulated both in frequency and depth during deep anesthesia; the color is improved, due to vasomotor dilatation, which sometimes results in sweating and in one instance gave rise to a well-marked rash, like the ordinary ether rash. Adults as well as children take ethyl chloride very well and quietly, and very quickly pass under its influence. Any trouble during induction usually occurs with hysterical people, drinkers, smokers and strong men. McCardie makes a strong point of the fact that when excitement takes place, it is due to the too free admission of air, and yet at the same time a free use of air should be allowed. Failure of the anesthetic is also traceable to the too free mingling of air with the vapor. It has been asserted that tea drinking is more productive of excitement than alcohol, and that coffee drinking tends to cause vomiting. In his first use of ethyl chloride in anesthesia McCardie used Breuer's mask, but recently he has employed Ormsby's ether inhaler and in 350 cases has met with but one instance of marked mental or muscular excitement and this in a young man who had just been drinking freely. With this inhaler anesthesia is much more quickly produced. The most useful form of Ormsby's inhaler is that devised by Hewitt, which contains a movable air-chamber which can be heated in hot water and, lying against the sponge, prevents it from freezing, as it is likely to do when either ether or ethyl chloride is used. McCardie has mostly used kelene or Henning's æther chloratus pro narcosi. The vapor of ethyl chloride is not disagreeable. McCardie has given it to himself and finds the subjective symptoms as nearly as possible like those of nitrous oxide. He has most frequently employed the drug for anesthesia for the removal of adenoids and tonsils or for dental extractions, but in one case it was employed for an operation requiring 26 minutes. A number of Europeans have used the drug for much longer operations, such as herniotomy, etc. The pupil is larger during early deep anesthesia from ethyl chloride than is the case with other anesthetics. If anesthesia is not induced in less than a minute or a minute and a quarter, the reason is that air is being too freely admitted to the inhaler, or else not enough ethyl chloride supplied. For continuation of anesthesia 2 or 3 cc. are sprayed on every 2 or 3 minutes, and air is allowed at frequent intervals, according to the state of the patient. The rapidity with which anesthesia is produced is sometimes startling, occurring in one instance after 6 full breaths of ethyl chloride. In nose and throat operations McCardie prefers the patient to be in the recumbent position with the head a little lower than the body. In none of his 620 cases has he noticed any syncope either respiratory or cardiac, the only difference arising from the operations being due to obstruction of respiration, the result of blood or the falling back of the tongue. Occasionally headache and vomiting are the after-effects of the drug. With rare exceptions, when full anesthesia is employed, the muscles are flaccid, although rigidity has been complained of by a number of writers. McCardie has used the French preparation called "somnoform" which is composed of 60 parts of ethyl chloride, 35 parts of methyl chloride, and 5 parts of ethyl bromide. The results, however, were practically the same as those obtained from ethyl chloride. A number of cases of particular interest are reported, showing that patients who have taken nitrous oxide and ether badly and unsuccessfully, can be anesthetized with the greatest satisfaction by ethyl chloride. The only contra-indication to the administration of ethyl chloride is marked narrowing about the larynx, in which cases chloroform is a better anesthetic as being less stimulating. In the case of children ethyl chloride is a perfect anesthetic for small operations. McCardie has used ethyl chloride as a preliminary to ether with satisfaction, but has never given it as a preliminary to chloroform. The recovery from the anesthesia is very prompt and complete. [J. H. G.]

5.—Walsham discusses some **operations for rectifying crooked and depressed noses.** He states first that crooked noses often are not the result of fracture of the nasal bones but of their bodily displacement at the frontonasal suture. This does not appear to be true when the patient is looked at from the front, as the anterior or cartilaginous portion of the nose is generally at the same time deflected in the opposite direction. For these cases forcible straightening is generally insufficient, and for correcting the deformity Walsham recommends a subcutaneous osteotomy of both nasal bones along the nasomaxillary suture. This can be done through a small skin incision and with a mastoid chisel. If thoroughly replaced, the tendency to recurrence of the deformity after one or 2 days is not great. Subcutaneous suture of the lateral nasal cartilage is next described. The author has had good results from wiring the central cartilage to the nasal bone when it has been displaced. Occasionally it is necessary to remove the ends of the overlapping nasal bones. His results from the use of paraffin have been very satisfactory and permanent. Walsham also recommends shifting the septum bodily at its juncture with the floor of the nose in cases of hairlip in which it is found fixed out of the median line. This operation he believes to be original with himself. Another operation is referred to, that of forming a septum by elevating the maxillary crest for cases of depression of the bridge due to necrosis. [J. H. G.]

6.—Shaw-Mackenzie has employed **iodipin,** a combination of iodine and sesame oil, **in the medical treatment of uterine fibroid** in 2 cases. The full dose of iodipin is stated to be 10 cc. (25% strength) for 10 days consecutively. The patients both showed some improvement. No particular local or general inconvenience followed the injections or treatment. The treatment is a continuation of the older iodine method, only in a more convenient, rapid and direct form of administration of the drug. [W. A. N. D.]

MEDICAL RECORD.

April 18, 1903.

1. A Report of Final Results in Two Cases of Polyarthritis in Children of the Type First Described by Still, Together with Remarks on Rheumatoid Arthritis. ROYAL WHITMAN.
2. "Eye Strain" in Youth and Its Modern Treatment. BROSE L. RANNEY.
3. Tuberculous (Basilar) Cerebrospinal Meningitis and Delusional Insanity Complicating Pulmonary and Laryngeal Tuberculosis. HENRY LEVIEN.
4. Resection of Intestine, with Report of Three Interesting Cases. A. E. ISAACS.

1.—Whitman presents a report of final results in 2 cases of **polyarthritis in children**, which conditions were of a type described by Still. Whitman's first patient died in the third year of the disease, and his second patient went on to recovery after about 3 years. The etiology of the condition is by no means clear but Whitman is inclined to regard it as distinct from rheumatoid arthritis. [T. L. C.]

2.—Ranney discusses **eye-strain in youth and its modern treatment** and presents the following conclusions: (1) Eyestrain cannot be recognized too early in youth. (2) Its scientific investigation by modern methods and its radical correction may favorably modify both physical and mental development. (3) The neglect of an existing eye-strain may in time allow it to exhaust the reserve nerve capital of the sufferer and produce untold ills both of body and mind. (4) No child should ever be allowed to begin education until it is known that its eyes are properly fitted for the work. (5) Legislative enactment should, and surely will in time, compel an eye examination of every child before it enters the public schools. (6) Teachers should also be instructed in the rudimentary steps of vision testing. (7) Tests for maladjustment of eye-muscles should be made upon every child as thoroughly and intelligently as tests for errors of refraction are made prior to its education. (8) A knowledge of the possible effects of eye-strain upon mental and physical development cannot be too widely disseminated among parents and teachers. (9) The direct causal relationship between "eye-strain" and nervous diseases is too well established today to require further proof, or even to justify further discussion. (10) The modern methods of testing for anomalies of adjustment of eye-muscles are the only ones that can furnish us with scientific and accurate information. The time has happily passed when any oculist can instruct a patient simply to follow some object held before the eyes with the eyes; and then on that test alone give a final decision as to whether maladjustment of the eye-muscles exists or does not exist. Two decades ago this was about all that anybody knew about eye-muscles. To-day, the mere tyro would not dare commit himself on such tests. (11) The cure of disease today is intelligently based on the search for its causes rather than on an indiscriminate use of drugs; and the prevention of diseases is rapidly becoming more important to the medical mind, and also to the laity, than its cure. (12) The detection of "eye-strain" in youth is an important step in preventive medicine, and the arrest of a nervous leak may save many a child from a permanent breakdown when an adult. (13) The study of facial expression and head posture is destined to become an important aid in diagnosis. (14) The governing boards of institutions for the feeble-minded, the epileptic and the insane will sooner or later be compelled to investigate more carefully and earnestly than in the past the eye conditions of their inmates. [T. L. C.]

3.—Levien reports a case of basilar tuberculous cerebrospinal meningitis and one of delusional insanity which complicated pulmonary and laryngeal tuberculosis. Levien holds that in his first patient the meningeal infection was secondary to that of the pulmonary and laryngeal tissues. The invasion of the bacilli or their toxins into the cerebrum caused exudation into the ventricles, and the pressure of the exudation gave rise to the coma which was present. His second patient presented 2 varieties of illusions following one another, and he suffered from somnambulism which was the starting point of his nervous exhaustion. No autopsy was obtained. In contrasting the 2 cases Levien states that, while both of them exhibited abnormal mental phenomena, he would place the first among those cases of meningitis with positive organic lesions in the brain substance, while the second case belongs rather to the functional disorders of the brain without any special lesions in the cerebrospinal system. It was certainly insanity of the delusional variety. [T. L. C.]

MEDICAL NEWS.

April 18, 1903.

1. Intestinal Indigestion (Dystrypsia). JOHN C. HEMMETER.
2. A Brief Review of Some of the Etiological Factors in Intestinal Dyspepsia. E. FRANKLIN SMITH.
3. The Rational Treatment of Tetanus; A Report of Successful Treatment by Spinal Subarachnoid Injections of Antitetanic Serum. W. H. LUCKETT.
4. Notes on Systemic Infections by the Staphylococcus Aureus. E. LIBMAN.
5. Itching; Its Occurrence Both as a Concomitant and as a Cure of Disease. EDWARD BENNETT BRONSON.
6. The Röntgen Rays: Their Mechanics, Physics, Psychology and Pathology. EDEN V. DELPHEY.
7. The Congenital Criminal. ROBERT T. IRVINE.

1.—Hemmeter gives a number of formulæ which he has found to be of service in this condition. He also states that the differential diagnosis is, as a rule, to separate the intestinal nervous from bowel disease. In acute enteritis of the jejunum and ileum most important objective evidences are found in abnormal conditions of stools. Characteristic features are: (1) Shreds of mucus intimately admixed with fecal matter; (2) bile pigment; (3) epithelium and muscle fibers stained with bile. If the stool is solid, a **test lavage of the colon** should be made to differentiate catarrh of the small from that of the large intestine; if the lavage water brings out large connected shreds of mucus or membranes or masses of glassy mucus, we have a colitis. [T. M. T.]

2.—Smith gives the following headings under exciting causes: (1) Intestinal dyspepsia due to pathologico-anatomical alterations of the intestinal walls, nerves, lymphatics or bloodvessels; (2) abscence or deficiency of the intestinal digestive secretions, especially of bile and pancreatic juice; (3) due to qualitative or quantitative irregularities of diet; (4) due to abnormal bacterial activity; (5) due to abnormal gastric chemistry; (6) of nervous origin —neurasthenia intestinalis; (7) caused by abnormal substances, or irritation reaching the intestines from the blood; (8) due to the activity of the intestinal parasites, worms; (9) due to hyperperistalsis or excessive mobility of the bowel. This last cause he subdivides as follows: (a) Motor neuroses; (b) sensory neuroses; (3) secretory neuroses. [T. M. T.]

3.—Luckett reports 2 cases and makes the following statement: (1) No attempt was made to maintain an equation between the amount of spinal fluid withdrawn and the amount of serum injected, that the shock or collapse so often observed following spinal subarachnoid injection of cocaine is solely due to the physiologcal action of the cocaine. (2) The anatomical seat of the wound plays an important rôle in the production of the constitutional symptoms of tetanus; that a favorable point for an injection of tetanus to produce constitutional effects is the space in the palm of the hand between the first and second metacarpal bones. (3) The reaction after each injection was so prompt and improvement so positive that the author believes in the spinal subarachnoid injection of the tetanus antitoxin, preceded by the withdrawal of the active, concentrated, highly toxic spinal fluid, supplemented by forced nutrition and proper care of the wound. [T. M. T.]

4.—Libman's results show that it does not necessarily follow that the more bacteria there are found in the blood the less chance there is of recovery. The number of bacteria found depends, in some cases at least, upon the time at which the examination is made, as the great tendency is for the body to rid itself of bacteria and for metastasis to be established. In the fatal cases reported the blood-cultures were made at periods varying from one to 19 days before death. The reports could be usually handed in within 24 hours. Sometimes colonies were seen after 6 or 8 hours. In some instances the reports were delayed several days on account of the slow development of the typical color of the organism. [T. M. T.]

6.—Delphey says (1) the X-rays cause slow degeneration. The connective tissue, musculature and the bones are not at all or are only slightly affected, and only suffer secondarily to inflammatory action. The first change is a degeneration of the epithelium. There were also localized masses of the cells of the glandular organs, of bloodvessels, of muscles and of connective tissues which show degeneration. This degeneration is both of the cell body and nucleus. (2) As soon as the inflammatory reaction has reached a sufficient degree, there is increased vessel dilatation with serous effusion, infiltration of cells and immigration of leukocytes until the structure is lost in a mass of infiltration. [T. M. T.]

NEW YORK MEDICAL JOURNAL.

April 18, 1903.

1. The Therapeutic Value of the Röntgen Rays in the Treatment of Pseudoleukemia. N. SENN.
2. A Plea for the Nonhospital or Office Treatment of Diseases of the Rectum and Anus. SAMUEL G. GANT.
3. The Practical Uses of Hypnotic Suggestion. WILLIAM LEE HOWARD.
4. The Work Performed by the Diagnosis Laboratory of the Department of Health in Connection with Ehrlich's Diazo Reaction During 1902. J. S. BILLINGS, JR.
5. The Treatment of Some of the Surgical Complications in Typhoid Fever. JOHN F. ERDMANN.
6. Is the Cognomen, "Chemical Physiology," Scientific? A Study of Vital Processes. JOSEPH CLEMENTS.

1.—Senn has found the Röntgen rays of decided therapeutic value in the **treatment of pseudoleukemia.** Two patients, far advanced in this disease, were recently treated by the author with the X-rays, and very satisfactory results were obtained. A medium vacuum tube was employed, and exposures were made daily for the first 10 days; various affected glands being subjected to the rays for one minute only. After 34 applications of the X-rays all the enlarged glands had almost entirely disappeared, and the general condition of the patient was much improved; when discharged no glands were palpable. The blood in this patient, however, did not show any characteristic changes. The second patient showed universal enlargement of the lymphatic glands. The blood examination revealed a well-marked anemia and a leukocytosis of 208,000, the increase being most marked in the lymphocytes (78.75%). This patient was also treated with the X-rays, and after 15 exposures he developed slight toxemia, and the treatment, therefore, was discontinued. However, the general condition of the patient was much improved, and all palpable glands were diminished in size, the number of leukocytes being reduced to 76,000. The treatment was again renewed and progressive improvement continued, the patient being discharged practically cured. [P. B. B.]

2.—Gant makes a plea for the **nonhospital or office treatment of diseases of the rectum** and anus. The writer believes that many patients suffering with various rectal ailments could be successfully treated in the office. The diseases that the author treats successfully in office practice are: External or internal hemorrhoids, polypus, fistula, fissure, ulceration, colpoproctitis and other conditions. Cancer, of course, should not be operated upon unless located low down, when it may be divided and the wound packed under local anesthesia. A detailed description of the treatment for the various conditions named is given, but his does not differ materially from that universally employed. [P. B. B.]

3.—Howard discusses the practical **uses of hypnotic suggestion.** He speaks of hypnotism in general, and says the physician who uses hypnotic suggestion must have knowledge of technical conditions and understand hypnotic phenomena clinically. Furthermore, the method being largely a psychical one, his education, therefore, should extend to a comprehensive study of physiological psychology. The author thinks that the practical use of hypnotic suggestion is limited, but yet, in certain conditions, it is invaluable. The author finds it of the greatest help in making a diagnosis between functional and organic brain disturbances. The pains of locomotor ataxia, rheumatism and neuralgia can also be temporarily relieved. The protean disease, hysteria, the author finds is a good field for the practice of hypnotic suggestion. He has also found it of decided value in the treatment of insomnia. The troublesome phenomena that ofttimes accompany organic lesions, he says, can also be relieved. [P. B. B.]

4.—Billings contributes a paper outlining the work performed by the **diagnosis laboratory of the department of health, in connection with Ehrlich's diazo reaction during 1902.** The writer describes the manner of performing the test and mentions the solutions used. The conclusions he has reached are: (1) The examination of the urine in cases of suspected typhoid is of value provided its limitations are recognized; (2) the reaction is more constantly present in typhoid than the Widal reaction; (3) in the majority of instances the diazo reaction is present 48 hours earlier than the Widal reaction; (4) it disappears early, and, therefore, results obtained later than the second week are of little value; (5) doubtful reactions have slight significance. [P. B. B.]

5.—Some of the surgical **complications of typhoid fever demanding treatment,** according to Erdmann, are: (1) Abscess of the liver, subphrenic abscess, perforation of the gall-bladder, cholecystitis and intestinal perforation. The writer says that the surgical treatment of these conditions would be an easy matter if we were able to say that this or that condition existed. The borderline, symptomatically considered, between subphrenic abscess and hepatic abscess is too closely drawn to make a diagnosis without some exploratory measure. Abscess of the liver, of course, demands incision. The route to be taken will depend upon its location. If the transpleural or transdiaphragmatic operations are performed, the pleura must be guarded by suture or gauze packing. The treatment in perforation of the gall-bladder should be cholecystectomy, if the patient's condition will permit the operation. Intestinal perforation demands immediate operation, and the most advantageous time Erdmann believes to be from 4 to 8 hours after the occurrence of rupture. [P. B. B.]

6.—Clements contributes a paper: **Is the cognomen chemical physiology scientific?** A study of vital processes. This paper is interesting but too detailed to be fully abstracted. He argues, however, that the term chemical physiology is a misnomer. Physiology, he says, in which chemistry is largely operative, is originated and dominated by a special force resident in the protoplasm of cells of the organism in which the phenomena obtain. Physiology is a vital phenomenon, not merely a chemical. Chemistry, the author claims, plays a secondary part. Chemical physiology, therefore, would be the correct nomer of a phenomenon essentially and distinctively chemical in nature, chemical force being its operating and dominating principle. [P. B. B.]

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

April 16, 1903. (Vol. CXLVIII, No. 16.)

1. A Case of Interscapulothoracic Amputation for Sarcoma of the Brachial Plexus. F. B. LUND.
2. The Diagnosis of Gonorrheal Urethritis.
   ALFRED H. GOULD.
3. Cream for the Home Modification of Milk.
   CHARLES W. TOWNSEND.
4. Variation in the Composition of Human Milk.
   PHILIP P. SHARPLESS and EUGENE A. DARLING.

1.—Lund gives the indications for operation: (1) In the majority of cases of malignant disease of the humerus, and especially any that involve the tissues about the shoulder joint. (2) In malignant disease of the axilla involving the axillary vein, which cannot be ligated without sacrificing the arm. (3) In extensive injuries, usually machinery accidents to the arm, shoulder and scapula, in which the scapula has been partially or completely torn away, or the skin over the deltoid has been destroyed so that it is not available for covering of an ordinary shoulder joint amputation. [T. M. T.]

2.—Gould has found that gonococci may be present in the urethra before there is any pus formation, and the recognition of their presence at this time allows measures to be taken to head off an acute urethritis. These bacteria can be found at this stage by an examination of urine by means of coverglass preparations and by cultures. The two conditions that make the demonstration of gonococci in very chronic cases very difficult are: (1) The organism may not be present in the discharge at the time of examination. (2) The gleet may be due to some other bacterium. [T. M. T.]

3.—Townsend's conclusions are: (1) Centrifugal cream is probably less desirable for infant feeding than gravity cream. As obtained from dealers it is often far from accurate in percentage. (2) Siphonage for obtaining gravity cream is an accurate method, but one requiring considerable skill to perform accurately and safely. (3) Dipping off the top milk is an accurate and safe method if reasonable care is used. (4) The method for obtaining gravity cream by pouring off the top is very accurate and extremely simple. There is no instrument to be bought and kept clean. By this method it is possible to obtain cream of any desired percentage up to 26%. (5) To ensure perfect accuracy, frequent examinations with the Babcock machine are required; but for practical purposes this is not necessary, provided the mixed milk from a well-regulated dairy is obtained. [T. M. T.]

4.—Sharpless and Darling's conclusions from the analysis of human milk are as follows: (1) The average composition of human milk, as shown by 117 analyses, is: Fat, 2.91; sugar, 7.01; proteids, 1.34; ash, 0.13; total solids, 11.39; solids not fat, 8.48. (2) There are wide variations from the average in milk from the same individual at different times. (3) There are marked variations in the average composition of milk from different individuals. (4) The average composition of human milk does not vary to any marked extent at different periods of lactation. (5) During the first lactation the milk, on the average, is weaker in fat and proteids, but stronger in sugar than in subsequent lactations. These differences may or may not be due to age. [T. M. T.]

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

April 18, 1903.

1. Treatment of Puerperal Fever. C. S. BACON.
2. Flatfoot in Infants and Children.
   ROBERT W. LOVETT.
3. The Present Position of Gall-stone Surgery.
   WILLIAM WOTKYNS SEYMOUR.
4. Ethyl Bromide in Adenotomy and Tonsillotomy.
   A. R. SOLENBERGER.
5. Rupture of Gall-Bladder or Duct From Vomiting, With Rupture of Appendix in Same Patients; Two Cases of Appendicitis; Acute Yellow Atrophy of the Liver.
   W. W. GRANT.
6. Accessory Pancreas. G. F. RUEDIGER.
7. Poisoned Wounds by the Implements of Warfare.
   LOUIS A. LAGARDE.
8. Transplantation of Omentum in the Operative Treatment of Intestinal Defects; A Clinical and Experimental Contribution. EMANUEL J. SENN.
9. Fibrosis of the Larynx and Trachea.
   RALPH W. SEISS.
10. The Pathology That Remains After the Nonsurgical Treatment of Peritonitis. H. D. NILES.
11. The Use of a Mydriatic After the Age of Forty-five.
   HORACE M. STARKEY.
12. Prescription Repetition and Its Dangers.
   WILLIAM C. ALPERS.

6.—Ruediger contributes an article on **accessory pancreas.** He describes the following pancreatic anomalies: (1) Abnormalities of the excretory duct; (2) pancreas annulare; (3) partial separation of the head from the body of the gland, the 2 portions being connected by the duct of Wirsung—the pancreas divisum; (4) accessory pancreatic lobule springing from the head of the main gland and extending along the anterior wall of the duodenum—the pancreas minus; and (5) accessory pancreas. After reviewing the literature of cases of accessory pancreas he records a case of recent occurrence, in which the accessory pancreatic mass was located in the wall of the jejunum, about 15 cm. from the duodenojejunal junction. It protruded about 5 mm. above the general level of the serosa; its base measured 17 by 22 mm. Microscopical examination showed that this mass was composed of pancreatic tissue imbedded in the center of the nodule where they formed a large duct which apparently emptied into the intestine. [F. J. K.]

10.—Niles discusses **the pathology that remains after the nonsurgical treatment of peritonitis.** He holds that 95% of all the survivors of the nonsurgical treatment of peritonitis are left with adhesions within the peritoneal cavity and with infection without the peritoneal cavity. His own experience leads him to believe that about 40% of individuals who survive the nonsurgical treatment of peritonitis suffer from recurrent attacks of acute or subacute peritonitis, and not less than 1% from mechanical obstruction of the bowels. He points out that in the remaining 59% of these patients there remains disease of the abdomen responsible for much distress and many deaths which were formerly attributed to other causes or which we were unable to trace to any well-defined cause. He thinks that the profession is just beginning to comprehend the remote results that may follow the nonsurgical treatment of peritonitis and that no itemized list of symptoms produced by this infection and these adhesions will serve to give us an adequate idea of this pathology and its ill consequences. [F. J. K.]

11.—Abstract will appear when article is concluded.

12.—Alpers points out **the dangers connected with prescription repetition.** He points out that in the state of New York there exists a law which prohibits the renewal of prescriptions containing a certain dose of opium, morphine or any similar preparation more than twice. He contends that it should be the object of the American Medical Association to institute a propaganda for the restriction of prescription renewal and thereby remove the danger that lies in such practices for the physician, the pharmacist and the public. [F. J. K.]

AMERICAN MEDICINE.

April 18, 1903.

1. A Plea for More Radical Operations in Malignant Disease of the Testicle.
   CHARLES GREENE CUMSTON, and WILLIAM A. ROLFE.
2. Bacteriological Studies of the Skin and Throat in Cases of Scarlatina. GEORGE H. WEAVER.
3. The Treatment of Insomnia. HUBERT RICHARDSON.
4. The Ocular Complications of Variola.
   BURTON K. CHANCE.
5. Angioneurotic Purpura. RAYMOND WALLACE.
6. Limitations of the Dimethylamidoazobenzol Test for Free HCl in the Stomach Contents.
   WILBUR F. SKILLMAN.

1.—Cumston and Rolfe make a **plea for more radical operation in malignant disease of the testicle** and emphasize the necessity for the removal of all the lymphatic glands, whether enlarged or not, which are connected with the lymphatics coming from the diseased organ. They report the case of a man, aged 52 years, who was operated upon for malignant disease of the testicle over 20 months ago, and up to date there has been no recurrence. The technique of their method is given. [T. L. C.]

2.—Weaver presents the following conclusions as a result of the **bacteriological studies of the skin and throat in cases of scarlatina:** (1) The bacteria obtained from cultures from the skin, epidermal scales and the surface of the tonsil in cases of scarlatina are the same as those found in the same locations in health, and not one of them is constantly present except the streptococcus in the throat. (2) Because the numerous cocci which grow in such cultures, and which appear in groups of 2 and 4 or bunches of the same under the microscope, it is impossible to identify them, except by a complete study in pure culture. (2) Cultures made by inexperienced persons or by those who do not fully appreciate the importance of avoiding the tongue, are especially apt to contain large diplococci or sarcinæ. (4) The streptococcus is present upon the tonsil of scarlatinal patients in enormous numbers in almost all cases. [T. L. C.]

3.—Richardson, discussing the **treatment of insomnia,** states that there are many mechanical and physical methods which, with attention to details, will obviate the use of hypnotics or at least enable the patient to sleep with much smaller doses than are usually given. According to Kraepelin, if the patient does not sleep after the intelligent application of these methods, it is improbable for him to sleep with drugs. The necessity of keeping the bed-chamber thoroughly ventilated and at a temperature of about 60°, is emphasized. The room should be dark, and it is a point of importance that the mental activity of the patient should be reduced for at least one or 2 hours before going to bed. In cases of neurasthenia in which loss of arterial tone is a marked condition, and in anemic conditions in which the mean and maximum pressure is low and there is a reversed postural change of pressure, small doses of digitalis will often be sufficient to produce natural and quiet sleep; opium in small doses sometimes acts well in these cases. [T. L. C.]

4.—Chance has studied the **ocular complications of variola.** In the analysis of over 2,000 cases at the **Municipal Hospital,** of Philadelphia, there were 36 instances of corneal ulcer, 17 of which were followed by perforation with destruction of one eyeball, and 15 were cured without perforation. Of these cases 15 were in unvaccinated individuals, in 6 others vaccinated at periods more or less remote the lesions were less severe. Pustulation of the lid borders was a common affection; conjunctivitis was frequently found with it and was also found independently; especially to be noted were 10 cases of iritis. [T. L. C.]

6.—Skillman presents the following conclusions as to the use of **dimethylamidoazobenzol as an indicator for free hydrochloric acid:** (1) If the test for lactic acid is positive, Günzburg's or Boas' reagents, or some other method, should be used to determine whether our dimethyl reaction is due to lactic acid or to free HCl. (2) If the stomach is normal both as to size and position and the peristaltic function is unimpaired, then dimethyl will give fairly accurate results. (3) If the size and position of the stomach are not normal (gastrectasis or gastroptosis), or if the peristaltic function is delayed, then Günzburg's or Boas' tests should be first performed to test positively whether free HCl is causing the reaction, or whether it is caused by organic acids, before proceeding to titration with dimethyl. [T. L. C.]

DEUTSCHE MEDICINISCHE WOCHENSCHRIFT.

February 26, 1903.

1. A Further Contribution Concerning the Cause and the Specific Treatment of Hay Fever. DUNBAR.
2. On the Physiology of the Nutrition of the Fetus. J. VEIT.
3. A Contribution to the Conservative Operative Treatment of Old Puerperal Inversion of the Uterus. SCHULZE-VELLINGHAUSEN.
4. The Diagnostic Value of the Old Tuberculin in Parenchymatous Keratitis. (Conclusion). ENSLIN.
5. Concerning Myosarcoma of the Stomach. (Conclusion). MOSER.

1.—Dunbar believes that the **active substance producing hay fever is to be found in the starch granules of the pollen of grasses.** This is probably an albuminous substance. He has used this pollen experimentally with patients that were subject to hay fever, and was able to produce an attack resembling hay fever. He then **used it to produce an antitoxin,** and reports that he was **able to overcome the effects of the pollen toxin by the use of the antitoxin.** He thinks that it will be quite possible to make an antitoxin for hay fever that will control that affection. [D. L. E.]

2.—Veit gives a brief résumé of his work concerning the nutrition of the fetus, which is based upon the Ehrlich lateral-chain theory. He says that a **syncytiolysin is produced as a side-chain of the erythrocytes, and a hemolysin as a side-chain of the chorionic epithelium.** In this way the hemoglobin dissolved from the erythrocytes, and the protoplasm from the syncytium, into the serum; and they are carried by the mother's blood to the fetus. The substances that are precipitated from the mother's serum by the serum of the fetus do not reach the circulation of the fetus, and the substances that are precipitated from the serum of the fetus by the mother's blood do not gain entrance into the mother's circulation. **The nutrition of the fetus, therefore, is carried out by taking up the albumins dissolved in the serum of the mother.** If much chorionic epithelium is destroyed, this produces hemolysis, and sometimes hemoglobinemia, albuminuria and hemoglobinuria. If syncytiolysis is imperfect, as in eclampsia, one finds unchanged syncytial emboli in the arteries of the lung. The author's complete article will appear later. [D. L. E.]

3.—The vaginal method of operation is particularly recommended because it is well borne by most patients. Whether the anterior or the posterior wall of the uterus is to be divided is largely determined by the individual case. Of 11 cases in which the operation was carried out and in which the position of the uterus was observed some time afterward, that organ was found retroverted in 5; and, in the case herein reported, the uterus showed some retroversion 3 months after the operation. This tendency to retroversion should be overcome, if possible. [D. L. E.]

4.—In reporting a series of cases in which tuberculin was used for diagnostic purposes, Enslin states that **in hereditary syphilis without any signs of tuberculosis he has never observed the slightest reaction;** while, on the contrary, when tuberculosis was present, whether syphilis was also present or not, the reaction has always occurred. A local reaction cannot be expected in these cases, and a **general reaction is the only one that is of value.** [D. L. E.]

5.—The details of the 3 cases are given at length, and the literature concerning myosarcoma of the stomach is reviewed. The anatomical appearances of these growths were quite similar to those described by Virchow as myoma of the stomach. These 3 cases confirm the statement made by Virchow that this **growth usually occurs on the lesser curvature.** One was on the lesser curvature and two were near it. They had developed from the muscular layer in the direction of the serous. Two of them were in direct connection with the mother-tissue; the third had become pedunculated. The last mentioned was the smallest. This fact is in conformity with the rule that, **the closer the connection of the tumor with the muscular layer, the larger it will become.** In none of the patients were there multiple tumors. In 2 the tumor grew very rapidly, contrary to the usual experience with myomata. This was certainly due to the fact that **the tumors were not myomata, but myosarcomata.** There are only 4 other cases of myosarcoma reported in the literature. The smallest of the tumors had produced numerous metastases. In one of the patients there had been ulceration of the stomach 2 years before, and it was thought probable that this had given rise to the growth. In the symptomatology there is nothing characteristic. The treatment can only be operative. **Operation was successful in producing a cure** in one of the cases reported. [D. L. E.]

March 5, 1903.

1. A Method of Investigating the Living Bone Marrow of Animals; Also Concerning the Motility of the Myelocytes. A. WOLFF.
2. Investigations Concerning Human Sweat. L. BRIEGER and G. DISSELHORST.
3. The Chemistry of Oxygen-Chloroform Narcosis. ROTH.
4. A Suggestion for Completely Reforming the Clothing of Infants Upon a Hygienic Basis. K. ASSMUS.
5. A Contribution Concerning the Presence of the Tetanus Bacillus in the Organism of Man Beyond the Point of Infection. O. HOHLBECK.
6. Concerning the Antitoxin Treatment of Tetanus. VON SCHUCKMANN.

1.—Wolff's method of investigating living bone marrow is with aseptic precautions, to expose the tibia or the femur, separate the periosteum and **bore one or 2 small holes in the bone.** The opening can then be enlarged if necessary. With a platinum öse, a **little bone marrow may now be removed for investigation.** The hole is closed with a few drops of paraffin, and the skin-wound is sutured. The operation may be done in 2 or 3 minutes. The only objection to this method is that there is often a good deal of bleeding, so that blood may become mixed with the bone marrow. This can be overcome by **applying an Esmarch bandage to the limb before doing the operation,** which is then entirely bloodless. In rabbits, the author has found that the **amphophile myelocytes show movements** similar to those that have been observed in the myelocytes of the circulating blood in leukemia, and in the lymphocytes in lymphatic leukemia, though more active. The medium used was Deetjen's agar-mixture, which Wolff strongly recommends. He insists upon the importance of investigating the bone-marrow in infections. [D. L. E.]

2.—The investigation of the sweat showed that **its osmotic tension is chiefly due to its varying content of sodium chloride.** The freezing-point was regularly lower, and the sodium chloride content regularly higher, in the first portions of the sweat. The authors found that in nephritics and neurasthenics the sodium chlodide was increased; these, however, were patients that naturally sweated little. **Sodium chloride certainly plays some part in regulating the osmotic tension of the sweat;** but the other components varied, and further study of them would probably be of importance from a therapeutic standpoint. The average lowering of the freezing-point was to very nearly that of blood. [D. L. E.]

4.—Assmus discusses the various suggestions that have been made concerning the clothing of infants, particularly diapers. He then **describes a new system of under-clothing that he has devised.** This consists of 2 parts; the outer and the inner. The outer part is composed of a jacket and a sack attached to it; the inner, of what the author terms a diaper-drawers, with a pocket for the introduction of an absorbent substance. **The absorbent substance that he has found most satisfactory is turf-moss, which will absorb relatively large amounts of fluid, and which also has the property of destroying odors.** Assmus states that with this system of clothing it is necessary to change a baby, if the bowels are normal, only twice a day, and that, for the lower classes particularly, this system would be especially valuable. He also finds that with the absorptive material that he uses there is less tendency to the occurrence of intertrigo, etc., than when diapers are used. He considers the system much more hygienic than the old one. [D. L. E.]

5.—Literature apparently affords only 3 instances of the demonstration of the presence of tetanus bacilli in the blood of human subjects. A case is reported occurring in a man of 18, who developed tetanus 8 days after an injury. Five days before death **a blood culture was taken, and bacilli were found in the culture.** These had the characteristics of tetanus bacilli. There were also, however, cocci present. Injecting these cultures into rabbits produced the results usual after injecting tetanus bacilli. There apparently was, then, a mixed infection; but Hohlbeck believes that the organisms were true tetanus bacilli, and that they were present in the general circulation. He thinks, therefore, that **one must reckon with the possibility that tetanus bacilli may invade the organism in certain circumstances.** Probably mixed infection plays a certain rôle in such conditions. [D. L. E.]

6.—A patient, admitted to the hospital with his feet much cut and swollen, developed, on November 3, 10 days afterward, the outspoken signs of tetanus. An injection of antitoxin was at once given him, and the injection was repeated the next day. He died, however, on the day of the last injection. A brief study of the cases of tetanus in which antitoxin has been used is then given, and Schuckmann particularly refers to the fact that, **according to the clinical results so far obtained, the earlier the injections, the more fatal were the cases.** This he considers undoubtedly due to the fact that in the rapidly progressing, grave cases, injections have been carried out very early. **The patients died, not because of the injections, but because their tetanus infection was a very severe one.** In the milder cases, injections are longer postponed; and these patients have a definite tendency to gět well in any case. The author believes that tetanus antitoxin in its present form is not likely to have any notable effect upon the course of tetanus. [D. L. E.]

MUENCHENER MEDICINISCHE WOCHENSCHRIFT.

February 24, 1903. (No. 8.)

1. Contribution to the Knowledge of the Prognosis of Atrophic Cirrhosis of the Liver. H. EHRET.
2. The Wiener Method of Increasing the Virulence of the Danysz Bacillus. M. OETTINGER.
3. Microscopical Technique. T. SATO, of Japan.
4. Tuberculosis of the Larynx During Pregnancy. LOEHNBERG.
5. A Rare Tumor of the Nasal Mucous Membranes. HAMM.
6. Clinical Contribution to the Knowledge of Crossed Hemianesthesia. VON RAD.
7. Tænia Cucumerina in a Child. W. ASAM.
8. A Simple Electric Illumination Apparatus for the Investigation of the Eye. VON AMMON.
9. The Education and Treatment of Defective Children at Home and in School. H. PFISTER.

1.—Ehret believes, in order that we should be able to declare a case of **atrophic cirrhosis of the liver cured,** that it is necessary that there should be a completely developed clinical picture, retrogression of all the manifestations, persistence of the absence of symptoms for at least 20 years and the determination of the anatomical picture by autopsy. He reports the following case: A man of 72 years had had a liver disease 30 years before, during which he had been frequently tapped for ascites, had had jaundice, and had been forbidden alcoholic liquors. In the course of 2 years he gradually improved, and he finally recovered. When he came under Ehret's observation he was emaciated, the spleen was enlarged, and there were some pareses of the vocal cords. He finally died of hypostatic pneumonia. At the autopsy a carcinoma of the esophagus was found that had perforated into the trachea. In addition, the liver was small, showing the typical picture of granular atrophy, and the spleen was enlarged and firmly adherent. Histologically the condition of the liver corresponded with that of atrophic cirrhosis. The case appears to be one in which practical recovery took place, that is to say, the symptoms of congestion of the portal circulation subsided. It indicates that our efforts in treatment should be directed at securing a latency of the process. [J. S.]

2.—Oettinger has tested **Wiener's method of increasing the virulence of the Danysz bacillus** by cultivating it in the egg according to Hüppe's method. He found that a very moderate increase of virulence occurred, so that altogether of 8 rats 2 died, one of these 34 days after being fed. It appears that, if the cultures are left for a considerable time in the egg, their virulence is slightly increased. Of 8 rats in which the cultures were left for varying periods of time, up to 21 days, 4 died when fed on cultures 14 or more days old. Of 26 rats, fed on cultures of various periods, it was found that the greater proportion died if the cultures were old. Finally Oettinger tried feeding the rats with the egg in which the cultures had been made, and he secured 12 deaths in 20 rats. He used 3 different specimens of the bacillus, all of which varied from the usual form because they did not liquefy gelatine. He tested the serum reaction and found that it was positive in high dilutions. [J. S.]

3.—Sato suggests that, in using artificial illumination for microscopical investigations, excellent results will be obtained if colored glass—or, what is probably better and cheaper, colored gelatine paper—be placed between the mirror and the stage. He also uses colorless gelatine paper in place of coverglasses. [J. S.]

4.—Löhnberg reports 5 cases of **laryngeal tuberculosis complicated with pregnancy.** In the first patient there was an increase in the activity of the progress during pregnancy, and both mother and child died shortly after delivery. In the second the mother died of tuberculosis, but the child lived and was apparently very healthy. The third patient and the child both died, the mother of the pulmonary condition. In the fourth both mother and child died, and in the fifth the mother died, but the child lived in poor health. Pregnancy appears to have a very injurious affect, therefore, upon laryngeal tuberculosis, and upon the pulmonary form. [J. S.]

5.—Hamm reports the case of a tumor situated upon the anterior end of the left inferior turbinate bone, about as large as a cherry. This was so hard that it could not be removed by wire. In 8 days it was necessary to remove a recurrence. The surface of the wound was then cauterized with zinc chloride, and no recurrence has taken place. Microscopically the tumor was found to be a **lymphangioma.** This appears to be exceedingly rare in the nose. [J. S.]

6.—A man of 37 years was suddenly attacked with vomiting followed by vertigo and an uncomfortable feeling in the head. It was then found that he had diminution of sensation for all 3 qualities of the right half of the face, and in both left extremities. The gait was staggering, especially on the left side. A few days later there was evidently slight paresis of the left side of the face. Sensation was restored in the face, but was still impaired in the left arm and leg. The gait was still staggering, and Romberg's symptom was present. The patient gradually improved. The probable diagnosis was hemorrhage into the tegmentum on the right side. [J. S.]

7.—Asam reports a case of **tænia cucumerina** which he found in a child, 19 months old. After the administration of 2 gr. of extract of male fern 3 bodies were discharged, one of them containing the head. He prefers kamala in small doses to male fern or pelleterin for children. [J. S.]

8.—Von Ammon describes an ingenious method for utilizing the electric light for the investigation with the ophthalmoscope. The apparatus consists essentially of a large cylinder with a small hole in the side, over which can be placed either a yellow glass or a planoconvex lens or both. [J. S.]

9.—Pfister, in continuation of his article upon the education of defectives, discusses the methods of instruction and laments the frequent inefficiency of the teachers. The proportion of children who inherit a neuropathic tendency —in other words, are more or less degenerate—is very large; apparently about 50%. The modern methods of education in Germany are entirely too severe for such children. These children should be carefully kept from all sources of excitement, such as theaters, excessive reading, balls, etc. They should be denied alcohol, which is a poison for all children, and especially for this class. As they grow up they should be instructed to avoid occupations that lead to much anxiety, and particularly they should not unite in marriage with other defectives or with drinkers. [J. S.]

MEDICINSKOIE OBOZRENIE.

Vol. LVIII, No. 22, 1902.

1. On the Casuistics of the Nervous Forms of Grippe. V. F. VELJAMOVITCH.
2. On the Operative Treatment of Cancer of the Pylorus. F. ROSE.
3. A Case of Compound Gunshot Fracture of the Thigh Resulting in Complete Recovery. D. A. BLAGOVJESCHENSKY.

1.—Veljamovitch discusses the **pleomorphism of grippe** as it occurs in different individuals, rendering the diagnosis at times extremely difficult. He explains this by the varying virulence of the influenza toxins, the varying site of the *locus minoris resistentiæ* in the body and the varying individual predisposition of the patient. In his experience with grippe, covering a period of 10 years, he found the following symptoms to be of pathognomonic significance: (1) The intermittent character of the temperature, and (2) the slowing of the pulse as soon as the fever subsides, the pulse-rate coming down to 40-60 beats per minute. While pure nervous forms of grippe have been described, they are not very frequent. However, he reports a case of that form which came under his observation. The case was that of a young soldier, who was admitted to the hospital with an acute urethritis. After the first irrigation the patient suddenly developed loss of consciousness, delirium, somnolence, elevation of temperature of an intermittent character, clonic convulsions in the extremities and gastric disturbances. A diagnosis of grippe was established by exclusion as well as upon the existence at the time of an epidemic of grippe, the presence of an intermittent fever without any enlargement of the spleen and the characteristic slowing of the pulse. The patient recovered. In conclusion, the author calls attention to the fact that inasmuch as the influenza toxin affects the vagi and the cardiac ganglia, the administration of digitalis in grippe is prejudicial. He uses, instead, caffeine, strychnine or strophanthus. [A. R.]

2.—Rose discusses the **operative treatment of cancer of the pylorus,** both as a radical cure in early, and a palliative in advanced, cases. He reviews the literature on the subject and reports 2 cases of cancer of the pylorus. In one, the patient was only 29 years old and had been suffering for a considerable period from gastric disturbances presenting symptoms of gastric ulcer. The absence of hydrochloric acid and the presence of lactic acid in the gastric contents and loss of motility suggested the existence of cancer. The patient was operated upon. After the operation he gained in weight and made a good recovery. The gastric juice, upon recovery, was found to contain free hydrochloric acid and to be free from lactic acid. Gastric motility was also improved. In the second case, gastroenterostomy was performed on a man, 34 years old, who was suffering from an inoperable cancer of the pylorus. Free hydrochloric acid was absent and lactic acid present. The operation was resorted to as a palliative measure with the result that a year after the operation the patient was still doing well, although he commenced to show indications of decline. [A. R.]

3.—Blagovjeschensky reports a case of a compound **gunshot fracture of the thigh** which resulted in recovery notwithstanding the advent of suppuration and the accompanying severe constitutional disturbances. [A. R.]

VIRCHOW'S ARCHIV.

Band 170. Heft I.

1. Rudolf Virchow and His Archiv.
2. A Contribution to the Knowledge of the Structure and Growth of Lymphangioma. C. SICK.
3. The Histological Changes in the Human and Animal Nervous System Produced by Lightning or Strong Electric Currents. S. JELLINEK.
4. The Amount of Fat in Renal Infarcts, with a Contribution to the Knowledge of Fat Degeneration. F. FISCHLER.
5. Twin Births in Their Hereditary (?) Relation. A Historical Criticism of False Statements. H. NAEGELI-AKERBLOM.
6. Brief Communications. (I) The Arrangements of the Elastic Fibers in the Uterus. Reply to Herrn N. Iwanoff. L. PICK. (II) The Effect of Section of the Nerves upon the Thyroid Gland. J. KATZENSTEIN.

1.—See editorial, **Philadelphia Medical Journal,** March 28, 1903, page 537.

2.—Sick makes a further report upon some cases of **abdominal cysts** and endeavors, as a result of a careful study of the material in the Pathological Institute at Berne, to determine the nature and mode of growth of the **lymph-cysts of the hepatogastric omentum.** He reports 4 cases, and gives the following conclusions: In the first patient the congenital tumor, which arose from the retroperitoneal tissue and consisting of lymphvessels and tissues, was really a lymphangioma with cyst formation. There was proliferation of connective tissue and the formation of new lymphchannels in the youngest part of it. The origin of the tumor can best be explained by assuming that a connective tissue germinal layer became free during embryonal life. The small cysts found in the hepatogastric ligament could not certainly be considered as lymphangiomata chiefly because distinct regressive changes were not found. The aberration of lymphvessels, such as it is necessary to assume in support of this theory, has frequently been found in animals, but not yet in man. [J. S.]

3.—Jellinek has performed a number of experiments upon animals in order to determine **the effect of electricity upon the nervous system.** The current in passing through the body probably affects chiefly the most delicate parts. If these are severely affected, the resulting functional changes will be severe; if slightly affected, only transient results will ensue. Altogether he was able to study the nervous systems of 3 men and 6 animals which had been killed by electricity. Two of the men had been killed suddenly by lightning; the other had been killed by a very powerful current. Two rabbits and 2 frogs were exposed to streams not powerful enough to kill, but which produced permanent functional disturbances. An examination of the central nervous system showed capillary hemorrhages and quite distinct changes in the cells of the central nervous system. The capillaries were also distended, which Jellinek regards as an indication of vasomotor paralysis. In some subjects intracellular hemorrhages were observed. In mice, which are particularly susceptible to electric currents, the changes were usually limited to the gray matter and the surrounding portions of the central nervous system. In the rabbits and frogs upon which experiments were made with nonlethal currents, a certain degree of paresis of the posterior extremities was produced. In these animals focal and systematic degenerations were found in the spinal cord, involving the lateral and posterior columns. Jellinek concludes that to the hitherto known noxious influences that produce pathological changes in the central nervous system we must add electricity. Death by electricity is not due to shock, nor to asphyxiation, but can be explained by the pathological anatomical changes found in the tissues.
[J. S.]

4.—After having determined that the normal kidney of the rabbit is practically fat-free, Fischler has artificially produced infarctions in order to determine **in what manner the fat frequently found in infarcts is produced.** He concludes that not only in cases of fat infiltration but also in cases of fatty degeneration the appearance of fat depends upon the action of some factor lying outside the cell, and not the peculiar condition of the cell itself. Under these conditions the occurrence of fat is dependent upon the existence of an imperfect circulation, either of the blood or lymph, because it only occurs in those situations in which this defective circulation exists. Dead cells do not undergo fatty degeneration, therefore, the vitality of the cells is essential to this process. It does not appear, however, that there is sufficient evidence that the fat arises from the albumin. Probably the presence of fat is due to a great variety of circumstances. [J. S.]

5.—See editorial, **Philadelphia Medical Journal,** March 21, 1903, page 493.

6.—Pick states that Iwanoff, in criticizing his article upon the arrangement of the elastic fibers in the uterus, misquoted his statements regarding these fibers, and evidently failed to understand his opinions. (2) Katzenstein calls attention to the fact that in his experiments upon the effect of nerve section upon the thyroid gland, he distinguished two forms of degeneration: One partial and the other complete. In the latter the cells had lost their arrangement and the colloid substance had almost disappeared.
[J. S.]

ARCHIV FUER VERDAUUNGSKRANKHEITEN.

Band VIII., Heft 6.

1. The Determination of Pepsin by Mett's Method and the Necessity of Modifying This Method When it is Used for Clinical Purposes.
E. NIRENSTEIN and A. SCHIFF.
2. The Determination of Pepsin by Modern Methods, and the Demonstration of Relative Digestive Insufficiency.
FRANZ A. R. JUNG.
3. The Internal Treatment of Gall-Stone Disease.
LUDWIG VON ALDOR.
4. A Round-Worm in the Bile-Passages, With the Clinical Picture of Hepatic Colic. W. N. CLEMM.
5. Some Remarks Concerning Bismutose.
HANS ELSNER.
6. A Reply to Schorlemmer's Article on "Investigations Concerning the Extent of the Albumin-Digesting Power of the Gastric Contents, etc."
ALBERT HAMMERSCHLAG.
7. A Reply to Hammerschlag's Discussion of My Article on the "Extent of the Albumin-Digesting Power of the Gastric Contents, etc."
RUDOLF SCHORLEMMER.

1.—Nirenstein and Schiff contribute an extensive article concerning Mett's Method for quantitatively determining pepsin digestion in the gastric contents. They claim to have clearly **demonstrated that there are present in the gastric contents substances that very largely modify pepsin digestion and make the results obtained entirely incorrect.** They find that, when the gastric contents are sufficiently diluted, these interfering substances no longer have any influence. They, therefore, advise that, when Mett's method is used, **it should be employed with the modification that the stomach contents are first diluted 16 times.** When the method is used in this form, they consider the results to be entirely correct. [D. L. E.]

2.—Jung describes some improvements that he has made in carrying out Mett's method for determining pepsin digestion in the stomach. He finds that 5.5 to 5.7 mm. is the normal value for pepsin digestion by this method. Subacidity and anacidity give lower values, but the **reduction of pepsinogen does not run parallel with the reduction of HCl.** As a rule, hyperacidity is associated with high values for pepsin, but this is not always the case. The normal figure obtained for pepsin is about 60 with Hammerschlag's method. The values obtained by this method in subacidity and in anacidity are much closer to those found in hyperacidity than they are by Mett's method; but in Hammerschlag's method there is no direct ratio to be seen between the reduction of HCl and the amount of pepsin in subacidity. In 75% of cases the 2 methods give similar results; but in some cases the results obtained by these 2 methods are decidedly different. The author considers that the results by Mett's method are the more satisfactory. He believes that a study of the amount of HCl in the gastric contents should be combined with the study of the amount of pepsin, as **relative changes in the pepsin may frequently be found.** He contributes a series of cases as examples of the clinical usefulness of such studies. [D. L. E.]

3.—Von Aldor insists upon the importance of inflammatory conditions along the bile-passages in producing cholelithiasis and in continuing this condition. The radical treatment of gall-stone disease is, therefore, not identical with mere removal of the calculi but means the **cure of the inflammatory process. The calculi are not the most important indications of the patient's condition.** In those patients in whom the disease is evidenced only by indefinite subjective symptoms or by pure objective examination, the author orders the patients to remain in bed until the symptoms of any inflammatory trouble have disappeared. From 7 A. M. until 12 M., and from 2 P. M. until 7 P. M. he has cataplasms, as hot as the patients can stand, applied over the region of the gall-bladder. The patients are required to drink warm Carlsbad water every two hours. They should not be starved but should receive a mixed diet, all irritating substances, spices in particular, being forbidden. This treatment should be continued until all objective signs, including tenderness and spontaneous pain, have disappeared. The author has by this means succeeded in producing cure in 4 or 5 weeks in almost all cases without the recurrence of any attacks or colic. [D. L. E.]

4.—The patient who is the subject of this article was 27 years old and had had **repeated attacks of what seemed to be gall-stone colic.** He was treated by various methods, until suddenly, with a most severe attack of pain, he **vomited a young round-worm,** 10 cm. long. **The pain then ceased entirely,** and he had no return of suggestive symptoms. The tenderness over the liver region that had previously been present gradually disappeared. Clemm believes that the worm had caused the attacks, and that it had lodged in the bile-passages. He refers to similar cases discovered in the literature. [D. L. E.]

5.—Bismutose, a combination of bismuth and albumin, has been tested in practice in a series of cases by other observers. Elsner now reports his results, particularly **in hyperacidity and in gastric ulcer.** It is claimed that bismutose is superior to bismuth, as it has a more marked acid-combining power, is more insoluble and has a more active astringent effect; also, because it is more insoluble, it is less likely to have a toxic action. When given, in cases of hyperacity, with the test-meal, it was found that, compared with the effect of the same meal given without bismutose, **the result was to reduce the acidity;** this was naturally to be expected. One disadvantage of bismutose is that it is much more constipating than bismuth. [D. L. E.]

6. and 7.—Hammerschlag replies in detail to Schorlemmer's criticism of his method, previously abstracted from the same journal, and criticises Schorlemmer's work in return. Schorlemmer responds. [D. L. E.]

NEUROLOGISCHES CENTRALBLATT.

February 1, 1903. (No. 3.)

1. The Isthmostriatic Tract (or Bulbostriatic Tract) of Pigeons. A. WALLENBERG.
2. A Most Remarkable Complication of a Case of Migraine. L. HOEFLMAYR.
3. Contribution to the Knowledge of a Disseminated Encephalomyelitis. F. BAUCKE.
4. Ear Reflex. W. ALTER.

1.—Wallenberg has failed to obtain degeneration of the **isthmostriatic tract** in a pigeon by unilateral disturbance of the cerebellum even if the central nuclei of the cerebellum were involved. Division of the sensory root of the fifth rib nerve between the bulb and Gasserian ganglion caused degeneration of the dorsal and lateral part of the nuclei. By means of Marchi's method it was then possible to follow the tract as far as the anterior portion of the base of the brain. In the frontal lobe this tract of fibers breaks up into 4 groups which terminate in various parts. The terminal sensory trigeminal nucleus, therefore, is in direct union with the basis of the frontal lobe without the intermediary of the thalamus. According to Edinger this is also true in reptiles. [J. S.]

2.—Hoeflmayr reports the case of a woman, 57 years of age, who had ceased menstruation 6 months before observation. Her father and sister had suffered from migraine. One of her 3 children was hysteric and had headache. She herself had had **migraine** for 40 years. Previous to this especial attack she had had anxiety and trouble for a long time, and had taken considerable doses of migranin every day. The attack commenced with pulling up of one eye and one eyeball, hemianopia, collapse, vomiting and the fear of death. She lay semiconscious for several days without sleeping, and repeating frequently the syllables "noten" and "nieten." There was obstinate constipation and agrypnia. Noise apparently caused pain. On the fifth day the face assumed an expression of pain, and there was twitching of the arms and legs. Sleep was obtained by bromides, and during sleep she was quiet. After this she improved but occasionally had hallucinations, and there was some disturbance of the field of vision which lasted for some weeks. She finally recovered after a convalescence that resembled that of typhoid fever. The symptoms were those of ophthalmic migraine and toxin infection. As no other source of intoxication could be found, it is possible that the coprostasis was the exciting agent. This accords with the theory of Moebius. [J. S.]

3.—A school teacher, 39 years of age, had had an inflammation of the meninges in childhood. She had also suffered from rachitis, chlorosis and influenza. She was intelligent, but at the age of 27 had some psychical disturbance. At the age of 34 she began to have pain in the left leg. For 3 years she was able to walk with a limp, but then was obliged to cease. She began to increase in weight; her leg finally became adducted and rotated inward, but the contractures disappeared completely during chloroform narcosis. A plaster-cast was applied, but this caused extensive decubitus which increased after the cast was removed. A month later the patient had paralysis of the bladder and rectum and loss of sensation in the lower half of the body. Later she had paresis of the right arm, and finally she died. There was an internal hemorrhagic pachymeningitis and numerous minute white points. Microscopically numerous areas of degeneration in various stages were found throughout the entire nervous system. (The paper is still unfinished). [J. S.]

4.—In a patient with **paretic dementia,** left-side facial paralysis and status epilepticus striking upon the right ascending ramus of the inferior maxilla caused a vigorous contraction of the attollens aurem with elevation of the external ear. This reflex was also obtained by sensory irritation, such as pricking with a needle in the same area. It, therefore, represents a **skin reflex.** An examination of patients with paretic dementia showed that it was present in 19.4%. It often differs considerably on the two sides. Alter suspects that it is the pathological appearance of a reflex that has disappeared in human beings. [J. S.]

February 16, 1903. (No. 4.)

1. A Contribution to the Casuistry of the Relation of Hair in Cases of Mental Disease. W. HEINICKE.
2. The Biology and the Functional Activity of the Central Nervous Cells. P. KRONTHAL.
3. Contribution to the Knowledge of Disseminated Encephalomyelitis. F. BAUCKE.

1.—Heinicke reports the case of a girl, 21 years of age, who suffered from dementia præcox. The symptoms had developed slowly for about 8 years. From time to time she had periods of excitement, in one of which it was observed that the pupils were greatly dilated, and that an almost **silver-white band of hair** passed from the forehead to the right parietal bone. The hair remained of this color for about 4 days and then rapidly returned to its normal condition. Three days later a second attack occurred, and on the first day this coloration of the same band of hair was observed, occurring one or 2 hours before the symptoms developed. During the height of the attack it became almost silver white, and the following day it began to return to its normal blonde color which it reached about the evening. The method by which this change of color occurred apparently was the filling of the sheath with air. This would be observed by microscopical examination, and, when the air was expelled by water, the hair returned to its normal color. The manner in which the air accumulates cannot be determined. Possibly it is due to a contraction of the cells of the sheath giving rise to larger spaces. [J. S.]

2.—Kronthal discusses the **nature of the nerve-cells.** He argues that when the cortex is stimulated it is not certain whether stimulation affects the cells, because the terminations of the nerve fibers are also found in that region. It is curious that the nerve-cell is not affected by changes in diet as are the other cells of the body. It has been shown that even in starvation the central nervous system loses less than any other part of the body. In fact, it is possible that the nervous tissue does not lose at all in this process, but merely the connective tissue that it contains. This suggests the possibility that the nerve-cells do not require nourishment, but if we assume that it is an organism we must assume that it requires nourishment. Some substances, such as the narcotics, do act upon it as they do upon other forms of protoplasm. Ganglion cells in the process of division have never been observed. It has been assumed that certain invisible latent ganglion cells exist as a reserve, but Kronthal shows that this is impossible. Even in the embryo the cells which have become specialized for nervous tissue do not divide. He occasionally has observed in the nerve cells a second cell. This is really a leukocyte. Kronthal believes, as a result of these investigations and reflections, that the nerve cell is not actually an organism; that it is not actually alive, that it contains scattered through its protoplasm its nucleus, and that it really represents an agglutination of leukocytes. The functions of the nervous system are accomplished by the neurofibrils which unite the various nerve fibers. It remains to be seen what is the function of these so-called nerve cells. He believes that they obliterate the insulation of the nerve elements. He, therefore, regards the process of the central nervous system as accomplished by the fibrils. The nerve cells merely promote a transmission of energy from one fiber to another at certain definite points and in certain definite ways. [J. S.]

3.—Bauche continues his description of a case of **disseminated encephalomyelitis**, describing the degenerative changes in the neuroglia and in the cells. There was also a secondary gliosis which was manifested particularly by the presence of large cells with oval nuclei. He believes that the case was one of dementia præcox, in which the pathological process probably started as a result of the infection produced by the gangrenous bedsore. [J. S.]

ARCHIV FUER KLINISCHE CHIRURGIE.

1903. (Volume 69, Nos. 1 and 2.)

[Festschrift dedicated to Professor von Esmarch in honor of his eightieth birthday.]

1. The Radical Treatment of Intestinal Invagination. VON EISELSBERG.
2. Surgical Experience With Intestinal Cancer. J. VON MIKULICZ.
3. Osteotomy and Osteoclasis for Rachitic Deformities of the Lower Extremity. T. KOELLIKER.
4. The Etiology and Treatment of Talipes Cavus. L. HEUSNER.
5. The Mechanism of Flatfoot. F. PETERSEN.
6. The Treatment of Osseous Cavities in the Tibia. F. VON MANGOLDT.
7. Arthrodesis of Paralytic Movable Shoulder Joint. OSCAR VULPIUS.
8. The Etiology and Treatment of Spondylitic Paralyses. H. TILLMANNS.
9. The Treatment of Fractures of the Thigh. RUDOLF KLAPP.
10. Histological Investigations Upon the Bones in Tabetic Arthropathy. BARTH.
11. The Technique of Secondary Incision of the Breast. CARL BECK.
12. Symmetrical Disease of the Lachrymal and Salivary Glands. HEINRICH HAECKEL.
13. Malignant Pustule. RICHARD HOELSCHER.
14. The Treatment of Septic Disease by Intravenous Injections of Collargol. CREDE.
15. Penetrating Gunshot Wound of the Breast and Abdomen. MOMBURG.
16. Clinical Experiences. H. FISCHER.
17. The Development of Carcinoma. DE RUYTER.
18. Rhinoplasty With the Arm. H. WAITZ.
19. Drainage of the Hepatic Duct. ERICH BERGER.
20. The Diagnostic Significance of Leukocytosis in Appendicitis. WASSERMANN.
21. Clinical Cummunications. H. SCHUESSLER.
22. The Surgical Significance of Elasticity of the Muscles. TILMANN.
23. Winkelmann's Hydrocele Operation. F. KLAUSSNER.
24. The Present Status of Pharyngeal, Laryngeal and Tracheal Surgery. GLUCK.
25. Syphilitic Inflammation of Striped Muscle. OTTO BUSSE.
26. Communication From Private Practice. HOEFTMANN.
27. The Symptoms of Arteriovenous Aneurysm. ERNST VON BERGMANN.
28. Primary Acute Typhlitis. JORDAN.
29. Adrenalin in Local Anesthesia. H. BRAUN.
30. Larghi's Arched Incision in Luxation of the Hip. A. VON BERGMANN.
31. Operation in Acute Infectious Cholecystitis. W. KOERTE.

1.—Out of 13 cases of **intestinal invagination**, von Eiselberg performed **total resection** in 12, the intestine being peeled out in the other case. The invagination was chronic in 7, subacute in 3 and acute in 3 cases. In 10 cases it was ileocolic in position. In 6 of the cases the very long mesentery was probably the congenital cause of the condition. Of the 12 cases of total resection, one patient died because operation was too late, 2 died in from 3 to 6 weeks, from inanition, and 9 recovered. [M. O.]

2.—See **Philadelphia Medical Journal**, May 3, 1902, page 787.

3.—Kölliker has performed **osteotomy** in 47 cases and **osteoclasis** in 13, **for correcting rachitic deformities in the lower extremities.** Of these 36 were for genu valgum and 24 for curvature in the lower third of the leg. Osteotomy of the tibia was performed 26 times, of the femur 6 times. The operative technique is given. [M. O.]

4.—Heusner reports a case of **talipes cavus** in a man of 19, which was treated by forcible redressement. An especially prepared shoe was then worn. The condition was probably congenital. [M. O.]

5.—Petersen fully describes **the mechanism of flat foot,** which he considers anatomically as pes flexus, pronatus, reflexus, abductus. His exposition is illustrated by many diagrams. [M. O.]

6.—By Röntgen photographs it is now possible to determine **the nature of osseous cavities.** Besides, skin transplantation aids final recovery, and with care the original condition can be almost wholly restored by operation. Twelve cases of cavities in the tibia of different origin are reported, showing the value of these statements. Von Mangoldt advises **flaps of periosteum and skin for closing** these cavities. [M. O.]

7.—Vulpius reports 6 cases of **movable shoulder joint, treated by arthrodesis.** Ankylosis followed, the best functional result possible. The operation is only indicated after the paralysis has existed a year at least. His technique is described with explanatory photographs. [M. O.]

8.—Tillmanns reports 11 cases of **spondylitic paralysis, due to pressure from tubercular spondylitis.** He uses orthopedic apparatus, extension, etc., first, though the results of such treatment vary. When they fail, operation is indicated, either finding and opening the abscess only, or performing laminectomy. In his 11 cases, all children, **laminectomy** was done, with 10 successful results, which, however, were not permanent, only 3 of the patients being still alive, the others having died of some intercurrent disease inside of 3 years after operation. [M. O.]

9.—Klapp describes his method of applying **extension and elevation in the treatment of fractures of the femur.** This is well illustrated by diagrams. [M. O.]

10.—Barth reports a case of **tabetic arthropathy** in a man of 44, whose foot was amputated. Histological examination of the bony changes in the foot showed the presence of much connective tissue, with a rarefication of the osseous tissue from enlargement of the Haversian canals, with the collection of fatty tissue in these dilated canals. [M. O.]

11.—Beck reviews the operative treatment of empyema, giving the technique and principles of exploratory incision in different parts of the chest, what he calls the **"secondary chest incision."** [M. O.]

12.—Haeckel reports the case-history of a man of 21, in whom, 3 months after a crushing accident affecting the kidney region and spine, **symmetrical swellings of the tear ducts, lachrymal glands, auricular and submaxillary salivary glands developed,** without any changes in the blood.

With a severe enteritis these swellings decreased, but returned again later, with widespread circumscribed infiltration of the skin, as in pseudoleukemia. Death followed 4 months after the swellings first appeared. The cause was probably some infection, not the accident. The diagnosis remains uncertain. [M. O.]

13.—Hölscher reports 7 cases of **malignant pustule, anthrax.** The discoloration, edema, necrosis and pain are all characteristic. There was in all cases a suspicious history of anthrax, and in 5 cases a hair follicle was first affected. In 4 cases typical anthrax bacilli were cultivated. but in 2 cases the only microbes found were staphylococci. [M. O.]

14.—Credé advises **intravenous injections of collargol** in the treatment of septic disease, gangrene, general sepsis, puerperal fever, pyemia, septic osteomyelitis, polyarthritis, endocarditis, peritonitis, erysipelas, anthrax and advanced phthisis, in some of which cases he has had good results. [M. O.]

15.—Momburg reports the history of **a man** who was **shot through the breast and abdomen.** Death followed 4 hours after exploratory operation, in which the heart was examined, but no injury was found. Yet the **heart was probably injured.** Momburg describes the Rotter method of laying free the heart when the left pleura is injured, Watten's method when the right pleura is injured. [M. O.]

16.—Fischer reports **several strange cases,** cysticercus racemosus cerebri causing sudden death; cases of purulent peritonitis due to perforation of septic duodenal ulcer, gastric ulcer, gonorrhea, osteomyelitis and nephritis; fistula of the auricle and keloid following piercing the ear for earrings; supernumerary auricle; and numerous lipomata situated in odd localities and of great size, with photographs. [M. O.]

17.—De Ruyter reports several cases of **cancer of the breast** in which some long standing irritation seemed to be the cause. In 5 patients he removed cancer from breasts showing cystic inflammation besides. The axillary glands showed only inflammatory changes. Four cases of paramammary cancer are then described. [M. O.]

18.—Waitz reports the history of 2 patients upon whom he performed **rhinoplasty, using the skin from the arm.** Photographs illustrate his operation and results. [M. O.]

19.—After reviewing the history, literature, indications, technique and after-treatment of **drainage of the hepatic duct,** Berger gives the histories of 26 cases. Drainage of the hepatic duct is to be preferred to choledochotomy with sutures, since it causes recovery of cholangitis, makes possible the removal of stones left behind, and is more rapidly performed. It is indicated in cholangitis and for removing stones from both bile and hepatic ducts. It should be done with every choledochotomy and in cholelithiasis, even when no stones are found. It is contra-indicated in acute closure of the bile-duct and acute purulent cholecystitis, since the infection might spread. The operation is not dangerous and the results are good. [M. O.]

20.—Wassermann reports a case of long standing **appendicitis, diagnosticated by continued leukocytosis,** during the whole 2 weeks of illness. This was the only sign left at the time of operation. Recovery followed. Wassermann reviews the literature, showing the value of leukocytosis in the diagnosis of appendicitis. [M. O.]

21.—Schüssler reports 2 cases, a **pulsating diverticulum of the esophagus** in a man of 74, and an **intracapsular resection of the hip** with the chisel, with recovery. [M. O.]

22.—From a series of experiments Tilmann found that weights held by the finger muscles 20 seconds had no lasting effect upon their elasticity, but when held a minute or longer, it took 6 minutes for the fingers to return to rest. Muscle contractility prevents the development of permanent injuries from weight disturbances. Long-continued stretching muscles causes atrophy. As long as a paralyzed muscle contains contractile material, improvement may occur. Thus, too, scoliosis follows traumatic injuries of the muscles of one side. Many deformities are explained in this way. [M. O.]

23.—Klaussner reports 35 observations of **Winkelmann's hydrocele operations,** performed during 4 years. Twenty-two of these were cured, 3 are too recent to be sure, and particulars are unknown in 9 cases. A recurrence occurred in one case. [M. O.]

24.—Gluck describes resection of the trachea, laryngectomy, pharyngoplasty, thyreotomy, laryngofissure and other large, radical operations, with several case-histories. Many were devised for removing cancer and its metastases. [M. O.]

25.—Busse's investigations show that **the striped muscle,** as well as the connective tissue, **undergoes inflammatory changes in syphilis,** as is well shown in 2 cases, one of myocarditis, the other myositis, of syphilitic origin. [M. O.]

26.—Hoeftmann describes **apparatus** made of sodium silicate and leather, both of which have proved of service in orthopedic cases. [M. O.]

27.—Von Bergmann reports a case of **traumatic arteriovenous aneurysm** above the knee, in the popliteal space, following a gunshot wound. Afer suturing the vessels, the aneurysm was removed, circulation improved and recovery slowly followed. Only 8 of the reported cases underwent operation, and but 5 recovered. [M. O.]

28.—There is no doubt that acute typhlitis may occur. Jordan reports such a case in a girl aged 10 years, a true **acute stercoral typhlitis,** with recovery after operation. Perforation did not occur, nor was the appendix affected. [M. O.]

29.—After describing a long series of experiments, upon the influence of vitality of the tissues on the local and general toxic effects of drugs used in local anesthesia, Braun discusses the significance of **adrenalin in local anesthesia, especially its value in combination with cocaine.** He has never observed any bad secondary effects. Many cases are described in which the mixture was employed. [M. O.]

30.—Von Bergmann reports a case of **congenital dislocation of the hip** in which he laid open the hip joint **by the Larghi arched incision,** in an adult, replacing the femur with successful result. [M. O.]

31.—Of 18 patients with **acute infectious cholecystitis operated upon in the acute stage,** 15 recovered and 3 died. Cystectomy is to be preferred to cystostomy. Körte advises operating in the acute stage always. [M. O.]

ANNALS OF SURGERY.

February, 1903.

1. An Operation for the Radical Cure of Aneurysm Based Upon Arteriorrhaphy. RUDOLPH MATAS.
2. Cases Illustrating Some Important Points in the Diagnosis and Treatment of Abdominal Contusions Associated with Visceral Injuries. GEORGE EMERSON BREWER.
3. Intraperitoneal Rupture of the Bladder. DANIEL FISKE JONES.
4. A Case of Pancreatic Cyst, With Remarks on the Pathology and Surgical Treatment. CHARLES GREENE CUMSTON.
5. The Question of Surgical Intervention in Cases of Injuries to the Spine. JOHN CHADWICK OLIVER.
6. Posttyphoidal Infection of Ribs. J. SHELTON HORSLEY.

1.—See **Philadelphia Medical Journal,** Vol. 10, No. 1, p. 17.

2.—Brewer reports 9 cases of **abdominal contusion** associated with visceral injury. The most important early symptoms are pain, tenderness and muscular rigidity; of these muscular rigidity is the most reliable and sometimes the only sign present. Shock, even after the occurrence of the severest lesions, is often surprisingly slight. The plan of treating extensive fractures of the spleen and liver by pressure and packing with gauze rather than by splenectomy is advised; it is equally effective in arresting hemorrhage, is accompanied with less shock, saves time and preserves an important organ. Success depends upon speed of operation, perfection of technique and the ability to administer at any moment the most vigorous stimulation. [F. T. S.]

2.—Jones reports 2 cases of **intraperitoneal rupture of the urinary bladder,** in which operation was followed by recovery. The principal symptoms in both cases were: Sudden severe pain in the lower part of the abdomen, which remained constantly present; persistent desire to urinate with inability to do so; a preference for erect or partially erect position of the body rather than the recumbent; general tenderness with little or no rigidity; a small quantity of bloody urine in the bladder and dulness in the flanks. As an aid to diagnosis the injection of air or water into the bladder is not recommended, as the former contributes to shock, and the latter may cause peritonitis. [F. T. S.]

4.—Cumston reports a case of **pancreatic cyst** which followed a blow upon the upper abdomen, and which he successfully treated by incision and drainage. [F. T. S.]

5.—Oliver discusses the question of **surgical interference in cases of injury to the spine.** He believes that, when all of the functions of the spinal cord are abolished in the area below the seat of injury, the patient should not be submitted to operation. Early operation is indicated in those cases in which there is some evidence of active function in the spinal cord. In all other cases decision should be postponed for 2 or 3 days. [F. T. S.]

6.—Horsley reports a case of **posttyphoidal infection of the ribs** and collects 48 cases from the literature. [F. T. S.]

AMERICAN JOURNAL OF OBSTETRICS.

February, 1903.

1. Transabdominal, Intra- and Extraperitoneal Ureterovesical Grafting. DOUGAL BISSELL.
2. Intra-Abdominal but Retroperitoneal Shortening and Anterior Fixation of the Round Ligaments for Posterior Uterine Displacements. Being a Preliminary Report Concerning the Technique, with Report of Cases. F. F. SIMPSON.
3. Intramural Extraperitoneal Anchorage of the Round Ligament for Posterior Displacement of the Uterus. GEORGE H. NOBLE.
4. Two Hysterectomies With Fibroma Uteri. Sudden Death Twenty-four Days After Operation in One. Typhoid Fever with Recovery in the Other. H. GRAD.
5. Sarcoma of the Uterine Parenchyma. HENRY D. BEYEA.
6. Hepatoptosis. IRVING MILLER.
7. Strangulated Hernia in Children Under One Year. Report of a Case in a Patient, Twenty-seven Days of Age; Herniotomy; Recovery. W. B. REID.
8. Management of Difficult Breech Presentations. H. J. STACEY.
9. Thoughts on the Prophylaxis of Puerperal Eclampsia. DOUGLAS H. STEWART.

1.—Bissell reports a case of **ureterovesical grafting** operated upon successfully by him by the **transabdominal method.** He gives a short review of some of the representative transabdominal methods as performed by Witzel, Kelly, Baldy, Boldt and Calderini. He does not believe with Pozzi and MacMonagle that the repair of these fistulæ should always be first attempted through the vagina. In view of the great difficulty of dissecting out the ureter and implanting it into the bladder by this route and because of the close proximity of the uterine artery, he believes that the transabdominal method is the preferable one. This route permits the surgeon under all circumstances to discover the extent of the ureteral injury, and enables him to prepare the ureter to the best advantage for grafting, and also allows a selecting of the most desirable point on the bladder wall for implantation. He gives the technique of ureteral implantation in full. [W. A. N. D.]

2.—Simpson describes an operation for **shortening and anterior fixation of the round ligaments through an intra-abdominal but retroperitoneal incision.** This operation he proposes for posterior uterine displacement. He calls attention to the large variety of operations that have been devised to take the place of ventrofixation. His method is as follows. A median abdominal incision, one-and-a-half to three inches long, is made just above the symphysis. Adhesions to the uterus are freed, and lesions of the adnexa are given such attention as they require; the wound being held wide open by a retractor, the round ligament is grasped by delicate forceps, one inch from the uterine attachment, and drawn up to the surface of the wound. A silk suture is passed through the ligament at this point in such a way as to encircle about ¾ of its circumference, and to include about an inch of that structure in its grasp. The needle is taken off, and both ends of the suture are passed through the eye of a carrier. The peritoneum is incised just below and in front of the round ligament. The carrier is then inserted and passed directly forward immediately beneath the peritoneum of the vesico-uterine pouch, to a point on the anterior abdominal wall just above Poupart's ligament and an inch and a half to the side of the median line, where it again emerges. Both ends of the suture are grasped, and the carrier is withdrawn. One end of the suture is now threaded on a sharply curved needle which is passed into the abdominal wall so as to grasp peritoneum, muscle and fascia, again emerging into the cavity. When the 2 ends of the suture are tied, the ligament is drawn into and along the subperitoneal channel made by the carrier. The same is done upon the other side. The peritoneum is thus folded loosely over the round ligaments, and when the sutures are tied the uterus is held in normal anteversion. [W. A. N. D.]

3.—Noble now uses the transverse in place of the vertical incision in his **intramural extraperitoneal implantation of the round ligaments.** He claims the following advantages in this operation: There is but one incision. The weak distal end of the ligament is not depended upon for support. The operation is applicable to a greater number of cases than other round ligament operations. It does not interfere with the normal mobility of the uterus or its physiological development during pregnancy. It causes no vesical irritation or dysuria if the ligaments are not imbedded too low down, and no dragging if they are not brought through too high up. The anchorage is superior in permanency to all peritoneal attachments. The uterine portion of the ligment will not stretch. There are no sutures in the fundus to irritate the uterus. The womb is not anteverted but is suspended in the axis of the pelvic brim. The fixation is extraperitoneal. The operation does not predispose to hernia. The round ligament does not pull open the internal abdominal ring by a constant strain on its inner border. There is no encroaching upon the bladder, nor interference with its distension. Abnormal shortening of the ligaments does not occur. The peritoneal investment is not drawn into the abnormal wall thereby inviting hernia. [W. A. N. D.]

4.—Grad reports 2 **hysterectomies for fibroid uteri.** One of the patients developed typhoid fever but recovered, and the other died suddenly 24 days after operation. The sudden death was probably due to thrombosis and **embolism** of the pulmonary artery. [W. A. N. D.]

5.—Beyea remarks that **sarcomata arising in, and developing from, the myometrium** as a multinodular new growth of the uterus is a very rare condition. Not more than 70 or 80 such cases are to be found described in the literature. Their histogenesis is undetermined. Some investigators believe that they arise through a metaplasia of the muscle-cells of a pre-existing myoma of the uterus and are myosarcomata; others, that they arise in the connective tissue cells of such a tumor; and again others, that they are primary sarcomata of the myometrium. Beyea believes that the first theory is most frequently the correct one. He reports a case of the growth. [W.A.N.D.]

6.—Miller has encountered an exaggerated case of **hepatoptosis.** The liver was so movable that it could be passed in any direction, and it was possible even to deliver the organ through the abdominal incision. [W. A. N. D.]

7.—Reid remarks that **strangulated hernia in a child under one year of age** is extremely rare. He reports the youngest patient operated upon by an American surgeon since the aseptic era. The patient was 27 days old. The author has been able to find 105 cases of herniotomy for strangulation in which the patient was under one year. This number is small when compared with the number of children who suffer from congenital hernia. The patient made an uninterrupted recovery. [W. A. N. D.]

8.—Stacey deals with **the management of difficult but not impossible breech presentation in labor.** Such a labor is most often seen in the primipara when the child is disproportionately large, because the mother's pelvis is slightly contracted or the child oversized; it may occur in any case in which the cervix, vagina and perineum are unyielding, and in multiparæ when the child is disproportionately large. He permits the labor to progress naturally until the breech is down nearly to the perineum; that is, until the child is sitting on the rectovaginal septum. The patient is then placed in the dorsal position with the knees drawn up and profoundly anesthetized. The vulvar orifice is carefully dilated with the sterile hand, which is closed and the fist slowly withdrawn. If necessary the other hand may be introduced beside the closed fist, the process continued until the perineum is well stretched, and the vagina dilated up to the presenting breech. The child is gently pushed upward and both feet brought down. The cervix is thoroughly dilated and also the lower uterine segment until they are practically paralyzed. Upon the completeness of the dilatation depends the success of this method. The child is then slowly drawn down, the head being kept well flexed and pressure being made externally. [W. A. N. D.]

9.—Stewart states that **deficient elimination** is such a certain forerunner of **puerperal eclampsia** that some of the French authors almost justify the use of a new name—stercoremia gravidarum—for this disease. The prophylaxis of this condition consists simply in restored elimination. The skin should be stimulated by means of the hot pack, irrigation of the bowels should be insisted upon, and frequent small venesections may be performed. The pulse softens after venesection, not because of less bloodpressure from the abstraction of blood, but because of the withdrawal of toxins which irritate the nerve-centers. [W. A. N. D.]

REVUE DE CHIRURGIE.

January, 1903. (23me. Année, No. 1.)

1. The Pathogenesis of Intermittent Hydronephrosis. P. BAZY.
2. Acute Occlusion of the Small Intestine. L. CAHIER.
3. A Case of Costal Hydatid Cyst. H. GERAUD and R. MIGNOT.
4. The Surgical Treatment of Salpingitis. ACQUAVIVA and ROUX DE BRIGNOLES.
5. Multiple Osseous Myelomata with Albumosuria. P. VIGNARD and L. GALLAVARDIN.

1.—Bazy reports in detail the case-history of 3 patients with **intermittent hydronephrosis**, in all of whom he performed **ureteropyeloneostomy** with recovery following. A description of 73 post mortem findings is given, with drawings of the conditions in each case. Bazy concludes that the cause of intermittent hydronephrosis is a congenital predisposition of the pelvis of the kidney and of the ureter to hydronephrosis. The pelvis of the kidney is large, horizontal, crooked or like a bag-pipe in shape, and there are strictures, folds or torsions at the upper end of the ureter. The condition may follow movable kidney, but is more often the cause of a floating kidney. The condition may become permanent, either from the beginning or after frequent recurrence, due to adhesions which prevent the evacuation of the cyst contents. [M. O.]

2.—The diagnosis between **acute occlusion of the small intestine** and appendicitis may be extremely difficult. Cahier reports the cases of 3 patients in whom the symptoms pointed distinctly to acute appendicitis, yet laparotomy disclosed acute occlusion of the small intestine. On this account he advises early laparotomy in all cases in which acute obstruction of the small intestine is suspected. Even if somewhat delayed, it is the one means of bringing about recovery. [M. O.]

3.—Géraud and Mignot report a rare case of **hydatid cyst affecting the seventh rib,** in a man of 54 years. The operation showed the presence of the hydatid vesicles, and the tumor had not yet caused suppuration. The vesicles examined were covered by osseous tissue. Operation was followed by rapid recovery, without recurrence. Another case is quoted, in which the breast was affected. Hydatid cysts of the bones are exceedingly rare, since the parasite hardly ever reaches osseous tissue. Histologically there was osteitis with periostitis. The symptoms were few, the course rapid and the prognosis good, because surgical treatment was undertaken early. The diagnosis was not made before operation. [M. O.]

4.—Will be abstracted when concluded.

5.—Vignard and Gallavardin report a case of **multiple myelomata of the bones,** with albumosuria, in a man of 56. The first symptoms were continued severe thoracic pains, with rapid cachexia, slight fever and coma. Death occurred in 6 weeks. The autopsy disclosed myelomata of all the ribs and of the sternum. Four similar cases are quoted from the literature. They conclude that primary myelomata of the bones form tumors which develop at the same time, with one primary and many secondary growths. They are most commonly observed on the sternum, ribs, vertebræ and skull, the bones containing red marrow. There are no visceral metastases. Histologically these tumors are not all alike, some being endotheliomata, others lymphadenomata and others myelomata. The myelomata are multiple, latent, accompanied with rapid cachexia, fever, coma, albumosuria and death. Future researches will show whether albumosuria is specific of the myelomata. [M. O.]

February, 1903. (23me. Année, No. 2.)

1. Mucoid Cysts of the Neck, Remains of the Thyroglossal Duct. P. FREDET and M. CHEVASSU.
2. The Surgical Treatment of Salpingitis. ACQUAVIVA and ROUX DE BRIGNOLES.
3. Pharyngotomy for Removing Tumors of the Buccal Portion of the Pharynx. L. V. ORLOW.
4. A Case of Longitudinal Arteriovenous Anastomosis for Obliterating Arteritis. GALLOIS and PINATELLE.

1.—Fredet and Chevassu report 2 cases of **mucoid cysts formed from the remains of the thyroglossal duct** (canal of His). One was subhyoid, the other thyrohyoid in position; both contained ciliated cylindrical epithelium. Recovery followed removal in both patients, a man of 40 and a woman of 42. The histological findings and the literature are then described. [M. O.]

2.—Will be abstracted when concluded.

3.—After describing the various methods for performing **pharyngotomy**, with full details, diagrams, and photographs, Orlow describes his method, a modification of the Krönlein method. It permits access to the pharynx and laryngeal aperture, leaves the branches of the maxillary artery intact, makes few scars, and allows opening the affected glands freely. Preliminary tracheotomy, ligation of the carotids, partial resection of the inferior maxilla, removal of the tumor, and the after-treatment are all described. Ten case-histories are reported. Recurrence is, unfortunately, common. [M. O.]

4.—Gallois and Pinatelle report a case of **longitudinal arteriovenous anastomosis for obliterating arteritis affecting the left crural artery,** after amputation of the right hip for gangrene. Yet gangrene followed, with death in 6 weeks. The autopsy findings are described minutely. Such attempts are rare. Yet 2 patients did recover after arteriovenous anastomosis of the crural vein and artery. The technique is fully given. [M. O.]

March, 1903. (23me. Année, No. 3.)

1. Ligation of Veins, Especially the Inferior Vena Cava. G. HOUZEL.
2. Osteoplastic Femoropatellar Amputations. J. A. BUSSIERE.
3. A Case of Onychogryphosis. ALEXANDRE.
4. A Case Necessitating Autoplastic Operations and Apparatus. VALLAS and C. MARTIN.
5. Idiopathic Dilatation of the Colon. PIERRE DUVAL.
6. Congenital Defects of the Four Extremities. NICANOR MAGNANINI.
7. The Treatment of Salpingitis. ACQUAVIVA and ROUX DE BRIGNOLES.

1.—Will be abstracted when concluded.

2.—After describing **the Gritti method of amputating the leg above the knee,** using the the patella in the stump, **and the cuneiform method** which resembles the other, Bussière concludes that these operations give excellent results, the patella becoming tightly adherent to the end of the femur, making a splendid stump. A case is reported, with illustrations showing the good result. [M. O.]

3.—Alexandre reports a case of **onychogryphosis** in a woman of 84 years. Only 2 years previously did she notice the shell-like growth of the nail of her big toes. Photographs show the conditions existing. A review of the condition, etiology, symptomatology, etc., is given. [M. O.]

4.—Vallas and Martin report an interesting case in a man of 24, who had been **shot through both inferior and superior maxillary bones. The operations performed and the apparatus employed in their efforts to form a nearly normal buccal cavity** are described in detail, with photographs. The case was very difficult, and the results were good. [M. O.]

5.—Will be abstracted when concluded.

6.—Magnanini reports 2 interesting cases of **symmetrical congenital deformity of the hands and feet**, with photographs. In the first patient, a child of 2, the hands and feet were bifid, the middle finger not having developed, and the other fingers, 2 to either side, were joined up to the terminal phalanges. Radiographs show but 3 metacarpal and 3 metatarsal bones, though one foot contains a rudiment of a fourth. The 3 phalanges of the index finger and the 2 phalanges of the thumb rise from one metacarpal bone. In the feet the big toe is alone, the other 2 toes being joined. The other patient, a man, also had bifid hands, but there was an almost normal middle metacarpal, which, however, ended below the other. His right foot showed a small middle toe, while the left foot was normal. [M. O.]

7.—In a very long article Acquaviva and Roux de Brignoles review the history of **the treatment of salpingitis**, from 1885. The surgeon may perform simple vaginal incision, subperitoneal laparotomy, vaginal hysterectomy, without and with drainage, and both methods of abdominal hysterectomy. The case-histories of 7 patients upon whom simple vaginal incision was done: 4 with subperitoneal laparotomy; 6 with vaginal hysterectomy: 7 with laparotomy with drainage; abdominal, supravaginal hysterectomy in 2 cases, and total abdominal hysterectomy in 6 cases. Full operative details of these various operations are given. [M. O.]

IL POLICLINICO. (SEZIONE CHIRURGICA).

January, 1903.

1. Experiments in Hemostasis in Hepatic Resection. L. BALDASSARI.
2. A Rare Case of Intestinal Occlusion. T. CALABI and L. GAIARDONI.

1.—In a previous series of experiments upon animals, Baldassari sought to obtain hemostasis of the resected liver which would be sufficiently effectual to permit the immediate return of the organ to the abdominal cavity, and permanent suturing of the abdominal wall. To this end he combined two methods of hemostasis, *i. e.*, tamponing and suturing of the liver. As a tampon material he found the wall of a large artery was the most satisfactory, owing to its resistance, elasticity, ease of sterilization and subsequent absorption after healing had taken place. In more recent work, he has supplemented the hemostatic effect of the tampon by keeping it in a solution of gelatine, thus obtaining the coagulating influence of that substance. After resection he applied a gauze tampon saturated with gelatine solution, in order to check the first flow of blood. This was later replaced by the gelatine-soaked section of arterial wall, accurately adjusted to the resected portion and held in place by sutures previously inserted for the closure of the hepatic wound. The abdominal wall was then permanently closed. Recovery was rapid in the animals experimented upon, and, when they were killed some time after the operation, healing was found to be satisfactory, and, after a period of some months, the arterial tissue was found to have been absorbed. [R. L. F.]

2.—Calabi and Gaiardini report a remarkable case of intestinal occlusion due to the penetration of several loops of the small intestine through the superior portion of the bladder. Histological examination of that organ showed a deficiency of muscle tissue in that part of the bladder, and the authors believe this to have caused it to yield under pressure and give rise to intraflexion: thus forming a sac which dipped down into the body of the organ. It is supposed that the intestine prolapsed into the sac thus formed, and that a traumatism or some other cause induced rupture of that part of the bladder wall and consequent penetration of the intestine into the viscus. [R. L. F.]

JOURNAL DES PRATICIENS.

February 21, 1903. (17me. Année, No. 8.)

1. Natural Alkaline Medication. MONTEUUIS.
2. Retained Membranes With Normal Parturition. BUDIN.
3 Infectious Endocarditis. FERNAND WIDAL.

1.—Mineral waters no longer constitute the only **natural alkaline medication**, for we now use fruits and vegetables for their alkalis. Of the farinaceous foods potatoes are to be preferred to bread, especially in lithemia; of the nonfarinaceous vegetables, carrots are excellent, since they furnish large amounts of sodium salts, just as potatoes furnish potassium salts. Monteuuis advises alkaline waters, with farinaceous foods as nourishment, nonfarinaceous foods for furnishing salts, hot drinks and purgatives when necessary, in the treatment of lithemia. [M. O.]

2.—Budin reports several cases in which **retained membranes followed normal delivery**, yet recovery resulted after digital curettement. But often serious results follow. The condition may be prevented by making delivery slow. The treatment is digital curettement with great antiseptic precautions. [M. O.]

3.—Widal reports full case-histories of 2 young women with **endocarditis, infectious** in nature and fatal, with autopsy notes appended. In one the condition followed acute articular rheumatism and angina; in the other, acute pleurisy. The point of entrance of the bacteria in the latter case was unknown. [M. O.]

February 28, 1903. (17me. Année, No. 9.)

1. Pneumonia With Hemiplegia and Cerebral Abscess. LANDRIEUX.
2. Ethyl Chloride in General Anesthesia. BERLIOZ.
3. Compression of the Spine. RAYMOND.
4. Gangrene From Carbolic Acid. LUCAS-CHAMPIONNIERE.

1.—Landrieux reports a case of **pneumonia** in a man of 40, **with hemiplegia and cerebral abscess, death occurring** in 5 days. The autopsy showed pneumococci in the cerebral abscess, a rare condition. The differential diagnosis from meningitis is given in full. [M. O.]

2.—Berlioz describes **ethyl chloride**, its employment **as a general anesthetic**, with details of the technique, commenting upon the absence of danger and the rapidity with which it causes loss of consciousness. [M. O.]

3.—Raymond presented a woman of 37, with both legs paralyzed, showing total loss of sensation, the result of **pressure from a tumor** at the level of the fourth dorsal vertebra. She is to be operated upon, as the condition is still recent. The symptoms and differential diagnosis are given. [M. O.]

4.—Lucas-Championnière advises the use of **glycerinated solutions of carbolic acid**, since alcoholic and watery solutions may cause gangrene. Besides, there is always danger of intoxication from their use. Carbolic acid is the strongest of the antiseptics. [M. O.]

March 7, 1903. (17me. Année, No. 10.)

1. Aneurysm of the Right Sylvian Artery, With Left-Sided Hemiplegia. J. PAWINSKI and Z. ADELT.
2 Cephalhematomata. MAYGRIER.
3 The Treatment of Empyema. FIESSINGER.

1.—Pawinski and Adelt report in detail a case of **hemiplegia** in a woman of 63, who had complained of headache, nausea and general weakness for 3 weeks. She had fever, and left-sided hemiplegia came on gradually, with psychical symptoms. Double pneumonia developed, with death following. Autopsy showed an **aneurysm**, 3x2x2½ cm., **of the right Sylvian artery**. The subject is fully discussed. [M. O.]

2.—Maygrier reports **2 cases of cephalhematomata**, effusion between the bone and the periosteum of the skull, affecting newborn infants upon whom forceps were employed. Maygrier has seen 30 such cases, though they are rather rare. The diagnosis from encephalocele and external contusion is given. The treatment is rest, to allow slow absorption. [M. O.]

3.—Fiessinger reviews **the treatment of empyema**. In some cases exploratory puncture with one or more irrigations is sufficient. In others, thoracotomy must be performed. The technique of both procedures is described. [M. O.]

Original Articles.

PROBLEMS IN SANITATION.

PRESIDENTIAL ADDRESS BEFORE THE AMERICAN PUBLIC HEALTH ASSOCIATION, NEW ORLEANS, DECEMBER 9, 1902.

By HENRY D. HOLTON, A. M., M. D.,
of Brattleboro, Vt.

Members of the American Public Health Association and Friends:

It is with pleasure that on this, the thirtieth, annual meeting I can greet you in this southern clime, redolent with sunshine and the perfume of flowers still blooming in this closing month of the year, in this beautiful Crescent City, celebrated for its commercial activity and distinguished for a hundred years for its generous hospitality to all strangers who come within its gates. Those of us who come from the North, whether from the States or from the Provinces, designated by Kipling as our "Lady of the Snows," bring the warmest appreciation of the beauties so manifest here, and our colleagues from our sister republic of the South will endorse all that can be said of the charms presented by this State, once ruled by the same Spanish sovereign as their own country.

Looking back to 1880, when we last met here, what changes have taken place, how great the progress in sanitation! Then the burden of your presiding officer's address was the "Education of the Public," in order that they might appreciate the needs of communities, States and the nation, and seek to aid rather than hinder the work of health authorities.

The most wonderful progress has been made along all sanitary lines; much of it is the result of the work of this association; then there were only twenty-two States having any recognized health officials; now all the States of the Union, except four, have some form of Public Health Department. Great progress has been made in the registration of vital statistics, although there is still much to be accomplished in this direction. While thirty of our States make a semblance of reporting them, only eleven States have adequate registration laws. In Mexico and the different Provinces of the Dominion of Canada a good system of registration prevails. The association should take measures that will lead to an increased effort being made to induce all States and Countries on this continent to establish a bureau of vital statistics.

For years germs of various kinds were recognized as organisms that gave rise to disease; it was not until 1881, when Koch developed his gelatine method of culture, that bacteriology began to assume leadership. It is by workers in this department that the wonderful advances have been made in our knowledge of the causes of disease, and of the means of prevention. At the time of our meeting here there was only one laboratory in the world in which instruction was given in bacteriology. This was in Copenhagen. Now many of the States and cities of this continent have well-equipped establishments in which constant bacteriological investigation is being prosecuted in the interest of sanitary science. Antitoxin for the prevention and cure of diphtheria has been developed, and its value in decreasing the mortality of this disease cannot be overestimated.

Within these years the discovery of the pathogenic bacteria of the majority of the contagious diseases has given greater precision to diagnosis, has enabled health authorities to make more specific, accurate and, in many instances, less irksome quarantine regulations. It has been definitely determined that we possess various germicidal agents that have a definite value in destroying the various pathogenic organisms. Many communicable diseases the appearance of which in any community was sure to result in terror, panic and enormous sacrifice of life are now controlled by health authorities in so thorough and satisfactory a manner that the death-rate is not perceptibly increased. Communities exhibit the greatest confidence that the health department will take care that the business of the people is not interfered with. It was for members of this body and their associates to discover and announce that the mosquito was the intermediate host which with swift wing bore the parasite of malaria and yellow fever. No more illustrious page in the philanthropic history of the world will ever be written than that made possible by the Sanitary Corps of the United States Army in the late Spanish-American war. Brilliant as were the achievements of the army and navy, it will be written that their victories only made it possible for the American sanitarians with their energy and scientific attainments to clean the capital city of Cuba, which for a century or more had been the focus of pestilence, destroying hundreds of thousands of the human race; always a menace to the commerce of the world, and annually costing this country millions of treasure. Under the leadership of Medical Military General Leonard Wood, our lamented vice-president, Dr. Walter Reed, W. C. Gorgas, M. D., and their associates, not only cleaned and drained the city, but, by following the suggestion made by Dr. Carlos F. Finlay, in 1881, determined by actual experiment that the culex fasciatus is the original carrier of yellow fever. The patriotism of the military as they spring to the defence of their country always deserves and receives the applause of the populace. Their deadly conflict on the battle-field is made easy by martial music, the booming of artillery, the rattle of the infantry fire and the advancing step of comrades. How much more should we recognize the great courage of such devotees of science as Drs. James Carroll and Jesse W. Lazear, who, filled with a great philanthropic love for humanity, calmly, quietly and without the cheers or even the knowledge of the multitude, silently submitted themselves to the test to determine in what way this pestilence was communicated. We are told, "Greater love hath no man than this, that a man lay down his life for his friend." We find that Jesse W. Lazear, fired with, and impelled by. this great love for his fellow-man, did offer his body as a sacrifice upon the altar of scientific investigation, to the end that in the years to come hundreds of thousands might escape this pestilential death. The memory of this heroic example should fill all of us, and future generations, with this inspiring, ennobling love:

> "Two paths lead upward from below,
> And angels wait above
> Who count each burning life-drop's flow,
> Each falling tear of love.
>
> "Though from the Hero's bleeding breast
> Her pulses Freedom drew,
> Though the white lilies in her crest
> Sprang from that scarlet dew—
>
> "While valor's haughty champions wait
> Till all their scars are shown,
> Love walks unchallenged through the gate,
> To sit beside the throne!"

The practical result of all this work and sacrifice has been evidenced this past summer; not a case of yellow fever has originated in the island of Cuba for the past fourteen months, and the quarantine period has been shorter by three months; thousands of lives and millions of treasure have been saved, and a feeling of security has filled the communities of the southern portion of our country.

It becomes my painful duty to announce that the white angel of death has silently entered the circle of our membership and beckoned several of our colleagues over the river to receive the reward of the faithful worker for the uplifting of his fellows.

It is with profound sorrow that we record the death, on November 23 last, at the early age of fifty-one years, of Major Walter Reed, M. D., our first vice-president for the current year. A native of Virginia, he entered the army from that State in 1875 as assistant surgeon. He was a member of the commission to investigate the cause of typhoid fever epidemics in the army during the Spanish-American war. In 1900 he was detailed with Surgeons Carroll, Agramonte and Lazear, with instructions from the Surgeon-General of the Army to "give special attention to the questions relating to the etiology and prevention of yellow fever." The result of their observations and experiments, as given in a paper read before this association at the annual meeting in 1900, was that "the mosquito served as the intermediate host for the parasite of yellow fever." This announcement was received by the profession of the world with especial interest. At the time of his death he was Professor of Bacteriology and Pathology in the Army Medical School and lecturer upon the same subjects in the Medical Department of Columbia College, Washington, D. C. He was a cultivated, genial gentleman, whose death will be mourned by a large circle of personal friends.

Dr. Robert C. Kedzie, an ex-president of this association, died November 7 last, at the age of seventy-nine years. He was for forty years a Professor of Chemistry in the Agricultural College of Michigan. He served as surgeon of the Twelfth Regiment, Michigan Infantry, during the Civil War. He was early in the field as a sanitarian, was a member of the State Board of Health of Michigan, and for several years its president. An acquaintance says of him: "As an agricultural chemist, as Director of the Government Experiment Station, an inspiring lecturer, public speaker and leader of useful thoughts, he was one of the foremost citizens of the State." With a power of achievement that was exceptional, he was the quiet, unobtrusive man who noiselessly did things. Justice, not fame, writes the fitting epitaphs of such characters.

Albert L. Gihon, another ex-president of this association, died November 17, 1901, at the age of sixty-seven years. He entered the navy, in 1855, as assistant surgeon, passed through successive grades to Senior Medical Director. In 1895 he was placed on the retired list, having arrived at the age-limit. He was decorated by the King of Portugal as a Knight of the Military Order of Christ, for services rendered the Portuguese men-of-war and the colony at Dilly, on the island of Timon. He was the author of a text-book on naval hygiene and of numerous essays on sanitary subjects. It is not necessary to speak in detail of the life and character of our departed friend; to know him was to admire his frank, manly ways. Energetic, quick to formulate, free to express his opinion, firm and tenacious in his views, pretenders and time-servers met with no mercy at his hands; courteous and kind, a gentleman, a reliable friend, whose memory will always be cherished.

Thomas J. Turner, A. M., M. D., Ph. D., Medical Director of the U. S. Navy, retired, died just before our last meeting, aged seventy-two years. He entered the navy as assistant surgeon in 1853, passing through all grades to Medical Director, and was retired by age-limit in 1891. He was for a time Secretary of the National Board of Health. He was the author of many important contributions to current literature on sanitary subjects.

Col. John P. Kimball, M. D., of New York, a member since 1892, entered the military service as Assistant Surgeon of the 121st New York Volunteer Infantry in 1865, joined the regular army in 1867, and was Assistant Surgeon-General at the time of his death. One intimately associated with him says: "As a military surgeon and sanitarian Dr. Kimball took high rank as one imbued with the highest sense of duty. His personality was quiet, yet magnetic, his manner dignified, but always approachable. As he found life waning he sought his home in the Catskills, and as the great panorama of plain, mountain and garden in which his life had been spent faded from his earthly view, the greater panorama of a noble, pure and self-sacrificing life was opened to his spiritual vision, as, on April 19 last, he entered peacefully upon his long leave of absence."

One of our old members, Francis W. Lewis, M. D., of Philadelphia, was not often with us. Also George E. Tyler, M. D., of Denver, a younger member, now both passed to their eternal rewards.

It is with special sadness that we record the loss of our young colleague, Wyatt Johnson, who died on June 19. He was an enthusiastic worker in sanitary science, especially in bacteriology. Becoming a member of this association in 1892, he at once manifested great interest in all its purposes and evinced a desire to aid, so far as possible, along all the general lines of its work. It was from him, I think, that the suggestion first came for a laboratory section. This suggestion was most cordially received by all members, and the section established, with Dr. Johnson as its first secretary. His interest and labors in the general meeting did not abate in the least. His modification of Widal's reaction of the typhoid bacillus is recognized and employed by scientists all over the world. Thus will his memory be forever preserved among scientists. It saddens us to thus take leave of fellow-workers, but

> "Let us be patient. These severe afflictions
> Not from the ground arise,
> But oftentimes celestial benedictions
> Assume this dark disguise.
>
> "We see but dimly through the mists and vapors
> Amid these earthly damps;
> What seem to us but sad funereal tapers
> May be heaven's distant lamps.
>
> "There is no death. What seems so is transition.
> This life of mortal breath
> Is but a suburb of the life Elysian
> Whose portals we call Death."

The avowed object of this association, being the suppression of contagious diseases, impels me to direct your attention to a class of diseases which has received but scant consideration from this body. I am aware that it is the subject that has, with few exceptions, been tabooed, especially in mixed audiences of nonprofessional people; if, however, we are to make any abiding progress in the control and prevent the infection of our communities and the degeneration of our posterity, all philanthropists, men and women, interested in promoting better sanitary conditions and in the suppression of vice, must join in a united effort to this end. That the nations of the world are arousing to the importance of the subject is shown by the fact that, in the recent Congress held in Brussels, to consider the prevention of syphilis and venereal diseases, thirty-four countries were officially represented. Undoubtedly, the first effort should be along educational lines. A marked step in advance was taken by the Belgian Government in issuing instructions to the public on the prevention of these diseases. It demonstrates that it is possible to present this subject to communities without offending the ordinary sense of any. We must depend upon medical men to take up this work of education with all classes of society. Miss Blanche Leppington, of England, in a recent contribution on this subject, sums up the matter by saying: "One thing the doctors have pretty much in their own hands." In their personal practice and by the use of their public influences in their communities they can sow the seeds of the most valuable teaching. They can dispel the illusion that regulation affords a quarantine against disease; they can spread, as no one else can, through all ranks and classes, a wholesome anxiety which will act, to some extent, as a check upon indulgence and which will also tell immediately upon the partner of that indulgence. They can do better still; they can try if there is no allurement for young men in the ideal, recommended by common sense and their physician, of unbroken chastity and a pure marriage. The doctor who has done nothing to suggest or fortify such generous ideals in the minds of his male patients has not done his part toward the solution of this problem.

The great public should be thoroughly informed in regard to its prevalence, its degrading effects morally, intellectually and physically, and that its transmission to successive generations is a prolific cause of the degeneracy leading to crimes, which are alarmingly increasing. We need not at this time consider the fact that it prevails in every country in the world, nor the various ways in which it finds its way into all classes of society. We would, however, recommend that a committee be appointed to consider the whole subject of its eradication and the best means, educationally and otherwise, to accomplish this end.

We are annually appalled at the mortality from tuberculosis, although there has been a slight reduction in the last decade. The bacillus which causes this disease is everywhere recognized. For several years sanitarians and physicians have been impressing upon the people the fact that these bacilli may infect any who may be so unfortunate as to take them into their system; so effectually has this fact been impressed upon a large number of people that the sufferer from this infection is to-day almost an outcast; especially is this true if such person is without a permanent home or with but limited means; no one is willing to take him into his own home; he is shunned on the street; he finds himself a social vagabond. Sanatoria there are, but to gain entrance to these private homes one must have money in plenty. At present there are only three within our national domain that are in any degree asylums for impecunious sufferers. We provide care, homes, attendance and everything that is requisite to the proper maintenance of all our criminal classes and for our insane. We have hospitals for the poor, ill with any other disease. Yet our legislators and philanthropists hesitate to appropriate money for persons suffering from this plague. However, when we compute the amount now expended in the care, with the loss in wages, of those suffering from this disease, it appears that upon a commercial basis it would be an especially economic expenditure for the State. In the United Kingdom of Great Britain the majority of the forty-two thousand who die annually of pulmonary tuberculosis are between the ages of twenty and forty. The loss of earnings of this number is estimated at between fifty and sixty millions of dollars annually, while there is expended in their care for the same period five millions more. With all of these facts before us, it would seem that, having succeeded in impressing the mass of the people with its communicability, we should take the next step in their education, which is the necessity of providing, not only care and maintenance for this class of sufferers, but, at the same time, the best means for preventing others from being infected. Compulsory notification stands first and should be insisted upon. When it is fully understood that, as soon as health officials are notified of the existence of this disease in any family, instructions will be given and enforced which will render it possible for the infected person to remain in the home without others becoming infected, then the infected one will not be an outcast branded for all to shun, and the great objection to notification is removed. When education has advanced a step further and the public comes to appreciate that sanatoria for tuberculosis open to such as have unfortunately become infected, the most promising avenue of escape from certain death, at the same time that it is an additional safeguard against the spread of the disease, then will the *vox populi* demand that justice be done the impecunious sufferers in the establishment by the State of institutions in which in the earliest stage of the infection they may be placed and thus given all possible aid to recovery and the enjoyments of social and productive citizenship.

We believe that it is also the duty of the State to provide homes for those of this class who, from any cause, have advanced beyond the period when recovery may be expected, thus soothing and comforting their remaining days and giving additional protection to the community. Is it not the duty of this association to formulate an appeal to the different governments represented to establish such sanatoria and homes?

At the Congress on Tuberculosis, held in Berlin in October last, Koch reiterated his statement of the previous year that it had not been satisfactorily demonstrated that the human bacillus of tuberculosis could be communicated to the bovines, and *vice versa;* hence it was unnecessary to use any measures to prevent the transmission of the disease from cattle to man. We have from Professor Brouardel the statement that, in conversation with Dr. Koch, he admitted that there was a possibility of this transmissibility. On a previous occasion, and in another presence, we took occasion to show that the consensus of opinion upon the proposition of the able and distinguished German savant was one of opposition; that by bacteriological, pathological and clinical evidence we were compelled to acknowledge that human tuberculosis has been communicated to cattle, that scientific observation in several cases demonstrated the fact that man had been inoculated with bovine tuberculosis; this view is substantiated by Ravenel, Smith, Nocard, Arloing and many others. When we recall the fact that, at the end of the year which has elapsed since Koch first made this statement of noncommunicability, he has no new evidence to submit, while, as already stated, many other observers have produced evidence tending to establish the fact of intercommunicability, we believe it would be crimnial to relax in any measure the efforts to prevent human beings from becoming infected from bovines.

The neglect of vaccination prepared the field for a general development of smallpox; all that was required was the seed. For the last four or five years there has prevailed an exceedingly mild form of this disease. In many localities the mildness of the disease has led to errors in diagnosis, impetigo contagiosa, Cuban itch, elephant itch, but the most frequent error has been to call it chicken-pox. The mildness of these cases results, undoubtedly, from the change brought about in our people by a hundred years of vaccination. This modified virulence and the reduced power of infection have been seized upon by antivaccinationists and the ignorant as an argument against vaccination. With great flourish of trumpets the Mayor and Chief Health Officer of Cleveland, Ohio, set up the claim that the city was free from smallpox, that this eradication had been brought about by a system of rigid sanitation, entirely without vaccination. However, within the following six months there were within that city 532 cases of the disease, with 73 deaths. This was one-third of all the cases of smallpox in the State of Ohio, and more than three-fourths of all the deaths from the disease occurring in the State. This was the result of an attempt to stamp out smallpox in a populous city without vaccination. Everywhere we meet persons who have arrived at adult life and who have never been sucessfully vacinated, some from carelessness, others from simple neglect, who are waiting for a more convenient opportunity, and others ignorant of the nature of this loathsome disease and its results, even in the present epidemic, and who are not properly informed or who have been misled by erroneous statements regarding vaccination. These persons make up a large and dangerous class in every community, who, when exposed to this contagion, contract the disease and become the foci from which a whole town or city becomes infected. The medical profession are familiar with, and should frequently repeat, the history of Porto Rico's deliverance from this pestilence. When the United States Government took possession of the island, smallpox was epidemic, as it had often been before; no greater or more beneficent work in prevention of disease has ever been done than that of Col. Hoff, the Chief Surgeon of the United States Army, who at once entered upon a work of compulsory vaccination of the whole population. A report of Major Azel Ames contains the following statements:

"In October, 1898, smallpox was endemic in Porto Rico; in December it was epidemic; in January, 1899, it had "honey-combed" the island; by February there were over 3,000 recent cases and the disease was spreading at a gallop. In February systematic compulsory vaccination, carefully and scientifically conducted and recorded, was begun simultaneously and with pretty equal efficiency in all parts of the island. It was vigorously prosecuted for *four months only*, till July 1, when 860,000 vaccinations had been made in a population of about 960,000. Of these 87½% were successful. The work then ceased because completed; the disease had practically disappeared; the fuel for it to feed upon had been consumed by the "head fire" of vaccination. In the 2½ years that have since passed, instead of the former annual average death-rate of 621, the mortality from smallpox has been but two per annum in a population of nearly a million. Can any honest, intelligent person doubt, in the face of these indisputable and easily verified facts, what it was that in four short months drove smallpox from its wide and long-time reign in the island and has since kept it out? Vaccination alone did it, and will do it effectively wherever compulsory legislation, properly enforced, secures its benefits to all."

The terrible results that may follow the general neglect of vaccination was shown in Germany, when a population which had allowed vaccination to be almost entirely neglected had an annual mortality from smallpox of from 15,000 to 20,000, culminating, in 1871, in an epidemic in which there were 143,000 deaths. This aroused the government to the importance of taking means to prevent such wholesale destruction of human life, and, in 1874, a law was passed making vaccination compulsory in the first year of life and revaccination in the tenth year. With the enforcement of this act smallpox ceased to be a menace and the annual mortality since then, instead of fifteen or twenty thousand, has been an average of 116.

These facts cannot be too often repeated; they should be advertised to the people in every hamlet on this continent. Only six of the States of this Union have compulsory vaccination laws; eight may enforce it to check an epidemic of smallpox, and twenty-two may exclude children from school who cannot present a certificate of successful vaccination. The profession and public should be impressed that for one to be successfully vaccinated means that this apparently slight operation, which most laymen think of so little moment that they would not hesitate to perform it themselves, should be done with the greatest care, that thorough antiseptic precautions should be taken, that the vaccinated person should be under the daily observation of the vaccinator in order that he may determine if proper characteristic vesicles form. Also to determine if the person is in a proper physical state for the operation and to insure that the requisite antiseptic directions are observed. All virus should be submitted to the director of the State laboratory or public health service for bacteriological examinations as to its freedom from pathogenic germs. The strongest assurance may be given that, if these precautions are taken, there will never be any untoward results. With these precautions the State should require that every child should be vaccinated before it is two years old and revaccinated before the twenty-first year. Both State and municipal legislators should be made to understand clearly that only by thorough and successful vaccination can smallpox be prevented.

There are persons in almost every community who object to enforced vaccination, declaring that it is unconstitutional. However, in six States, in which this issue has been carried to the court of last resort, it has been pronounced constitutional.

For several years not only this association, representing the sanitarians of the country, but the American Medical Association, as the representative of the medical profession as a whole, with various commercial organizations, have been making united efforts to secure from Congress the necessary enactment to establish a commission of public health. At our meeting last year all the interests had apparently united upon the "Spooner Bill," which had been before Congress for several months, and which provided for the creation of a bureau, to be known as the National Commission of Public Health, in the Treasury Department, this commission to be under the supervision of a commissioner of public health, who should be a physician and an experienced sanitarian and appointed by the President of the United States or by the commission, if such were possible, and an advisory council consisting of one member from each State and Territorial board of health and from the medical corps of the army, navy and Marine-Hospital Service. This advisory council was to meet once or twice a year in Washington. It provided also for an executive committee consisting of nine members of the commission, of which the commissioner, a representative from the army, navy and Marine-Hospital Service should be the ex-officio members, the remaining five members to be elected by the commission at the annual meeting, which should be convened by the commissioner whenever in his judgment public interests should so demand it, and this executive committee to have full power to act. It was expected that, if a new department was created by Congress, it should have charge of the commercial interests of the country.

Various members of Congress had assured the committee on legislation of this association that there was very little doubt that the proposed bill would become a law. However, on December 19, 1901, Mr. Perkins, a member of the House of Representatives from California, introduced a bill into the House "to increase the efficiency and change the name of the United States Marine-Hospital Service." The effect of this was to divide the professional support which had been given to the Spooner Bill and, in the opinion of the most experienced members of Congress, to render the passage of either of these bills improbable, at the same time remarking "that, as usual, the medical profession were not able to agree upon what was most desirable. However, should they ever be able to agree upon a measure intended to accomplish the objects of the Spooner bill, undoubtedly Congress would enact it into law."

Such was the state of this matter when, early in March last, the legislative committee of the American Medical Association met, in Washington, with representatives of this association to take into consideration and determine the wisest course to be taken to accomplish something for the advancement of sanitation and public health. After a full conference we were forced to the conclusion that both the Spooner and Perkins bills were doomed to destroy each other, that the only hope was in a compromise measure, by means of which something might be inaugurated that would mean progress along the desired lines: hence the adoption of such amendments to the proposed legislation as it was believed would accomplish this end. A further conference with Senator Spooner resulted in a substitute bill, which finally became a law, providing for a Public Health and Marine-Hospital Service for the United States. It authorizes the detail of a commissioned medical officer of the service for duty in charge of administrative divisions, namely: Marine hospitals and relief, domestic quarantine, foreign and insular quarantine, personel and accounts, sanitary reports and statistics and scientific research. Also for an advisory board for the laboratory, consisting of three competent experts, to be detailed from the army, the navy and the Bureau of Animal Industry, by the Surgeon-General of the Army, the Surgeon-General of the Navy and the Secretary of Agriculture, respectively.

It further provides that there shall be a competent person at the head of the divisions of chemistry, zoology and pharmacology. In reporting the bill, the committee say, the dividing line between Federal powers of quarantine, in its relation to foreign commerce and interstate commerce, and the State power of quarantine and police regulation, in its relation to the public health, is undoubtedly real, but it is often very difficult of discernment, and, therefore, it has often happened that State authorities have felt their province invaded by Federal authorities, and Federal authorities have insisted that the national function was invaded by State authorities; and out of it all has grown more or less of friction, necessarily detrimental to great public interests. No statute, of course, can change the power of Federal authorities, as defined by the Constitution, or take away the sovereign power of any State in respect of these matters. We have been impressed with the conviction that, in the general public interests, some recognition by Federal legislation of the State health authorities, in the way of consultation upon subjects of vital consequence to the localities, and as to the rules to be put into operation by both State and Federal authorities in accomplishing the same end, would of necessity bring about better understanding and a co-operation which would inevitably promote a fuller accomplishment of the great purpose desired by both the Federal and the State authorities.

The Federal jurisdiction is exercised primarily in the interests of commerce. The local or State jurisdiction is exercised, primarily, for the protection of life and health in the communities and, secondly, in the interests of commerce. In the hope and belief that good results will come from it, the committee inserted section 7, which, briefly stated, provides:

First: That when, in the opinion of the Surgeon-General, the interests of the public health would be promoted by a conference of that service with the State or Territorial health officers, that he may invite as many of said health officers and quarantine authorities as he deems necessary to send delegates, not more than one from each State or Territory and District of Columbia, to such a conference.

Second: That an annual conference of health authorities of the States and Territories and District of Columbia shall be called by the Surgeon-General, each State, Territory and the District of Columbia to be entitled to one delegate.

Third: That it shall be the duty of the Surgeon-General to call a conference upon the application of not less than five State or Territorial boards of health, quarantine authorities or State health officers, each of said boards or quarantine authorities joining in such request to be represented by one delegate.

It also provides for the collection and publication of vital statistics upon blanks so prepared as to have the returns from the different States uniform.

The work of this new department was charged with a most important duty on the same day that the act creating it became a law, by the passage of another act by Congress "to regulate the sale of virus, serums, toxins and analogous products in the District of Columbia," also to regulate interstate traffic in said articles and for other purposes. It will be appreciated by all that this law, if properly executed, will give to the country absolutely pure and reliable products and will establish confidence of the public in them, thus removing a great objection that may have existed against their use.

This association, as well as all who for so many years have been striving for the establishment of a public health service, are to be congratulated that at last their efforts have been crowned with success. While all that was desired has not been granted, yet a substantial and, in many ways, satisfactory organization has been effected, with an able and experienced organizer, and a member of this association, at its head. We congratulate Dr. Wyman upon the enlarged opportunities thus presented to him to develop upon a scientific basis a service of varied functions which shall equal in original research and demonstration any similar service in the world. Our government is about to engage in the construction of a ship-canal across the isthmus of Panama; thousands of men are to be employed in a climate to which they are not accustomed and in which the most unsanitary conditions prevail. The terrible mortality attending the building of the Panama Railroad, which was said to be so great that every tie in the road represents the sacrifice of a human life, must not be allowed to occur in the prosecution of this new enterprise. The public health service will find in this an extensive field for the exercise of well-directed, energetic sanitary work along a large variety of lines, the selection of camping-grounds, where temporary villages will spring up, their proper sewerage, water-supply, food; in fact, everything that will contribute to the preservation of robust, healthy life, at the same time that all sources of pestilential poisoning are sought in advance and destroyed, including the insects which, with hasty flight, carry the microbes of death within their tiny forms.

We have no doubt that in the discharge of these duties the public health service will achieve results which will redound to the credit of sanitary science everywhere.

It was long ago established that pestilence followed in the wake of famine. The fuel famine resulting from the recent coal strike has been a serious menace to the public health. It is not our purpose to consider the causes which led up to it, but rather to its general effect upon the people of the whole country. Several weeks have elapsed since it nominally came to an end; yet, in the cities and large towns there are a large number of persons who are not able to obtain a sufficient amount of fuel properly to cook their food or to keep their apartments warm; the result must be to induce many acute diseases and aggravate chronic affections, each of which adds to the mental and physical suffering of these people and an increasing death-rate.

Other industries vital to the life and health of the people are liable at any time to be the subjects of similar sociological disturbances which might threaten the food-supply of various sections, and which would result in actual starvation in many cases, while suffering and resulting diseases of the innocent people far from the State in which the trouble originated would be beyond compare. Under such circumstances we believe the public health service should without delay, in all cases affecting the health of the inhabitants of one or more States, inform itself regarding the exact conditions and, having determined the causes that menace the public health of the States, submit to the President of the United States a satement of the facts and recommendations as to the necessary measures to be adopted to remove the causes of such a menace. When the recommendations of the public health service have been approved by the President, he shall immediately take such action and institute such proceedings as may be necessary to remove or prevent further menace to the public health of different States. Such legislation should be asked from Congress as may be necessary to effect these purposes.

In this matter, as in all sanitary work, the public should understand that the ultimate object is the amelioration of human environment and the prolongation of life and happiness: as each decade exhibits its progress we may rightly expect proportionately larger results.

THE ASSOCIATION OF TABES AND MULTIPLE SCLEROSIS; REPORT OF A CLASSICAL CASE OF TABES WITH INTENTION TREMOR AND NYSTAGMUS.

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of Cleveland, Ohio.

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In an article recently published in the **Philadelphia Medical Journal**, Dr. Wharton Sinkler reported a case presenting symptoms of both multiple sclerosis and locomotor ataxia. He does not explicitely state that the patient possesses enough of the symptoms of either or both of the diseases to make a positive diagnosis, yet believes that he exhibits "in a striking way the most characteristic and salient features of both diseases. The patient has violent lightning pains, absence of knee-jerks, inability to stand with the eyes closed, loss of bladder control and loss of sexual power. There is, however, comparatively little inco-ordination of the hands and but little of the feet, and there is no Argyll-Robertson phenomenon. In addition he has, to a marked degree, exaggerated and typical intention tremor of the upper extremities and some tremor of the legs when standing; but there is no nystagmus and the speech is not staccato or scanning."

Dr. Sinkler also cites a case reported by Mills, of undoubted tabes which presented a tremor, while not typically an intention tremor, yet possessing characteristics so like that of multiple sclerosis that the possibility of a complicating *sclérose en plaques* was considered.

In the Fall of 1899 I presented to the Cleveland Medical Society the following classical case of tabes, giving as an apology for presenting such an ordinary instance of disease the combined occurrence of the following unusual complications and phenomena: *Laryngeal crises; complete abductor and partial adductor paralysis; complete arytenoid and partial paralysis of the crico-arytenoidei laterales; hyperthermalgesia and hypercryalgesia; truncal hyperesthesia and hyperalgesia; a localized fixed painful area on the wrist; a marked and elassical intention tremor and nystagmus.*

From my case-book I copy the following history and examination of this patient made May 24, 1899:

C. C. H., aged 53, United States born, street-car conductor by occupation; has been married twice; had 3 healthy children by his first wife, 2 by his second. All of these children are living and healthy. His first wife died of pulmonary tuberculosis; his second wife is still living and is a strong, rugged woman.

Family history: His family history is negatively good, the majority of his ancestors living to a ripe old age.

Personal history: He suffered the usual diseases of childhood and as youth and adult has been exceptionally healthy, never employing a physician over six times in his life previous to present illness.

Present illness: Thirteen years ago and shortly after the death of his first wife he contracted syphilis. A characteristic initial sore developed which was followed by a slight rose rash and some loss of hair. He had only about three months' treatment which was given by an irregular practitioner, and this was probably as irregular and ill-ordered as the practitioner himself. Nine years ago his sexual powers began to decline and for the past 8 years he has been unable to copulate. At this time there was sensible loss of the sphincter powers of the bladder and bowel. Eight or 10 years ago he became "short of breath" on exertion, and felt a choking sensation if he ran for a car. Three years ago he began to suffer paroxysms of severe pain in the left wrist. This continued with little intermission until 2 years ago, when it became much less marked, and it is now only occasionally felt. This pain was located on the dorsal part of the left wrist, occupying a fixed place, "not larger than a dime" and was almost continually the seat of pain, but subject to exacerbations of great intensity lasting thirty minutes, leaving the circumscribed area exquisitely tender and sore for hours afterward, in fact until another paroxysm recurred. Soon after this he began to suffer shooting pains of a fulgurant type in both upper and lower extremities. Often they would be absent for a week at a time, and then he would have a "spell of them" which would last for a week or more. Eighteen months ago his gait became quite unsteady, at the same time it was noticed that his voice was husky. Shortly after this he experienced suffocative attacks which were very frequent and so violent as to endanger life, undoubted laryngeal crises. Three years ago he noticed a feeling of numbness of the left shoulder. The areas are not well remembered nor were they clearly defined. Shortly afterward numbness appeared in the feet and later in the fingers. He states that the soles of his feet now have no sensation. As far back as eight years ago he noticed a peculiar sensation in the truncal areas on application of cool or cold water. This peculiar hyperesthesia is particularly marked at present. A bath to him is almost a terror. If the water is warm it seems to burn him and if it be a little cool it gives him a sensation of pain. Careful experiment seems to show that this disagreeable sensation is not so much a disagreeable temperature sensation but a peculiar shock-like pain. Cold articles do not seem to exert such a marked effect, but cold water produces a "pain that is unendurable." One year ago he noticed a peculiar trembling of the hands which was only manifested when he attempted some fine movements, such as writing. He states that his eyesight is good, but recalls three or four occasions when he had double vision.

S. P.: Patient was a slight, thin man of medium height, looked all of his age; hair gray, face pallid and pinched. He walked unsteadily into my consultation room aided by a cane, manifesting the while a typical tabetic gait. His station was very poor. He was barely able to stand with his feet together, but fell at once when he closed his eyes. If he closed his eyes when his feet were widely apart he would fall if not supported. There was no noticable trembling of the limbs while walking or attempting to stand. The knee-jerks were absent to all tests, he had no Achilles-jerk, no elbow or wrist-jerks and no plantar, cremasteric, gluteal or hypogastric reflexes. He was unable to tell with blinded eyes the position of his toes, feet or legs. He could tell with more certainty the location of the upper extremities. In testing for co-ordination in the upper extremities it was found that he developed a tremor of the hands while attempting any intentional movement. His attempts to place his forefinger on his nose produced a classical intention tremor. Attempts to button buttons, to write or to pick up a pin, brought forth the tremor beautifully. Appended is a specimen of his handwriting taken at that time which shows perfectly the characteristic chirography of one afflicted with intention tremor. (Fig 1.)

C. G. Hannum,
Cleveland,
Ohio

FIG. I.—Signature No. 1, was taken June 12, 1899.

If his eyes were closed the forefinger did not locate the nose with any degree of accuracy; the tremor, however, was fully as great with the eyes open. There was no tremor of the head, facial muscles or tongue, none in the lower members and none in his hands when they were not in use. A marked hypomyotonia existed. His extended legs could be brought over his head until the knees would touch the face without giving the slightest discomfort or feeling of tension in the hamstrings or elsewhere. His ulnar nerves at the elbows were quite insensitive; and repeated and vicious pinching of the testicles called forth no protest. He stated that he no longer felt the urine passing through the urethra, and it was demonstrated that he had marked thermalgesia and cryalgesia in the truncal areas. He was hyperesthetic to touch and pain in wide areas of the body; there was some loss of tactile sense on the soles of the feet; touch and pain senses were delayed. He had a marked myosis. The left pupil was the smaller one and was quite symmetrical; the right was nearly an ellipse with the long axis directed upward and outward. Both were rigid to light and accommodation and to pinching of the skin of the neck. The palpebral apertures were equal and normally wide. Ordinary tests revealed no ocular palsies. The disks were slightly gray, but tabetic optic atrophy could not be positively demonstrated. His sight was a little below normal, but not sufficient to presuppose any other cause than his rigid pupils, and the refractive errors due to age. He had a well-marked double lateral nystagmus. His voice was husky, high pitched and quavering, and, while he enunciated peculiarly and slowly, yet his speech could not be said to be staccato or scanning.

May 25, 1899, Dr. A. H. Marvin kindly examined his throat for me and made the following report accompanied by diagrams from which I have made the accompanying pen sketches of the laryngeal condition:

"I have examined Mr. H. and find paralysis of both abductors and also of the internus and arytenoideii postici or transversus. The hour-glass paralysis with loss of abduction in addition probably denotes almost complete double recurrent paralysis—the remaining adductor muscles will doubtless soon be paralyzed and the picture completed. I make a diagram of his present (Fig. 2) and probable future condition (Fig. 3). The shortness of breath has existed eight or ten years, indicating beginning paralysis of the arytenoid post. or abductors; one year ago hoarseness began—paralysis of the adductors." In a later communication Dr. Marvin said, "The mucous membrane of his larynx is rather pale and relaxed, the vocal cords still presenting the hour-glass appearance mentioned in my former note. On phonation the cords meet, except in the posterior segment controlled by the arytenoideus proprius muscle. This approximation is, however, only obtained by considerable effort. The left vocal process lies at a higher level than the right, and crosses the median line slightly during phonation (Fig. 3). During quiet breathing the typical hour-glass appearance is noted (Fig. 2)—on deep breathing the cords become narrower and the anterior elliptical space longer, but abduction does not extend beyond the cadaveric position. We thus have complete abductor and partial adductor paralysis. The arytenoideus is completely paralyzed—the thyro-arytenoidei partially, while the crico-arytenoidei laterales are scarcely affected. From the prominence of the left cord I think the right suffered first. The suffocative attacks were likely caused by extra muscular efforts while all the abductors were intact." The patient has been under observation up to the present time. There is little to add. He is now bed-fast and greatly emaciated. His speech has become less difficult, his voice is still husky, but he no longer experiences suffocative attacks. His vision is fair, and all other special senses are intact. His urine dribbles, and the rectal sphincter is more or less incontinent. His tremor is still confined to his hands and is only manifested on intentional movements, and is now so great that he cannot carry a cup of water to his mouth. Appended are some of his signatures taken at intervals since the first one They perfectly illustrate the progressive increase of the tremor. (Figs. 5, 6, 7.) The nystag-

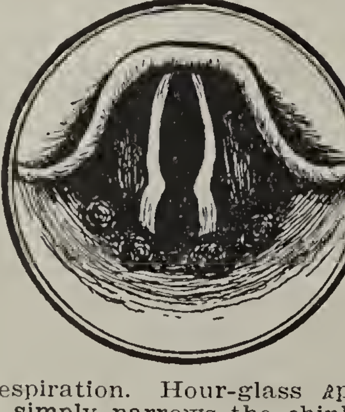

FIG. 2.—Quiet respiration. Hour-glass appearance. Deep respiration simply narrows the chink.

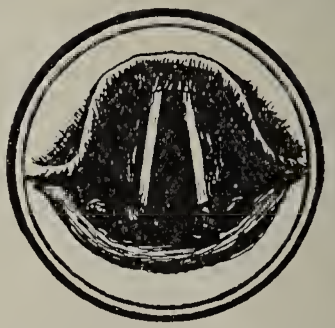

FIG. 3.—Cadaveric position; complete bilateral recurrent laryngeal paralysis.

C G Hannum
C G Hannum
C G H

FIG. 5.—Signature No. 2 was taken September 15, 1900.

C G Hannum

FIG. 6.—Signature No. 3 was taken May 20, 1901.

C G Hannum

FIG. 7.—Signature No. 4, was taken October 20, 1902.

mus has not increased nor the appearance of the disks changed. His hyperesthesiæ have decreased and, strange to say, the plantar surfaces of the feet have recovered some sensation. He has no paralysis or essential weakness of any muscles or group of muscles outside of his orbits and larynx. The vocal cords are now in almost the identical position that they were when Dr. Marvin examined him three and one-half years ago. Indeed, I believe that he approximates the cords better. The left cord still overlaps on phonation and the cartilages as seen in figure 4, override. The hour-glass position as seen in figure 2 is marked on quiet inspiration. The expected progression of the laryngeal paralysis has not materialized; why it has become arrested while all other morbid conditions have increased, I am unable to explain.

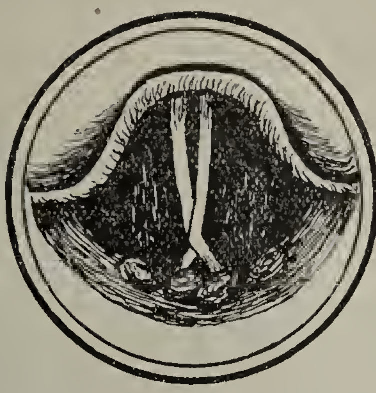

FIG. 4.—Appearance in phonation, showing overlapping of left and overriding of the arytenoid cartilages.

Discussion.

Tremor in tabes is not infrequently met with. In fact, evidences of motor irritation manifested by trembling, associated movements as described by Strümpell[1] and Oppenheim[2], and involuntary or spontaneous movements as observed by Stintzing[3] and Oppenheim[4], are not so rare as the literature would indicate.

The choreic and athetoid movements described by Audry (*Rev. de Méd.*, 1887, I), sometimes observed in tabetics, are to be regarded as due to a complicating disease of the lateral columns or the cerebral cortex.

Hirt[5] mentions the occurrence of tremor in tabes and figures the handwriting of a personal observation which for sake of comparison is herewith reproduced (Fig. 8).

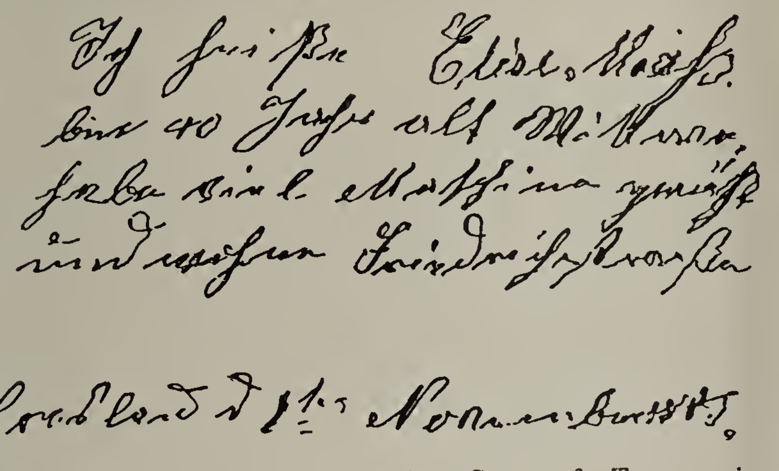

FIG. 8.—Specimen of Handwriting in a Case of Tremor in Tabes.

[From Hirt.]

He does not describe the tremor in a manner to convey any idea of its nature, but the chirography closely resembles that of an intention tremor.

Gowers[6], in the discussion of the complications of tabes, says: "In rare cases the legs present the symptoms of tabes, while in the arms there is the jerky inco-ordination of disseminated sclerosis, and the co-existence of the two lesions has been demonstrated, but is very rare."

Hirt[7] cites an undoubted case of multiple sclerosis possessing many of the classical symptoms, which began with so many of the symptoms of tabes that it was so diagnosed.

Oppenheim[8] states that multiple sclerosis may be confused "with combined disease of the posterior and lateral cords." Again[9], in discussing the same disease, he states that "we sometimes find the ataxia combined with atony, *and even with Westphal's symptom.*" The italics are my own.

Also, in discussing combined disease of the posterior and lateral tracts of the spinal cord, the same author says[10]: "The partial optic atrophy and the speech disturbance of multiple sclerosis are, however, quite different; *but nystagmus and tremor similar to that of multiple sclerosis have been observed.*" Again the italics are my own.

In the light of these quotations from acknowledged authorities I confess considerable surprise at Dr. Sinkler's statement, that "I have never seen or heard of a case of multiple sclerosis in which were present marked symptoms of locomotor ataxia."

It is perfectly true, as the able author observed in his first sentence, that the location of the sclerotic areas may give rise to a great diversity of symptoms in multiple sclerosis, yet it is pertinent to recall the fact that Dr. Sinkler's case and that of Mills, quoted by the former, occurred in men past the middle term of life and, hence, were far more liable to be affected by tabes than by multiple sclerosis which is essentially a disease of early life. In neither of these cases was there but one sign of multiple sclerosis—the intention tremor. In Dr. Sinkler's case it was positive, in that of Mills doubtful. In neither case exist sufficient grounds to justify a diagnosis of tabes complicated by disseminated sclerosis. The occurrence of intention tremor alone is insufficient evidence of a *sclérose en plaques disséminées*, especially in an old man, and one with evident degeneration of the posterior columns of the cord.

In the case here recorded by myself we observe a perfect type of intention tremor with nystagmus in a classical tabetic, yet, in view of the man's age and the fact that we may have nystagmus in locomotor ataxia as well as motor irritations such as tremor, impulsive movements, athetoid gestures (and why not intention tremor?), I can see no necessity of complicating our pathology by assuming the simultaneous existence of the two diseases. This latter observation is especially worthy of attention, since we have no definite knowledge of either the character or exact location of a lesion which uniformly and invariably produces intention tremor.

If it be true, as Gowers states, that the two diseases may simultaneously exist in the nervous system as a most rare combination, then the case herein reported offers a far greater claim for that distinction, since the symptom group of tabes is classical; and that of multiple sclerosis may at least be mentioned in the plural.

1. Struempell (Nenurol. Centralb., 1887, vi, 1.)
2. Oppenheim (Sitz. d. Charite-Gesells., 20, Marz, 1884.)
3. Stintzing (Centralb. f. Nervenh., 1886, 9, 3.)
4. Oppenheim (Diseases of the Nervous System, p. 126; Lippincott Co., Philadelphia, U. S. A., 1900.)
5. Hirt (Diseases of the Nervous System, pp. 644, 645; D. Appleton & Co., New York, 1899.)
6. Gowers (Diseases of the Nervous System, Vol. I. p. 466; P. Blakiston & Son, Philadelphia, U. S. A., 1899.)
7. Hirt (Loc. cit., p. 621.)
8. Oppenheim (Loc. cit., p. 214.)
9. Oppenheim (Loc. cit., p. 212.)
10. Oppenheim (Loc. cit., p. 148.)

THE CURATIVE POWERS OF THE X-RAYS UPON LUPUS AND MALIGNANT GROWTHS, WITH REPORT OF CASES.

By THOMAS J. BUCHANAN, M. D.,
of Philadelphia.
Assistant Demonstrator of Anatomy in the Jefferson Medical College, Clinical Assistant in the Surgical Clinic of the Jefferson Medical College Hospital.

The many cases of lupus and malignant disease in which cure or remarkable improvement has been obtained by the application of the X-rays prove that this method of treatment has obtained a permanent position in surgical therapy. In order justly to estimate the real value and the limitations of the method it is necessary that many cases be reported, and in this article the writer places on record several cases from his own experience, which were studied and treated in the Jefferson Medical College Hospital. In some cases apparent cure, in others marked improvement, has been obtained.

Case 1.—**Lupus of the nose and cheek.** Mrs. R., 24 years of age, suffered from an extensive lupus involving the nose and cheek. At the age of 9 years the patient was afflicted with swollen lymphatic glands of the neck, for which condition 3 operations were performed. In addition, during childhood she developed a suppurative condition of the middle finger of the left hand, resulting in the formation of a sinus which led to the bone, and which was incised and curetted. When the patient was 19 years of age, an eruption appeared on the end of the nose, and later an ulcer formed which spread and finally involved a greater part of the nose and a considerable portion of the right cheek. A diagnosis of lupus was made, and the condition was subjected to various plans of treatment, medical and operative. The operative treatment was curettement. Among the local applications, mercurial ointment and lactic acid yielded the best results, but neither succeeded in entirely healing the lesion. X-ray treatment was begun in December, 1900. After a very few exposures the condition improved considerably, and at no time was any other form of local treatment employed. Unfortunately, no photograph was taken before treatment, but the accompanying illustration (Fig 1) shows the result of the treatment and the outline of the scar. The patient was subjected to 80 exposures, but not at consecutive seances, as she now and then remained away from the hospital for 6 weeks at a time. The patient remains well at the present time and has gained in weight.

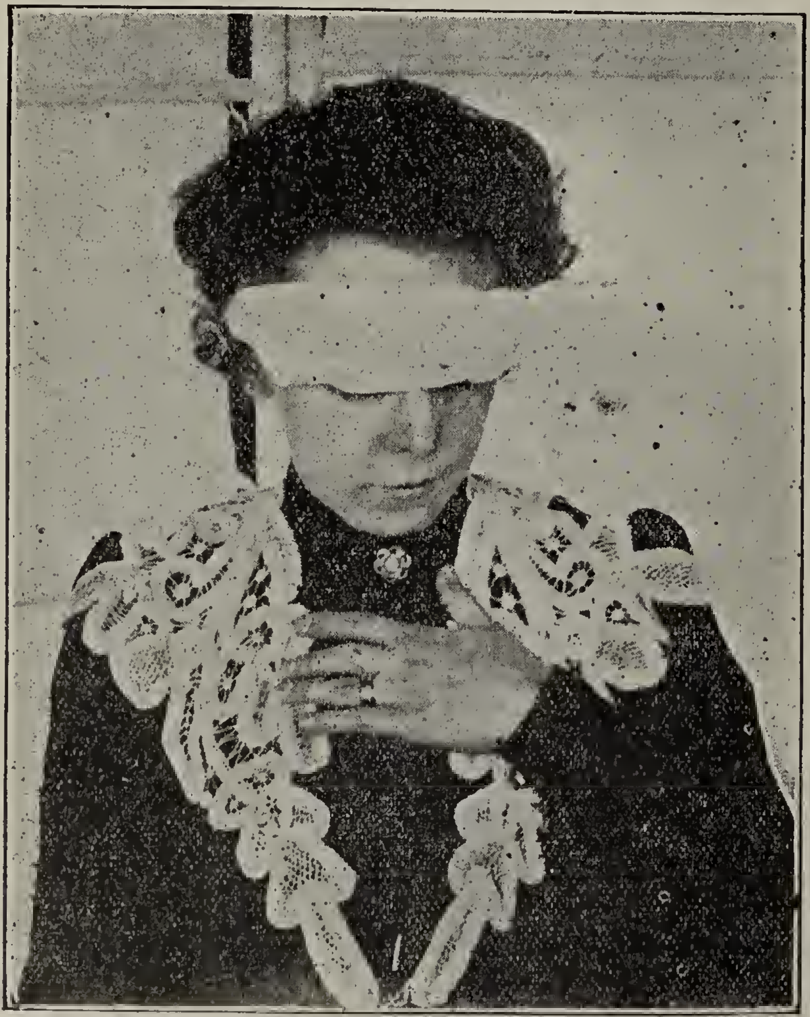

FIG. I.

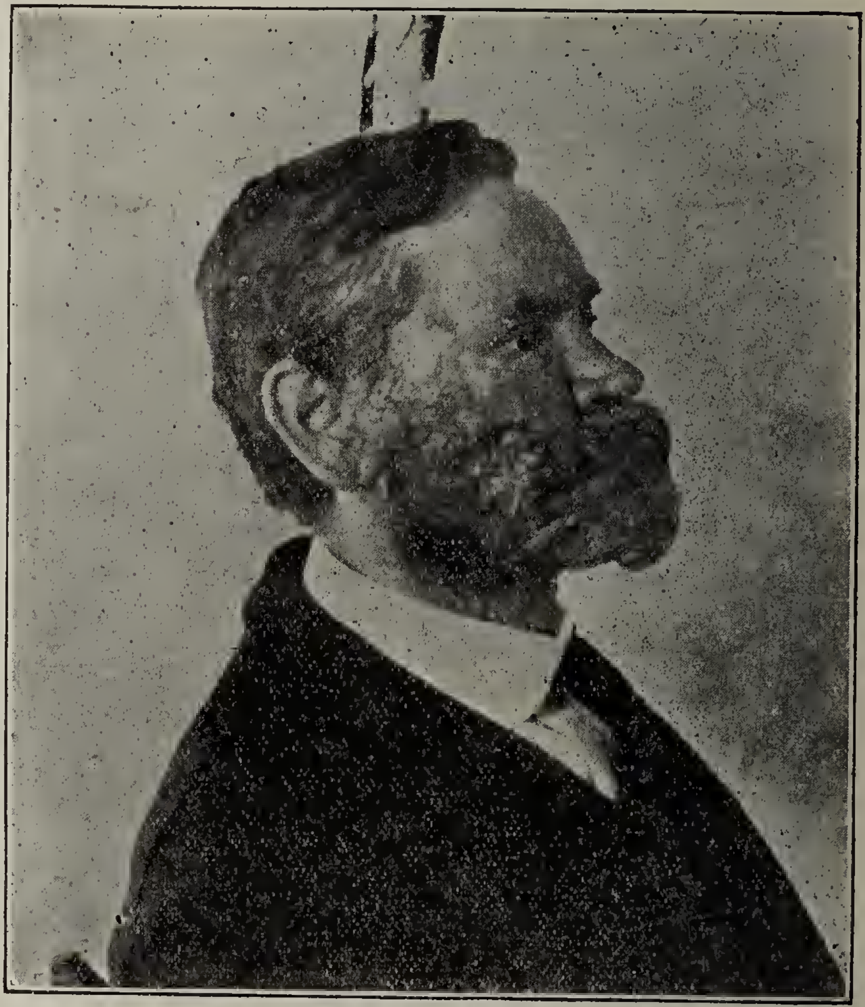

FIG. II.

Case II.—**Epithelioma of the cheek, gums, floor of the mouth, superior maxillary bone and neck.** Mr. J. J. Z., 45 years of age, an upholsterer, noticed 12 years ago a small sore on the lower lip near the right labial angle. The sore was excised one year later and rapid healing followed. The present trouble began in July, 1901, as a small lump upon the inner side of the right cheek, which gradually increased in size. The growth was removed in October of the same year by Dr. W. J. Hearn, the incision extending from the angle of the mouth outward toward the angle of the jaw. In addition to the growth some involved glands were also removed from beneath the jaw. The wound healed, but an indurated area still remained on the inner side of the cheek. An examination of the growth made by Dr. W. M. L. Coplin proved it to be a squamous cell epithelioma. Two weeks after the operation the growth recurred at its original site and grew with such rapidity and involved such an extensive area that it was considered inoperable. Fig 2 shows the patient at this time.

He suffered from a very profuse and fetid discharge from the wound, and was unable to open the mouth at all; consequently he was obliged to subsist on liquid food. X-ray treatment was begun January 9, 1902. He was seated about twelve inches away from the tube, and the exposure of 10 minutes was repeated every third day. Even after the first exposure there was a marked difference in the appearance of the growth, and after the patient had been subjected to 25 exposures he could open his mouth ½ inch, and could masticate solid food. The mass entirely disappeared, leaving only a salivary fistula. The accompanying illustration, (Fig. 3) shows the appearance of the patient after the treatment. The treatment was suspended, and in a short time the growth reappeared and advanced with great rapidity.

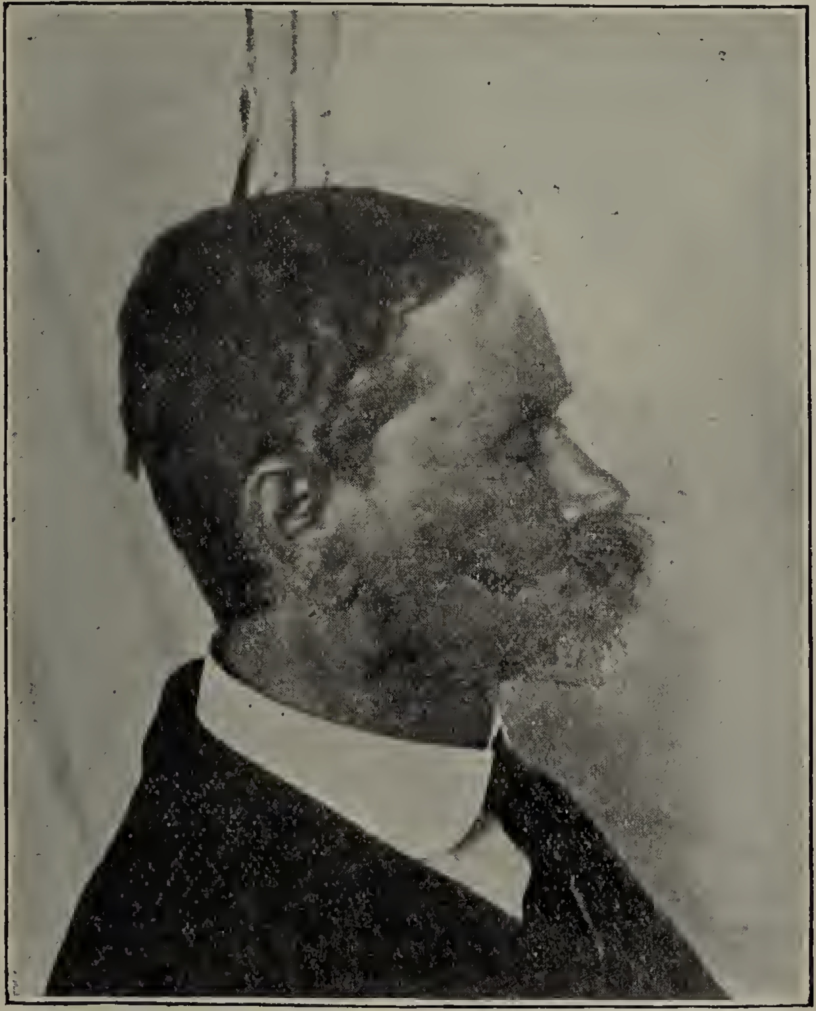

Fig III.

Case III.—**Epithelioma of the nose.** Mrs. C., 65 years of age, a midwife, had a fall in 1898, which caused a fracture of the arm and an abrasion of the nose. The wound of the nose never completely healed, and finally the ulcerated surface began to enlarge. In September, 1900, she came to the dermatological department of the Jefferson Medical College Hospital, where the condition was diagnosticated as epithelioma and was subjected to various forms of treatment, such as curettement, the electric cautery, etc. The sore would improve but would not completely heal, and the patient would stay away from the hospital until it became worse, when she would again return. On December 30, 1901, she was referred to the Surgical Department for the purpose of having an extensive operation performed. Dr. J. Chalmers DaCosta showed the patient to the class and called attention to the disadvantages of so extensive an operation upon her face. He stated that she would be subjected to X-ray exposures and shown at a later clinic. She was then referred to the X-ray Department. The patient was seated 12 inches from the tube, the face being protected with a papier maché mask, covered with lead foil, that portion of the mask which corresponded to the diseased area being cut away. The exposure lasted 5 minutes and was repeated at intervals varying from 3 to 4 days. While the X-rays were being used, no other form of treatment was permitted, and the patient was instructed not to interfere with the ulcer in any manner whatever, so that the full effect of the X-rays could be observed. At the end of 5 weeks the patient was again taken before the class by Dr. DaCosta, and the nose shown completely healed. Up to the present time there has been no sign of recurrence.

Case IV.—**Epithelioma of the nose and superior maxilla.** Mr. J. H. E., 73 years of age, farmer, noticed 25 years ago a small wart on the left side of the nose, directly above the corresponding ala. Two years ago the growth began to increase rapidly in size. At that time Dr. W. J. Hearn performed an operation upon the patient, removing a considerable portion of the nose, repairing the deformity by a plastic operation. In December, 1901, the growth recurred, involving the alveolar process of the left upper jaw and accompanied with much pain. The patient came to the hospital for another operation, and, with the hope of avoiding it, Dr. Hearn referred the patient to me for X-ray treatment. The first exposure was made on January 20, 1902. After the second exposure the pain entirely ceased, and marked improvement was noted in that portion of the growth involving the alveolar process. The patient has been subjected to 20 exposures in all and, although the condition is not yet entirely cured, it is very much improved, and there has been no recurrence whatever of the pain.

Case V.—**Lupus of the forehead.** Mr. D. M., 42 years of age, a weaver, noticed in September, 1900, a small pimple in the region of the glabella, from which, upon scratching, a thin fluid exuded. The sore remained open and gradually increased in size until it was about as large as a quarter dollar. He was treated for a long time, but the growth gradually increased in size. (Fig. IV). He first came to the Jefferson Medical College Hospital on June 5, 1901, at which time the X-ray treatment was begun and all other forms of treatment abandoned. The patient was seated at a distance of 12 inches from the tube, his face, except

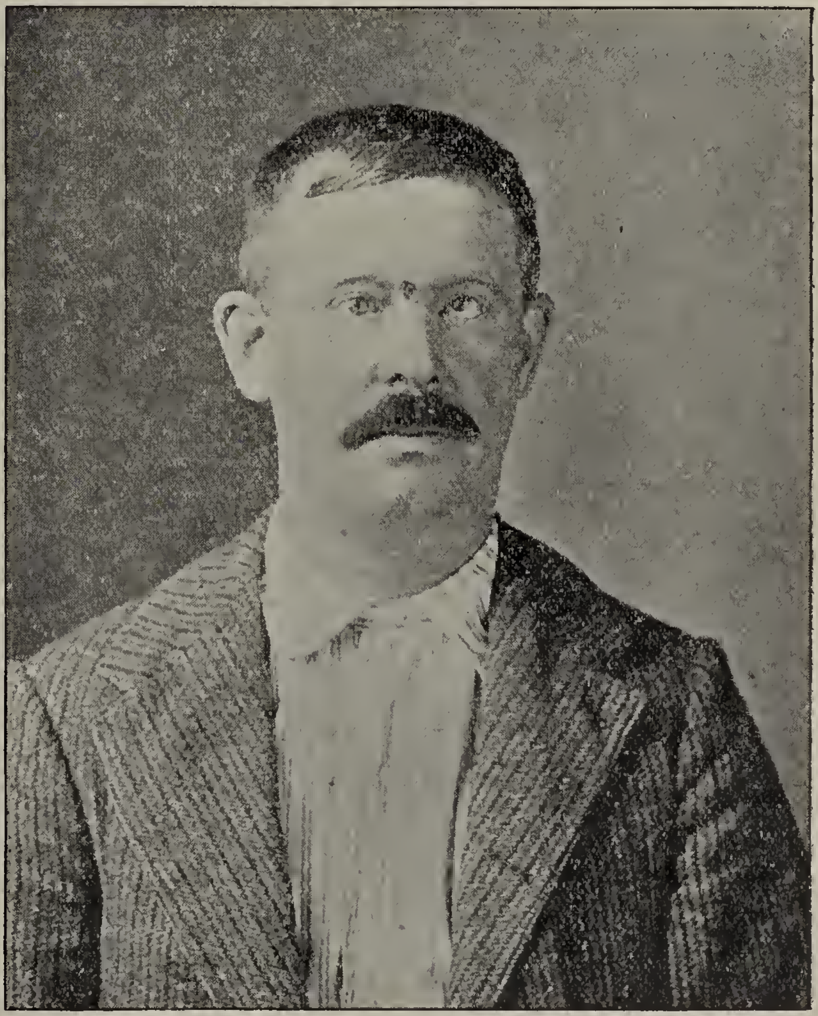

Fig. IV.

the seat of the disease, being protected by a mask covered with lead foil. Exposure was made twice a week, each exposure lasting 5 minutes. At the end of the fourteenth exposure the growth disappeared, and after 2 more exposures the patient was discharged as cured. Three months later the patient returned with a condition similar to that which first existed, and stated that the sore had recurred one month after leaving the hospital. The same treatment was again instituted and after 8 exposures the patient was discharged, since then there has been no further recurrence of the lesion.

Technique of X-ray Therapy.

The method of using the X-ray for therapeutic purposes, as employed by the writer, is as follows: The patient is seated with the part of the body to be treated in front of the tube, about 12 inches from the same. The surrounding tissue is protected by sheets of lead or, in the case of the face, by a mask covered with lead or tin-foil, the latter giving quite as much protection as the sheet lead. It is not necessary to have the protecting material grounded. The time of exposure should vary from 5 to 10 minutes, as longer exposures are apt to produce burns, and the interval between the exposures should vary from 3 to 4 days. Exposures of long duration and at frequent intervals will certainly produce violent dermatitis and, in some cases, even severe burns. The writer is of the opinion that superficial carcinoma and other similar affections of the skin can be cured by means of the X-rays without any burning whatever.

The danger of producing a burn is in proportion to the time of exposure and the distance of the part from the tube. At a distance of 12 inches from the tube and with an exposure of 10 minutes the danger of a burn is very slight; yet, if the distance be decreased to six inches, the time of exposure being the same, the danger of producing a burn will be at least four times as great. The liability of the tube to produce a burn increases as the square of the distance from the skin surface decreases. Considerable has been written about the kind of tube which is best suited for X-ray therapy, the soft tube or the one with but a feeble penetrating power being considered by most writers to be the best. The writer has found that a tube of a medium-high vacuum is better than a tube with a low vacuum. A good tube is one which will make a good skiagraph of the hip-joint of a person of average development.

How Do the X-rays Cure Carcinoma?

The repeated exposure of any part of the body to the X-rays causes, in some as yet unaccountable manner, a disturbance of the trophic nerves supplying the bloodvessels and the skin. The delay in the appearance of lesions after exposure, their progressive character and the refractory manner with which they respond to treatment are the strongest reasons in favor of this view. The lesions themselves vary from a slight erythema to a more or less complete destruction of the tissues. The writer, who operated the X-ray apparatus in the Jefferson Medical College Hospital for more than 2 years, has had occasion to observe both the subjective as well as the objective symptoms resulting from frequent exposures of healthy tissue to the X-rays, the accompanying illustration (Fig. 5) showing the effect upon his own hands. An average of two exposures per day was made. The first evidence of damage to the hands was a slight erythema, more pronounced on the left hand, which was the one more frequently exposed. The nails became brittle and striated, breaking and splitting; the skin at the root of the nails became hard and retracted, while the subungual spaces became much deeper. The nails would break with the slightest effort, splitting some distance from the free margins and becoming very painful. All the fingers of both hands showed atrophic degeneration from the metacarpophalangeal articulations to the ends of the fingers.

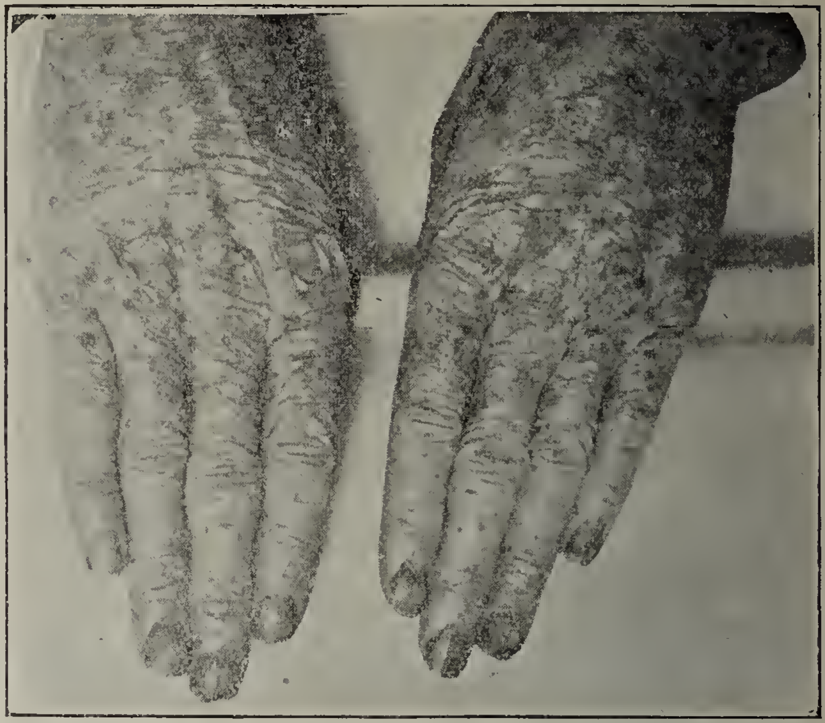

FIG. V.

It appears probable that the X-rays act upon the bloodvessels in the immediate vicinity of carcinomatous tissue much in the same way as they do upon healthy tissue, causing an interference with the bloodsupply of the neoplasm, with subsequent atrophy, presupposing, of course, that the exposures are conducted under suitable conditions. Should, however, the exposure be continued long, an atrophic ulcer will take the place of the growth.

Cases 1 and 5 are instances of a disease which can positively be cured by the X-ray treatment, namely, lupus. Superficial epitheliomata, rodent ulcers, etc., can be cured without danger of a burn.

Cases 2 and 4 improved very much while under the writer's care. In each of the above cases the pain, which had been very distressing, disappeared almost from the beginning of the treatment and had not returned at the time this paper was written.

Case 3 was in a deplorable condition when he came under the writer's care. He was rapidly losing flesh, and the dor from the growth made him obnoxious to himself and friends. When told that he could not be cured, he pathetically remarked that, if kept alive until March, it would be all he desired.

Conclusions.

1. Superficial epitheliomata, lupus, rodent ulcers, eczema and many kindred skin affections can positively, in many cases, be cured with the X-rays.

2. The growth of deep-seated carcinomata can sometimes be retarded, and the pain very much lessened by means of the X-rays, but that such patients can be permanently cured is, as yet, not demonstrated.
3. A tube of medium-high vacuum is better suited for X-ray therapy than a tube of low power, particularly for deep-seated carcinomata.
4. The part exposed should never be nearer the tube than 12 inches.
5. An exposure should never last longer than 5 or 10 minutes at one sitting.
6. An interval of 3 or 4 days should intervene between each sitting.
7. In order to produce a cure it is neither necessary to produce a burn nor to cause any reaction whatever.
8. All cases of inoperable carcinomata, sarcomata, etc., should be treated with the X-rays before they are abandoned as hopeless.
9. The operator must be one well skilled in the use of the X-ray apparatus.
10. After the suspension of treatment, carcinomata show a strong disposition to return quickly.

SPLENIC ANEMIA, NOTES OF A CASE.

By A. L. BENEDICT, A. M., M. D.,
of Buffalo.
Consultant on Digestive Diseases in the City Hospital for Women and Riverside Hospital, Buffalo and Dansville Hospital.

L. B. C., aged 40, manager of a printing establishment, was under observation from December 17, 1902, to January 2, 1903. His history was that he had never been thoroughly well, and that his meals and hours of work had been irregular. He had had attacks of jaundice at the ages of 6, 11 and 22 and had usually been more or less jaundiced. He gave no history of malaria, but his boyhood was spent at Lockport, where malaria is quite frequent, according to clinical reports, and where the water-supply has been contaminated with typhoid. With the exception of the three attacks of jaundice and the usual vague account of children's diseases, he gave no history of any acute disease. His bowels were usually somewhat constipated, but for some time he had controlled them with sodium phosphate.

Physical examination elicited the following points: Heart: a soft, blowing mitral regurgitant murmur, probably hemic, was noticeable. Spleen: palpable nearly to the median line and umbilical equator anteriorly and correspondingly enlarged posteriorly, according to results of auscultatory percussion. Stomach: practically normal in area, extending to the sixth rib, median line, and parallel ½ inch above umbilical equator. Liver, from fourth intercostal space to seventh rib, by auscultatory percussion, verified inferiorly by palpation. The appendix was not tender, but a small mass was palpable at this site. Kidneys: neither was movable. Ascites absent.

The urine was normal qualitatively, as regards albumin, albumose, sugar, indican and bile pigment. The sclerotics were yellowish, but there was no true jaundice. The feces were free from animal parasites in one examination, and the patient had never noticed any of the grosser forms. Plant hairs, bacteria and the ordinary detritus were found.

The blood showed 50% to 60% of hemoglobin by the Talqvist instrument. In the stained specimen the red cells were ring-like in many instances. There was no leukocytosis, but a slight relative eosinophilia. No opportunity was afforded for quantitative examinations, as the patient reported only by telephone and in two brief calls, and he was not sufficiently encouraged by the results of treatment to continue under my care.

The treatment, by the way, consisted in the administration of quinine, to which there was marked susceptibility, of hydrochloric acid to overcome gastric fermentation for which he had consulted me, and arsenic.

It occurs to me that this case may afford a hint of the nature of splenic anemia which, of course, is merely a symptomatic designation. The disease has none of the marks of an essential anemia and, according to Osler, culminates in Banti's disease, with obvious involvement of the liver. In the considerable series of cases reviewed by Osler, hepatic sclerosis was not diagnosed, but this disease, in abstainers from alcohol—of which the present patient was an example—is diagnosed with considerable difficulty till it has progressed to the development of back-pressure signs. Personally I am in the habit of diagnosing hepatic sclerosis on the strength of (1) the vague general symptoms; (2) the contraction of the area of hepatic contact with the chest wall, as determined by auscultatory percussion—the term contact being used in a relative sense as indicating sufficient proximity to enable percussive vibrations to be established; (3) the presence of moderate back-pressure signs, such as the festoon of venous varicosities at the level of the diaphragm. I do not allude to the disease in its marked degree, when it is readily diagnosed. The normal limits of the liver, by auscultatory percussion, are from the fourth rib to the costal arch, with allowance for marked individual differences of contour. So considerable a degree of diminution of area as was here found, seems to me to warrant a diagnosis of hepatic contraction or sclerosis, the latter term being preferable to cirrhosis, though practically synonymous. There is considerable scepticism on the part of those not familiar with auscultatory percussion as to its reliability and as to the possibility of diagnosing hepatic sclerosis from mere diminution of the hepatic area. As to the former point, I have checked the method so many times at necropsies and by X-ray examinations as to have almost implicit faith in it under ordinary circumstances. It is obviously impossible to diagnose hepatic contraction from the meager details obtained by palpation and ordinary percussion except in extreme cases. At a few necropsies I have verified the diagnosis of hepatic sclerosis, and, on the other hand, I have seen livers of normal size that were markedly sclerotic, and those free from disease that presented, clinically, a slight diminution of area. The degree of diminution here noted seems to me quite definitely diagnostic of hepatic sclerosis, judging from a comparatively small experience in checking clinical examinations by section.

While it would be premature to exploit the theory that splenic anemia is always due to hepatic sclerosis, it may be permissible to point out the following suggestive facts:

1. Hepatic sclerosis is practically always associated with some degree of secondary anemia.
2. Most authorities exclude the direct results of malaria, Hodgkin's disease, splenic neoplasm, leukocythemia, etc., from the etiology of splenic anemia, or, rather, splenic anemia is limited by definition to a recondite association of anemia and splenic enlargement, neither of which is explainable by disease of well-known pathology.
3. Osler has shown, almost beyond the possibility of contradiction, that hepatic sclerosis is part of the symptom complex in advanced cases of Banti's disease.
4. Splenic anemia has all the earmarks of a toxemia.

5. Coleman, in discussing 22 cases of pernicious anemia of the ordinary type, regards the destruction of the bloodcells as due to the liver.

6. Splenic enlargement is quite characteristic of hepatic sclerosis, though not always found, at least at the time of examination.

It would be going too far to say that splenic anemia is simply the anemia of hepatic sclerosis plus the splenic enlargement and due to portal obstruction, but it may very well be that the hepatic sclerosis is the underlying cause, or that it begins coincidently with the toxemic influence upon the spleen and blood, but usually manifests itself late, simply because of obvious difficulties of diagnosis.

REPORT OF A CASE OF CRANIAL FISTULA CURED BY OPERATION.

By J. A. KEOWN, M. D.,
of Lynn, Mass.
Surgeon to the Emergency Hospital.
and E. B. SCHALLENBACH, M. D.,
of Lynn, Mass.
Assistant Surgeon to the Emergency Hospital.

Patient, Agnes A. C., 25 years of age, married, gave the following history:

Family history.—Father died of Bright's disease; mother, brother and sisters are all living and well.

Previous history.—She had always been well until March, 1901, when two abscesses developed in the right breast and one on the upper right arm. The arm was lanced and the breast abscesses resolved.

In May, while about her work, she hit the top of her head on a bureau. At first no notice was paid to it, but soon a lump formed which persisted for some time, then an abscess formed. The face and eyes at this time were much swollen. The abscess was opened but did not heal well. Seven weeks before admission to this hospital she was operated upon and some carious bone removed, but the wound did not heal.

October 16, 1901.—On admission to this hospital there was a small sinus in the left frontal bone about 4 inches above the eyebrow, filled with pus, leading down to the dura. Through this sinus the brain pulsations could be felt. No specific history could be obtained. Physical examination was negative, and operation was advised.

October 19.—Operation was performed under ether anesthesia. Frontal portion of scalp was carefully shaved and aseptically prepared. Scalp was incised in line with sinus, the necrosed area of bone chiselled away, and all diseased tissue found was removed. Wound was then sewn up, great care being taken in dressing the wound.

October 27.—Returned to out-patient department after operation in house. Wound did well for a time, then acted as it did at a previous operation. As antisyphilitic treatment did not have the slightest effect, a second operation was advised after 8 months.

July 23.—Second operation under ether anesthesia. An elliptically shaped flap was made with the broad base below and down. With a trephine a button was taken out and then it was found that, while the outer table was solid, the inner table was necrosed. On the brain surface a dark cheesy substance was found to cover a considerable area. The opening in the bone was enlarged by rongeur forceps until an opening more or less oval in shape and about 4x2 inches resulted. Large pieces of bone sequestrum were removed. The cheesy substance was curetted from the brain tissue, the under edges of bone gouged away with rongeur until they looked perfectly clean. The wound was cleaned with lysol and then with corrosive sublimate 1-1000; it was closed with silkworm gut sutures after allowing an area for drainage. Aseptic dressing. Wound healed by first intention with exception of slight discharge through a stitch hole. Sterile dressings.

October 1.—Wound perfectly united. The opening in the skull seemed to be diminishing steadily in size by formation of new bone from the periosteum. This case is reported as a probable tuberculous process in the cranial bones.

Health Reports.

Health Reports: The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon-General, U. S. Public Health and Marine-Hospital Service, during the week ending April 11, 1903:

SMALLPOX—United States.

ALABAMA:	Mobile	Mar. 28-Apr. 4	2	1
CALIFORNIA:	Fresno	Mar. 1-3-	20	1
	Los Angeles	Mar. 21-28	2	
	Sacramento	Mar. 21-28	1	
	San Francisco	Mar. 26-Apr. 2	5	
	Stockton	Mar. 1-31	4	
COLORADO:	Denver	Mar. 14-28	49	
FLORIDA:	Jacksonville	Mar. 28-Apr. 4	4	
ILLINOIS:	Alton	Mar. 28-Apr. 4	1	
	Belleville	Mar. 28-Apr. 4	1	
	Galesburg	Mar. 28-Apr. 4	2	
	Kankakee	Mar. 24-31	1	
INDIANA:	Elwood			
	Indianapolis	Mar. 22-29	13	
	Kokomo	Mar. 28-Apr. 4	10	
IOWA:	Dubuque			
KANSAS:	Wichita	Mar. 28-Apr. 4	1	
KENTUCKY:	Lexington	Mar. 28-Apr. 4	2	
LOUISIANA:	New Orleans	Mar. 28-Apr. 4	2	
MARYLAND:	Baltimore	Mar.. 28-Apr. 4	2 all imp.	
MASSACHUSETTS:	Boston	Mar. 28-Apr. 4	1	
	Holyoke	Mar. 28-Apr. 4	2	1
MICHIGAN:	Ann Arbor	Mar. 21-Apr. 4	2	
	Detroit	Mar. 21-28	1	
	Grand Rapids	Mar. 28-Apr. 4	15	
	Port Huron	Mar. 28-Apr. 4	10	
MISSOURI:	St. Joseph	Mar. 28-Apr. 4	2	
	St. Louis	Mar. 28-Apr. 4	1	
NEBRASKA:	Omaha	Mar. 29-Apr. 5	7	
NEW HAMPSHIRE:	Manchester	Mar. 28-Apr. 4	7	
	Nashua	Mar. 28-Apr. 4	3	
NEW JERSEY:	Hudson County	Mar. 28-Apr. 4	2	
NEW YORK:	Buffalo	Mar. 29-Apr. 5	2	
	New York	Mar. 31-Apr. 6		1
OHIO:	Cincinnati	Mar. 28-Apr. 4	2	
	Toledo	Mar. 27-Apr. 3	2	
OREGON:	Portland	Mar. 21-Apr. 4	6	
PENNSYLVANIA:	Erie	Apr. 1	1	
	Johnstown	Mar. 28-Apr. 4	3	1
	Norristown	Mar. 28-Apr. 4	1	
	Pittsburg	Mar. 28-Apr. 4	1	
SOUTH CAROLINA:	Charleston	Mar. 28-Apr. 4	25	4

SMALLPOX—Insular.

PHILLIPINES:	Manila	Mar. 28-Apr. 4	7	
BRAZIL:	Pernambuco	Feb. 13-20	1	
	Rio de Janeiro	Feb. 1-28		9

SMALLPOX—Foreign.

COLOMBIA:	Barranquilla	Feb. 27-Mar. 6		8
GREAT BRITAIN:	Birmingham	Mar. 8-15		2
	Bradford	Mar. 14-21	12	3
	Liverpool	Mar.1-14	6	
	London	To Mar. 21	86	8
	Manchester	Mar. 14-21	2	
	Nottingham	Mar. 14-21	8	
	Walker-upon-Tyne	Mar. 14-21	3	
	Wallsend-upon-Tyne	Mar. 7-14	1	
ITALY:	Palermo	Mar. 7-14	1	
MEXICO:	City of Mexico	Mar. 7-14	1	
RUSSIA:	Moscow	Mar.. 15-22	6	5
	St. Petersburg	Mar. 7-14	3	1
		Mar. 7-14	37	5
STRAITS SETTLEMENTS:		Mar. 7-14		4
	Singapore	Mar. 7-14		4
BRAZIL:	Rio de Janeiro	Feb. 27-Mar. 6		27

YELLOW FEVER.

COLOMBIA:	Cartagena	Mar. 9-16		1
	Panama	Mar. 19-26	4	1
ECUADOR:	Guayaquil	Mar. 7-14		17
MEXICO:	Vera Cruz	Mar. 21-28		2

CHOLERA—Insular.

PHILIPPINE:	Provinces	Feb. 7-14	570	270

PLAGUE—Insular.

PHILIPPINES:	Manila	Feb. 13-20		2

Marmorek's Serum in Pneumonia.—Quéhéry and Grandin report in detail a case of pneumonia in a boy of 15, with recovery in 8 weeks upon Marmorek's antistreptococcus serum. Both tubercle bacilli and streptococci were found in the sputum expectorated. They conclude that tachycardia without fever, following acute pneumonia, shows the feeble resisting powers of the individual to infection. The differentiation between acute tuberculosis and mixed pulmonary infection depends on the atypical fever, the more abundant expectoration, the absence of physical signs, and a more rapid, serious course. While fresh air, good food, and drugs have but little effect, injections of Marmorek's antistreptococcus serum seem effective. In this case the tubercle bacilli disappeared under treatment with it. An erythema and some enlarged lymphglands were the only accidents attending recovery. (*Archives de Médecine et de Pharmacie Militaires*, January, 1903.) [M. O.]

The Philadelphia Medical Journal

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See Advertising Page 8

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The Humiliation of the Medical Profession of Pennsylvania by the State Senate.—In a previous issue of this **Journal** we expressed our approval of the proposed amendments to the Medical Act of this State that were finally incorporated in the so-called "Ray Bill." The proposed amendments required of the applicant for admission to a medical school a preliminary education equivalent to that which would lead to a High School diploma, and insured four years of eight months each in preparation for the degree of doctor of medicine, recognizing two years of scientific work in chemistry, physics, physiology, anatomy and the biological sciences as equivalent to the first year in a recognized medical college. According to the Medical Act now in operation there is required a "common school" education (and that not necessarily preliminary to the study of medicine).

The "Ray Bill" was evidently popular with the legislative body and with the profession throughout the State, as it passed the House by a large majority and was reported out of Committee and passed its second reading in the Senate. At this point, the "opposition" succeeded in having orders issued to kill the bill, and so the bill died in Committee, although there was but little doubt that it would have passed the third reading of the Senate and become a law after the Governor had affixed his signature.

What is the significance of the defeat of this bill? In the first place, it means that Pennsylvania as a Commonwealth has put herself on record as disapproving of any efforts to raise the standards of medical education. In this unenviable and humiliating position she stands surrounded by States, each of which will not recognize the low standards which she has elected. New Jersey has just secured amendments to its Medical Practice Act by which the academic standards for *admission to the State examinations* have been raised from a component common school education to a diploma issued after four years of study in a normal, manual or high school of *the first grade* in that State. In Ohio the requirements demanded of medical colleges are still more severe. "As a condition of admission to the examinations of the State Board of Medical Registration, the applicant shall produce either of the following credentials: A diploma from a reputable college granting a degree of A. B., B. S., or equivalent degree, a diploma from a normal school, high school, seminary, legally constituted, issued after four years of study; a teacher's permanent or life certificate; a medical student's certificate of examination for admission to the freshman class of a reputable literary or scientific college; or a certificate of his having passed an examination conducted under the direction of the State Board of medical registration, an examination by certified examiners, none of whom shall be either directly or indirectly connected with the medical college, etc., etc."

The laws of the State of New York require of the prospective student of medicine a preliminary education equivalent to that obtainable in a four years' course in any of the public high schools, recognized by the regents as maintaining a satisfactory standard, before the applicant can be admitted to any class in any medical college in the State. In lieu of this the applicant is required to pass examinations at regular intervals throughout the year.

The interest in the Ray Bill manifested by the profession was twofold. In the first place, the medical profession of this State, once the center of medical education, was in hopes that, in the reform movement now sweeping the land, Pennsylvania would have stood in the forefront and not wait until she was whipped into line after having disgraced herself in the eyes of her sister States. Had the Ray Bill become a law, that much to be desired reciprocity could have been arranged between this and other States. Assurance, we are told, was received from the Board of Regents of New York State that, had such legislation been enacted, requirements could have been prescribed by the Medical Council which would have permitted reciprocity between these two States. Under the present standard of requirements in Pennsylvania her medical diploma is not accepted in many States.

In the second place, the best interest of our medical schools demanded the enactment of such legislation as was prescribed in the Ray Bill, since graduates from many of these institutions will not be permitted even to take the State examinations in some of the neighboring States, inasmuch as many of their students have not had the prescribed education preliminary to the study of medicine.

It is hard to realize that this deplorable state of affairs in medical education has been allowed to exist even up to the present time. For admission to the study of every other subject, whether it is graduate or undergraduate, the minimum preliminary education requires eight years of pre-academic and four years of academic work, such preparation as every boy in the State of Pennsylvania in its public and high schools could obtain at the expense of the State. The study of chemistry, of mechanical and electrical engineering, of finance and economy, of biology, the study of law and of divinity, is only open to those who, in the opinions of educational authorities, have had the early training which is regarded as essential to the proper understanding and comprehension of these subjects. But the study of medicine, at the completion of which the graduate receives a license to take into his hands human lives, is open to the illiterate, who, because of this very illiteracy, would be debarred from even the study, not to say the practice, of any other profession.

If the Supreme Court of Pennsylvania has determined that those who have not had a sound preliminary education are not qualified to enter either the study or practice of law, which deals chiefly with the property of the citizen, why should the study or practice of medicine, to which are entrusted the lives of our citizens, not be equally well safeguarded?

Pure Food and Politics.—It will be most deplorable if the efforts to secure legislation in this country for pure food shall be frustrated by base political methods in the interest of any commercial monopolies. This applies at the present time to the subject of baking powder.

Efforts have recently been made in several of our States to secure legislation against the interests of firms manufacturing alum baking powders. This legislation, it is alleged, has been really in favor of a monopoly which manufactures and sells the non-alum baking powders; but the specious plea has been put forth that the whole thing is due to a regard for the public health. In Missouri a great scandal has arisen, and it is charged that this monopoly has been corrupting legislators. As the investigation of these charges is still under way, we do not intend to discuss the situation in that particular State. What we wish to do is to draw attention to the evils that may arise when the public health is made a cloak for promoting the selfish schemes of corrupt commercial bodies.

In Pennsylvania we have evidently just had the same project before the Legislature; at least we judge so from the fact that Governor Pennypacker has just vetoed a bill that was directed against the manufacturers of alum baking powders, and which required these manufacturers to label their wares: "This baking powder contains alum." The reasons given by the Governor are so extraordinary that we cannot forbear to quote them.

The Governor says:

> "It is evident that the passage of this bill was secured by the manufcturer or vender of some rival baking powder with intent to obtain an unfair advantage. It is evident from the fact that the conspicuous printing of these words would be likely to deter purchasers. It would be entirely proper to require that all baking powders should have upon the outside of the package a label describing the ingredients and their quantities, but it would be manifestly unjust to require one ingredient to be displayed without any reference to quantity."

It will be observed that the Governor's main objection to the bill is that it was secured by a rival with intent to secure an unfair advantage. No reference whatever is made to the question of the public health. The fact that alum baking powders may be injurious does not enter into consideration, but simply the wholly secondary question of a contest between commercial rivals. In other words, the sanitary question is entirely ignored in favor of the commercial one. The fallacy of the whole position could not be more clearly shown, for Governor Pennypacker is a broad-minded man, and not likely to be deceived. But in this instance he has ignored the graver question, because the less important one has been forced upon him by the lobbyists.

In this **Journal** we have no interest in baking powders whatever, except as they affect the public health; and we have good reason to believe that the alum baking powders are objectionable on that score when used largely and persistently. But we do not see why this question should be allowed to become one for settlement in the lobby among a lot of manufacturers. The proposition to label the contents of all food products, and all nostrums and patent medicines, and whatever else is sold that affects the public health, is a wise and fair one, and only those persons can object to it who have some ulterior design, the least important factor in which is a regard for the health of anyone whatever.

The Intraneural Injection of Cocaine in Surgery.—The paper by Dr. John H. Gibbon, which we publish in this issue, contains an account of a most interesting and successful physiological experiment. We call it an "experiment" only in the broader sense that a novel procedure is always something of an experiment so long as it remains in the stage of trial or of proving. Dr. Gibbon may justly be said to have added another instance to those cases in which it has been demonstrated that perfect anesthesia can be obtained by the injection of a solution of cocaine into a nerve trunk, and that this method is a perfectly practicable one for the purposes of surgery. While the method is not original with Dr. Gibbon (as he takes pains to point out), he nevertheless deserves credit for having used it so successfully, and for thus having done much to establish it as a legitimate procedure in surgery.

The thought has occurred to us on reading Dr. Gibbon's paper, that the intraneural injection of cocaine might be a beneficial procedure in such a disease as sciatica. It is true that the method might be only palliative and even very temporary in its effects, but still this could only be shown by a trial. The method would necessarily involve an acupuncture of the nerve—a procedure which in itself is often beneficial—and the exposure of the nerve would even give opportunity for opening the sheath, and thus relieving tension, a further procedure which upon some not entirely *a priori* grounds we have often been tempted to advocate. One autopsy at least is on record, at the Philadelphia Hospital, in the case of a patient with sciatica who died of an intercurrent disease, in which case the sciatic nerve was found deeply congested and packed with the products of inflammation. An incision of the sheath in such a case would probably be beneficial.

The intraneural injection of cocaine may yet be found to have other fields than surgical ones for its successful employment.

The Transmission of Scarlet Fever.—The April number of the *Practitioner* contains a paper by Dr. Lewis C. Parkes, the Medical Health Officer of the Metropolitan Borough of Chelsea, which deals especially with the question of the infectivity of the later stages of scarlet fever and hospital isolation. There has long been a popular idea that, in the later period of scarlet fever when the epithelium is desquamating, the opportunity for contagion is greatly increased. Parkes points out that desquamation of the cuticle is a manifestation of more than one disease; of measles and rötheln to almost as great an extent as scarlet fever, and yet no special infective character has been ascribed to the period of desquamation in the two former diseases. The similarity betwen scarlet fever and diphtheria points to an infective organism for the former, similar in character to that of the latter. In both diseases the symptoms are usually first manifested in the tonsils and soft palate. A most important point brought out by Parkes is the statement that fever hospitals, which have lately taken to discharging scarlet fever convalescents before all traces of desquamation had disappeared, have not shown any consequent increase in the number of cases of the disease which have been admitted to such hospitals for treatment.

The intelligent interpretation of statistics frequently leads us to conclusions at once practical and indubitable. Parkes has shown that in England and Wales, while the number of cases of scarlet fever per annum has remained practically stationary for the last forty years, the death-rate has declined vastly. It is only about one-eighth of what it was in the former period. His tables also show that diphtheria has increased, and that it now causes nearly twice as many deaths as scarlet fever, while measles and whooping cough cause more than twice as many. He holds that the lower death-rate of scarlet fever is not due to a lesser prevalence, but to a change of type—the disease now being of a much milder character than formerly. We are without any facts at our command to conclude that the increased isolation of scarlet fever patients in hospitals has caused any diminution whatever, or any increase whatever, in the prevalence of the disease. We have called attention in these columns on previous occasions to the necessity of remembering the cyclical nature of epidemics; how a disease will increase in severity to a point of maximum intensity and then gradually show a decrease until a very low mark of mortality is reached. The evaluation of any system of treatment or of prevention must take cognizance of the course of the epidemic at the time. The question of the infectivity of the desquamation period of scarlet fever has a distinct economic side. Communities are heavily taxed in maintaining properly equipped institutions for the detention of such convalescents, as it is a matter of vital interest for us to know whether the need acutally exists for such enforced isolation. At the present time the question is *sub judice* and will probably remain open until bacteriologists have discovered a specific scarlet fever organism, and until this has been thoroughly studied.

Literature and Medicine.—The doctor should be an all-around man. It is not enough to be learned in medicine, for the knowledge of the physician has this quality that distinguishes it from the knowledge of all other professional men, except perhaps the soldier or the navigator, that it must be readily available; and no man can have the necessary suppleness of intellect whose mind is muscle-bound, as it were, by a too limited application to one line of thought. Therefore, it is desirable that the medical man should indulge, at least moderately, in the recreation that produces the greatest intellectual broadening, which is literature. It is scarcely necessary to refer to the singular ability, in medicine, of literary doctors, Charcot, Marion Sims, our own Mitchell and a host of others, or the added influence that accrues to an attractive literary style, of which nearly all the classics are examples. But there is no reason why, in reading general literature, a man should not add to his medical information. Clinical histories of the most charming and accurate nature observed in the autobiographies and memoirs of the last century, and some of the cases described, of undoubted authenticity, are both rare and instructive. Take, for example, the remarkable case of Pepys, whose lithotomy wound reopened after many years, the excellent description of cirrhosis of the liver in Fielding's Journal of a voyage to Lisbon, the curious histories of poisonings and sicknesses often accompanied by the autopsy records in Saint Simon's memoirs, or the cases recorded in romances, undoubtedly obtained from good authorities. Thus Fielding, in Amelia, speaks of a case of gonorrheal endocarditis; no autopsy nor cultures, of course, but still a clear clinical history, and, so far as we know, the first described; and the works of the great realists, De Foe, Smollett, Balzac, Zola and a hundred others abound in such reports. "Reading makes a full man," and the physician who has filled his mind with the understanding of the masters of literature, will be better able to handle the human side of his patients; if he has studied the subtleties of their observation, he will be better able to cope with the mysteries of diagnosis. Medicine, any more that statecraft, will never be an exact science, and the greatest physicians, therefore, will not be the men of mere technical training, but those who add to this that knowledge of the human character that is only acquired by the study of its highest production.

Suicide in the United States Army in the Philippines.—A melancholy result of our military operations in the Philippines has been the occurrence of a relatively large number of cases of insanity among our troops. Some months ago we published an interesting paper on this subject by Dr. Richardson, of the Government Hospital for the Insane at Washington. The newspapers have just published an account of the suicide of a lieutenant-colonel, while temporarily insane, and a statement that this is the tenth army officer who has killed himself in the Philippine Islands. Besides these ten, six are entered on the records as having met death by drowning. In several of these cases the drowning is believed to have been intentional.

It is part of the price we are paying for our "world-empire" that a large mortality should occur in the tropics among out soldiers; but to have any of this mortality take this grevous form is most disheartening. The causes are not difficult to trace. The exposure to tropical heat, the fatigues, the poor food, the excesses and the long absence from home, are the patent reasons for this unfortunate showing. Forms of insanity, such as melancholia and nostalgia, are not uncommon among soldiers of all countries, and suicide is one of their untoward results; but it does seem that something might be done to counteract this devastation.

A Remedy Against Rats.—In the *Public Health Reports* there is an account by Assistant Surgeon Donald H. Currie of the use of Danysz's virus for the destruction of rats. The tests were made in San Francisco. The composition of this virus is not given. Surgeon Currie used two tubes which had been supplied by the Pasteur Vaccine Company. The virus was mixed with rye bread and fed to nine rats. In a few days the rats began to sicken. They were then put in separate cages. Into these cages, each containing one sick rat, were then introduced 22 other rats. Within twenty-four days, 8 rats of the original 9 died of typhimurium infection. Of the second series of rats, or those which had been merely placed in contact with the infected ones, 5 died, but all had been more or less ill.

Dr. Currie concluded from this experiment that the virus is a very effective poison (just as arsenic or phosphorus is) for the rats that are directly infected with it; but that it is not reliable as a means of contagion from rat to rat, and therefore that it would not be of great service in exterminating rats in their wild state. It seems that plague is not yet to be vanquished through the rats.

Current Comment.

AN OBLIGING COW.

In an interesting article on the "Milk-Supply of Large Towns" in the *British Medical Journal,* March 28, we find the following remarkable statement: "The driver having finished milking, his cow offered to take me into an adjoining room where the milk was cooled, saying that while he fetched the manager I could have a look around." We submit that there has been nothing so remarkable since the days of Balaam. One would think that with such intelligent cows dairy reform would be easy.

—*Journal of the American Medical Association.*

DOES A GIRL OWN HER FACE?

It has always seemed unjust that any young girl who is endowed with beauty, cannot be protected from the chance of seeing at any time her portrait adorning the label of a patent medicine bottle or a toilet soap advertisement, and it is to be hoped that the new bill introduced into the New York State Legislature to forbid "the use of likenesses or names for commercial purposes without authority," may become a law. In its present shape the bill declares a misdemeanor the uses "for purposes of trade of the name, portrait or picture of any living person without the written consent of such person first obtained," and permits any person whose name or picture is so used to maintain action against the offender to restrain him and to sue for damages. —*New York Observer.*

Correspondence.

ANOTHER GOOD WORD FOR ELDER-FLOWER.

By BEVERLEY ROBINSON, M. D., of New York.

To the Editor of the **Philadelphia Medical Journal:**

I beg leave to say that the elder-flower as a diuretic, referred to by Dr. H. E. Randall, in your issue of April 18, 1903, p. 654, is well known in France as being useful in this respect. In one at least of the services in a large Paris Hospital it is given with notably good effects. In interstitial nephritis, to diminish excessive arterial tension when it is accompanied with threatening or annoying symptoms, an infusion, or decoction, of the bark seems preferable to the fluid extract prescribed by your correspondent.

In some instances, no doubt, elder-flower is more useful and less objectionable than nitroglycerine and the nitrites, when employed for a similar purpose.

Unquestionably, in a fair proportion of cases, in which the quantity of urine is lessened and the specific gravity low, it increase both with advantage to the patient, viz: It wards off menacing uremia and gets rid, in a measure, of serous effusions in the cavities and edema of the limbs. I am glad to corroborate Dr. H. E. Randall's personal experience.

WEALTH, NOT EDUCATION, THE CAUSE OF RACE DECLINE.

By GEORGE J. ENGELMANN, M. D., of Boston.

To the Editor of the **Philadelphia Medical Journal:**

Is it possible that you have so far misjudged me as to believe that I could make so far-reaching an assertion that **wealth, not education, is the cause of race decline,** on the figures and facts presented by those two Harvard and Princeton classes?

Your criticism in the **Journal** of April 18 would make it appear so, and this troubles me, as I have some right to presume that previous work should protect me against the accusation of such superficial trifling, which this would decidedly be.

This question of the sterility and fecundity of American women, or **family size and race decline,** as it is more generally termed, has interested me for some years, and my studies of the fecundity of various groups have demonstrated, long before this question arose, that it is mainly **wealth** and **luxury,** or if not wealth and luxury **achieved, the grasping, struggling for these often inattainable treasures, social ambitions and aspirations** which limit the family size and make welcome all possible means for the prevention of conception and for the destruction of the undesired product if an accident does happen.

You rightly say that "figures for such small numbers do not prove much of anything," they certainly do not, and my opinion is not based on these scant numbers or on a single fact of this kind, but on the study of years, of large numbers and of various groups in different parts of the country, long before I was aware of conditions among college graduate families.

The comparison made in the *Princeton Alumni Weekly,* January 10, '03, of the Princeton and Harvard classes of '95, appeared strikingly corrobative of my views, so much so that I was induced to reply to the call for an explanation of this very marked difference in the family-life of graduates of the two colleges, and I may add that this is not true of the classes of '95 alone; others tell the identically same story, and in the near future I hope to present facts sufficient to convince the most sceptical.

You are certainly right in assuming such number too small to prove anything, and **I did not mean they should; they were cited in corroboration,** but you were wrong to compare the graduates of two colleges, differing so greatly in themselves, with the average American male on the basis of education; we can only compare likes; Princeton and Harvard graduates can be so compared, education is the same, wealth is the factor in which they differ; the average native male differs in both education and wealth, if not in other points, and other standards must be applied, which makes the question a complicated one, too much so for discussion in a letter such as this, written only to protect myself against the accusation of having sought to build a structure which will have to withstand many storms on so slender a foundation.

If you have so misnuderstood me, others have, I am sure, and I beg you to make this explanation.

[**Note by the Editor:**—The statistics of the Harvard and Princeton classes of '95, to which Dr. Engelmann refers, contain no statements whatever about the comparative wealth of either Harvard or Princeton men, and, therefore, his conclusions, to which we referred in our editorial, do not seem to us to be justified. The figures referred entirely to the number of children born to members of these two classes and to the average American citizen, and were too meagre, in our judgment, to admit of definite conclusions.]

ELECTRICITY AND NERVE-FORCE.

By A. L. BENEDICT, of Buffalo, N. Y.

To the Editor of the **Philadelphia Medical Journal:**

There have recently appeared in medical journals several articles contending that electricity and nerve-force are identical. While this was the early belief, on account of the striking analogy presented to superficial consideration, most physiologists have expressed a contrary view, and, in lecturing to students, I used to employ a homely comparison to horses that might resemble each other in appearance, but which were easily distinguished by differences of speed. It is commonly stated that nerve currents travel 30-60 meters per second, electricity about 290,000 miles per second. Has this statement been disproved by recent scientific investigations?

Reviews.

Saunders' Question Compends.—Essentials of Diseases of the Ear. By E. B. Gleason, S. B., M. D., Clinical Professor of Otology, Medico-Chirurgical College, Philadelphia; Surgeon in Charge of the Nose, Throat and Ear Department of the Northern Dispensary, Philadelphia, etc. Third Edition, Thoroughly Revised. 16 mo. volume of 214 pages, with 114 illustrations. Philadelphia and London; W. B. Saunders & Co., 1902. Cloth, $1.00 net.

This little book is dedicated to Prof. B. Alex. Randall, whose influence in this field has been so powerful and beneficent. The entire subject of otology is covered, and in a way that is never fragmentary and vague, but always clear and complete. The anatomical descriptions are admirable, the symptomatology and natural history of the different diseases are well portrayed and the operative technique accurately given. After reading the book the student may suppose that ossiculectomies, paracenteses and Wilde's incisions are more frequently performed than they really are, and in the study of some of the diseases he may be bewildered by the number of remedies at his disposal (p. 107 to p. 110).; but, on the other hand, he will be glad to know many various treatments for tinnitus, for chronic catarrh of the middle ear (p. 119 to p. 124), and other intractable conditions. The work is in every way up to the standard of the Question-Compend Series. [W. G. B. H.]

Biological Laboratory Methods. By P. H. Mell, Ph. D., Director of the Alabama Experiment Station, Professor of Geology and Botany, Alabama Polytechnic Institute. The Macmillan Company. New York and London.

This little volume is intended for Experiment Station workers and students in agricultural colleges who desire to take up biological research. It is elementary in its scope, covering the well-known biological methods, as imbedding, injecting, staining, mounting, etc. Several chapters are devoted to a full description of the microscope and a few others to the art of making microphotographs and lantern slides. There are also a number of useful tables and formulæ. The book, however, is not without its weak points, and the weakest of all is the chapter on bacteriological technique, and especially the part dealing with cultural methods. It is decidedly amateurish, inadequate even for beginners, vaguely written, and contains a number of inaccurate and misleading statements. The preparation of media is described in a desultory manner and can certainly be of no use to one who intends to engage at all in a systematic study of bacteria. In describing the preparation of potato, the author advises to sterilize the medium for "an hour each day for several days" (how many?). Fluid bloodserum is to be sterilized "with a temperature of 80° C. to 90° C. for one hour" for six successive days. Fractional sterilization below the point of coagulation is evidently intended, and yet a temperature of 80°-90° C. is recommended. "The color of the serum," the author says, "should be pale straw, and transparent," that is after sterilization at such high temperature. To coagulate the bloodserum, the temperature should be raised to 100° C. A pity the author failed to look up the point of coagulation of albumin. The preparation of Löffler's solid bloodserum is only mentioned, and yet this medium is of much greater importance than the fluid serum. In describing the methods of cultivation of bacteria, the author always speaks of a sterile pipette, not even mentioning the platinum needle, which has become so indispensable in bacteriological technique. He also dwells unnecessarily on the older and obsolete methods of cultivation, paying but little attention to the newer and simpler procedures. As instances of vagueness and extremely poor diction, the following sentences will serve: "The end of the test-tube, containing the cotton plug, is passed through the flame of a Bunsen burner until the latter (the plug and not the burner) ignites, when the flame is put out (from the plug and not the burner). This action is for the purpose of destroying all bacteria that may have lodged in the dust settling from the air" (again, on the plug and not the universe). In making plate cultures, the author recommends that the nutrient "fluid" (either gelatine or agar) be warmed until "liquid" and then "inoculated with a trace of bacterial mixture." In the case of agar the point at which this solid (not fluid) becomes liquefied is sufficiently high to kill certain micro-organisms. There is, of course, a rule to cool down the melted agar to 42° C., but of this no mention is made. A counting apparatus, according to the author, is for the purpose of finding out "how many individuals belong to a colony." It is to be regretted that the author did not exercise greater care in the preparation of this, the most important, chapter in his otherwise useful book. [A. R.]

The Treatment of Fractures. By Chas. L. Scudder, M. D., Assistant in Clinical and Operative Surgery, Harvard Medical School. Third Edition, revised and enlarged. Octavo, 480 pages, with 645 original illustrations. Philadelphia and London. W. B. Saunders & Co., 1902. Polished buckram, $4.50 net; half morocco, $5.50 net.

This beautiful and very handsomely illustrated volume contains many practical suggestions, and its precepts for treating fractures are in the main satisfactory. The characteristics observable in the earlier editions are, however, still preserved, and, in the opinion of the reviewer, need modification to make the book truly representative of modern surgery, as applied to osseous lesions. Reference is here made to the author's conservatism and what may, with justice, perhaps be called an unnecessary fussiness and complication in fracture dressings. This criticism is, it is thought, justified by the treatment advocated for fractures of the cranium, the stress laid on measuring the legs in fractures of the femur, the lack of stress laid on the use of plaster of Paris, and the number of splints and compresses advised in some fractures of the extremities.

The book would probably be improved by an initial chapter on the principles underlying the treatment of all fractures, in which might be incorporated the chapters on the use of plaster of Paris, on the value of the Röntgen rays and on the epiphyses. These chapters are now found at the end of the book.

This edition has had added a chapter on gunshot fractures. [J. B. R.]

News and Notes.

AMERICAN

PHILADELPHIA AND PENNSYLVANIA.

Fighting Smallpox in Pennsylvania.—Regulations for the disbursement of the $50,000 placed at the disposal of the State Board of Health to aid in the suppression of smallpox were adopted April 23. These regulations, which have been printed, state that the fund shall not be used for any other purpose than for assisting local communities during the prevalence of smallpox, for the period covered by the act, and for meeting reasonable expenses incurred in the suppression of the disease.

Frankford Hospital, Philadelphia.—The house and grounds at the corner of Penn and Sellers streets, Frankford, have been purchased by the trustees of the Frankford Hospital The house contains 20 rooms and will accommodate 50 patients. These quarters, however, will only be temporary.

The Health of Philadelphia.—During the week ending April 25 an increase was noted in the number of cases of typhoid fever and smallpox reported, while there was a marked decrease in the number of cases of diphtheria and scarlet fever reported. There were 179 cases of typhoid fever with 8 deaths, as compared with 160 cases with 26 deaths during the preceding week, and 22 cases of smallpox with one death, as compared with 10 cases with one death during the previous week. There were but 61 cases of scarlet fever with 4 deaths, against 89 cases with 4 deaths during the week previous and 25 cases of diphtheria with 14 deaths, against 48 cases with 4 deaths during the week preceding. The number of cases of typhoid fever in West Philadelphia, especially, has been quite large. About 35% of all medical cases under treatment have typhoid fever. The cases of scarlet fever are exceedingly mild in character.

Anti-Cocaine Bill Passed.—The bill fixing a penalty of $100 or 6 months imprisonment for the sale of cocaine or any patent or proprietary remedy containing cocaine, without a physician's prescription or to a habitual user of cocaine, which passed both branches of the Legislature, was signed by Governor Pennypacker, April 22, thus becoming a law.

Methodist Episcopal Hospital, Philadelphia.—Telephones have been installed throughout this hospital, so arranged that patients in bed may be able to talk to their friends both in the city and at long distances. Each building, ward and private room in the hospital now has one or more telephone receivers, so that any patient, whose condition does not prohibit his participating in the benefits of this scheme, may converse with relatives and friends who are in touch with the telephone. Patients will be charged for all calls, both local and long distance.

Society Meetings Next Week.—The following societies will meet next week at the College of Physicians, Philadelphia, at 8.15 P. M.: Monday evening,, May 4, Academy of Surgery; Wednesday evening, May 6, College of Physicians, and Thursday evening, May 7, Obstetrical Society.

Dr. Kehr in Philadelphia.—Professor Kehr, of Halberstadt, Germany, sailed for America last Tuesday upon invitation of the American Surgical Association. He will at once proceed to Philadelphia as the guest of his friend, Dr. M. J. Stern, of the Philadelphia Polyclinic. The trustees of this institution have taken advantage of this opportunity and have arranged for a series of clinics which Dr. Kehr will hold on May 6, 7 and 8. Prof. Kehr, one of the greatest abdominal surgeons of Europe, has identified himself particularly with surgery of the biliary tract and has operated for gall-stones alone between 800 and 900 times. The trustees of the hospital hope that the profession will avail themselves of this opportunity and at once send such patients to the hospital as may benefit by the skill of this distinguished surgeon. When advice is sought, it is requested that the communication be by telephone or telegram, on account of Dr. Kehr's limited visit. It is said that a reception will be given in honor of Dr. Kehr by the Medical Club of Philadelphia, and a number of dinners will be given by prominent medical men also in his honor.

NEW YORK.

New York Free From Smallpox.—At this time last year there were more than 240 cases of smallpox in New York

City; at present there are none at all. This is considered by the Health Commissioner to be due wholly to the readiness with which cases of smallpox are reported to the Board of Health. There were 810,280 persons vaccinated during 1902, and so far this year the figures have been approximately as high.

College of Physicians and Surgeons, Columbia University, New York City.—Dr. G. M. Peabody, professor of materia medica and therapeutics, and Dr. G. M. Tuttle, professor of gynecology, have resigned. It is rumored that Dr. R. F. Weir, professor of surgery, and Dr. J. S. Curtis, professor of physiology, are also contemplating resigning. Dr. Weir has been a member of the faculty for over 30 years, and Drs. Peabody and Tuttle have served almost 15 years. The reason for these resignations is said to be the fact that a new curriculum, devised by the committee, consisting of Drs. J. M. McLane, W. T. Bull, and Francis Delafield, will give these professors more work than they can attend to satisfactorily, beside the exactions of their private practices. The new scheme devised for next year almost doubles the number of lectures to be delivered. The college also has organized class-room recitations, believing private quiz-classes to be detrimental to the organized work of the school. Dr. Tuttle's resignation has been accepted and Dr. E. B. Cragin, professor of obstetrics, becomes professor of gynecology also, next term. Dr. Peabody's resignation will soon be considered. In the meantime Dr. Christian Herter is to take his place.

Resolutions of the Medical Board of the General Memorial Hospital on the Death of Dr. T. Gaillard Thomas.—Resolved: That, by the death of Dr. T. Gaillard Thomas, we have lost an eminent member of the consulting staff, who had been connected with the hospital since its foundation. He has gone to his reward, crowned with years and honors, wearing both with grace and dignity; That a copy of this resolution be sent to the family of the late Dr. Thomas, and that it be published in the medical press.

NEW ENGLAND.

Massachusetts General Hospital.—Suit was brought, recently, by the widow of a man who died at the Massachusetts General Hospital, because an autopsy had been performed; it was claimed, without her permission. A verdict for the defendants, the physicians who had performed the autopsy, was the finding of the judge, who said that such action must have been performed against the express wish of the family, in order to warrant a finding against the hospital authorities. In this case autopsy was performed under the impression that the relatives had given their consent.

The Cause of Smallpox.—At the meeting of the Boston Society of Medical Sciences, April 28, Dr. W. T. Councilman, professor of pathological anatomy in the Harvard Medical School, demonstrated the details of his investigations, showing the cause of smallpox to be protozoa. He based his announcement on the results of experiments conducted by the aid of Drs. G. B. Magrath and W. R. Brinkerhoff, with the co-operation of the Boston Board of Health. He concluded that the protozoa resided in the skin. The introduction of these protozoa into the skin of animals showed unquestionable smallpox infection.

SOUTHERN STATES.

The Naples Table Association Prize.—Dr. Florence R. Sabin, of Denver, Col., at present assistant in anatomy in Johns Hopkins Medical School, Baltimore, a graduate of Smith College and of Johns Hopkins Medical School, has been awarded the prize of $1,000, offered 2 years ago by the Naples Table Association, for the best thesis on individual research in biology, physics, zoology or chemistry. This association is composed of the alumnæ of woman's colleges in the United States, who have endowed a laboratory for special research at Naples. The award was made at Smith College, Northampton, Mass., April 18, by 12 professors representing the biological, chemical and physical sciences. Ten other papers were presented. Dr. Sabin's work was an investigation of the origin of the lymphatic system. She is also the first woman to have been appointed an instructor at Johns Hopkins Medical School.

American Academy of Medicine.—The Twenty-eighth annual session will be held at Washington, D. C., May 11 and 12, under the presidency of Dr. Charles McIntire, of Easton, Pa. Among those reading papers are Drs. G. H. Makuen and R. G. Curtin, of Philadelphia; A. M. Holmes, S. G. Bonney and Edward Jackson, of Denver, Col.; V. C. Vaughan, of Ann Arbor; P. A. Morrow and L. D. Bulkley, of New York; C. G. Gerrish, of Portland, Me., and W. H. Welch, of Baltimore.

To Exclude Mosquitoes.—Efforts are to be made during the coming summer to exterminate mosquitoes in the District of Columbia, and new quarantine regulations have recently been issued to prevent the introduction of both the foreign and domestic breeds of the mosquito into the United States. Orders have been given for draining off all pools of stagnant water, and oil will be used where this cannot be done completely. The regulations which compel property owners to cover or drain off water, and all other precautions to prevent breeding of mosquitoes will be rigidly enforced this summer. The new quarantine regulations are the first to have been issued since 1899. They cover 36 pages of printed matter and contain, besides all the laws relating to the subject, 185 specific regulations governing the subject. The mosquito figures in several of these regulations, which constitute substantially all the new features of the quarantine precautions. Definite instructions are given for the destruction of mosquitoes on board ships leaving foreign ports for the United States, particularly if the ship is leaving a country in which yellow fever is prevalent. During the passage of the ship, if a passenger becomes afflicted with malarial or yellow fever, the regulations prescribe that he shall be covered with mosquito netting, and that the apartment in which he is confined shall be carefully screened against the mosquito. On the arrival of the vessel at the port of discharge precautions against the mosquito are again to be taken. The ship must be fumigated for its destruction, and this fumigation must be thorough and the destruction of the mosquito must be positive. Regulations to guard against the admission of plague to the United States are also emphasized. A vessel in quarantine for plague will not hereafter be allowed to anchor near enough to shore to allow rats to swim from the vessel to shore, and the sweepings of the decks even are to be burned and not thrown overboard. Fumigation for the destruction of rats and all forms of vermin is prescribed in this instance, as well as of the most careful scrutiny of the passengers of the vessel. The regulations are the most specific and explicit on all subjects ever issued and were prepared by Surgeon-General Wyman, U. S. P. H. and M.-H. S.

Against Tuberculosis.—Dr. Herman M. Biggs, director of the bacteriological laboratories of the New York Health Department, delivered an address in Baltimore, April 24, on the methods of dealing with tuberculosis and the means of preventing its spread. Dr. William Osler presided and introduced Dr. Biggs. Health Commissioner Bosley then discussed 3 things which he considered of prime importance in dealing with tuberculosis; the construction and maintenance of sanatoria for the treatment of curable cases, the establishment and maintenance of hospitals for incurable cases, and the reporting and registration of cases in Baltimore. Drs. J. S. Fulton and W. S. Thayer discussed the subject.

National Confederation of State Medical Examining and Licensing Boards.—The thirteenth annual meeting will be held in New Orleans, May 4, with Dr. N. R. Coleman, of Columbus, O., as president. Papers will be read by Dr. Rudolph Matas, of New Orleans; Dr. A. F. Barrow, of St. Francisville, La.; Dr. Henry Beates, of Philadelphia; Dr. W. F. Morrow, of Kansas City; Dr. F. A. Larue, of New Orleans; Dr. S. B. McGavran, of Cadiz, O., and Dr. E. L. McGehee, of New Orleans.

Medical School Commencements in Baltimore.—At the annual commencement of the Baltimore University School of Medicine, held April 21, 24 physicians were graduated, including 2 young ladies. The commencement exercises of the College of Physicians and Surgeons were held April 30, at which almost 80 physicians were graduated. The Baltimore Medical College will hold its commencement May 12, at which over 100 physicians are to be graduated. The Maryland University School of Medicine will hold its commencement exercises May 19, graduating about 120 physicians, while the Medical School of Johns Hopkins University has its final exercises in connection with the University commencement, June 9. There are 50 graduates from this medical school, making in all almost 400 physicians to be graduated this spring in Baltimore.

American Gastro-Enterological Association.—The sixth annual meeting will be held in Washington, D. C., May 14, under the presidency of Dr. J. C. Hemmeter, of Baltimore. An address will be delivered by Professor C. E. Ewald, of Berlin, Germany. Among those to read papers are Dr. Max Einhorn, of New York; Dr. G. W. McCaskey, of Fort Wayne, Ind.; Dr. F. H. Murdoch, of Pittsburg, Pa.; Dr. H. W Bettmann, of Cincinnati, O.; Dr. F. B. Turck, of Chicago; Dr. J. B. Sawyer, of Cleveland; Dr. J. C. Johnson, of Atlanta; and Dr. C. D. Spivak, of Denver.

Easton Hospital, Easton, Md.—At a meeting, held April 17, a board of directors and incorporators was elected. At the same time it was decided to institute the hospital for the benefit of the residents of Queen Anne's, Caroline and Talbot counties.

American Urological Association.—The second annual meeting will be held at the New Orleans Polyclinic, May 8 and 9, with Dr. Ramón Guiteras, of New York, as president. Among those who will read papers are Drs. W. H. Thomson, R. T. Morris, A. H. Goelet, A. B. Johnson, Winfield Ayres, A. E. Gallant, R. C. Kemp, L. C. Begg, A. S. Boyd, W. Y. Otis, E. H. Grandin, J. B. Bissell, W. Meyer, John Van Der Poel, A. L. Wolbarst, F. C. Valentine and T. M. Townsend, of New York; F. Kreissl, G. Kolischer, and L. E. Schmidt, of Chicago: J. W. Bovee, of Washington; J. R. Eastman, of Indianapolis; G. MacGowan, of Los Angeles; A. L. Chute, of Boston; G. S. Peterkin, of Seattle, and August Ravogli, of Cincinnati.

MISCELLANY.

Army Sanatorium in the Philippines.—A large modern hospital and recuperation station is to be built in the mountains near Mariveles, at an elevation of about 2000 feet. It is intended to provide, here, a general station where officers and men suffering from the effects of tropical service may be sent to recuperate.

Cholera in the Philippines.—Cholera has attacked troops on the Island of Mindanao, where 7 deaths were reported April 16. Many suspected cases are reported. It is supposed that the disease was contracted near Bacalod, which was captured April 8. The sick have been sent to the hospital at Camp Vicars.

No Yellow Fever in Cuba.—The State Boards of Health of Louisiana and Alabama are insisting on the disinfection of vessels arriving from Cuba, as has always been the practice heretofore. Surgeon-General Wyman, U. S. P. H. and M.-H. S., declares, however, that the time has passed when disinfection of every ship that arrives from Cuba is necessary. No case of yellow fever has originated in Havana within the past 2 years, and there is no case of yellow fever in the entire island at present. Under American rule, followed by the new Government, Havana has become one of the most sanitary cities in the world. Precautions will be taken, however, against vessels coming to the United States from Havana, which have previously sailed from Mexican ports. All such vessels will be disinfected by the Cuban health authorities after May 1.

Smallpox in the United States.—Between December 27, 1902, and April 24, 1903, 15,919 cases of smallpox with 441 deaths have occurred in the United States, as compared with 29,666 cases with 882 deaths for the same period last year.

Yellow Fever in Costa Rica.—A despatch dated Port Limon, April 10, states that there were 2 cases of yellow fever with a positive diagnosis, one of the patients being already convalescent, and 4 other cases which were considered suspicious.

Pan-American Medical Congress.—At a meeting of the International Executive Committee of the Pan-American Medical Congress, held in New York, April 1, it was decided to hold the fourth Pan-American Medical Congress in Buenos Ayres in 1905, and not in 1903. This change was made on account of the meetings of the American Medical Association in New Orleans, the Congress of Physicians and Surgeons in Washington, and the International Medical Congress of Physicians in Madrid, all of which have meetings this spring. It would have been impossible to have attended the Pan-American Congress also, had that been held this June.

Obituary.—Dr. Joseph Steel Eastman, at Berkeley, Cal., April 19, aged 49 years.—Dr. F. A. Sweet, at Bisbee, Ariz., April 15.—Dr. Edward Jaquelin Harrison, at Woodbine, Va., April 19.—Dr. James T. Greeley, at Merrimack, N. H., April 20, aged 63 years.—Dr. John M. Allen, at Chester, Pa., April 20, aged 84 years.—Dr. W. L. Robinson, at Danville, Va., April 21, aged 73 years.—Dr. Washington F. Anderson, at Salt Lake, Utah, April 21, aged 81 years.—Dr. Franklin A. Sherman, at Ballston, N. Y., April 22, aged 75 years.—Dr. Thomas Piñeo, at Brooklyn, N. Y., April 19, aged 38 years.—Dr. R. R. Breich, at Ringtown, Pa., April 22.

FOREIGN.

GREAT BRITAIN.

Royal College of Surgeons, England.—Dr. A. M. Paterson, professor of anatomy in University College, Liverpool, and Dr. Arthur Robinson, professor of anatomy in King's College, London, have been appointed Hunterian professors at the Royal College of Surgeons.

Aberdeen University.—Sir Frederick Treves, who was an examiner in medicine in the University of Aberdeen, 19 years ago, received the honorary degree of LL. D., April 8, last.

College of Surgeons, London.—The Council has awarded the Jacksonian Prize, for 1902, to Mr. T. Crisp English, M. R. C. S., of St. George's Hospital, for a dissertation upon Fracture of the Skull, its Consequences, Immediate and Remote.—Sir Francis H. Lovell, C. M. G., dean of the London School of Tropical Medicine, formerly surgeon-general of Trinidad, has been elected an honorary fellow of the London College of Surgeons after having been a member for 20 years.

The Increase in Suicide.—Recent English statistics show a great increase in the number of cases of suicide in the past 20 or 30 years in all but a few countries of Europe. The proportion in France during the past 25 years increased from 157 to 224 per million of population. In Germany it was about the same, and Belgium showed only a somewhat less proportion. In Russia there was no increase. Austria increased by 39 per million, Hungary by 27, Australia by 24, Ireland by 8, Scotland by 18, and England by 15 in the same period. In England there has been a steady increase for 50 years. In 1860 the number of suicides was 1,357. In 1896 it had reached 2,639, of whom 1,971 were men and 668 women. In all countries suicides have been more common among men than women. The proportion of women to men is greatest in America and Spain. England comes next, with 26 women out of every 100 suicides. In the 10 years between 1887 and 1897 there were in England over 400 suicides of persons under 15 years of age. Of these 76 were girls.

Obstetrical and Gynecological Society, Glasgow.—Dr. Howard A. Kelly, of Baltimore, honorary president of this society, is expected in Glasgow this June to deliver a presidential address.

The Modern English Boy.—A writer in the *Westminster Review* makes a comparison of the physique of the public school boy of to-day with his predecessor, taking Marlborough and Rugby as examples. The Marlborough measurements were taken from 1874 to 1901, and those of Rugby from 1879 to 1901. The advantage is shown to be with the modern boy. At Marlborough a boy of thirteen to-day weighs on an average 5½ pounds more and is two inches taller than the boy of thirteen in 1874. An eighteen-year-old boy to-day is 4½ pounds heavier and nine-tenths of an inch taller. The Rugby boy of thirteen of to-day is 2½ inches taller and rather over 6 pounds heavier than the thirteen-year-old boy of 1879. The seventeen-year-old boy shows an increase in height of nine-tenths of an inch, but a diminution of one pound in weight.

CONTINENTAL EUROPE.

International Congress Against Alcohol.—At the meeting, held in Bremen, April 15, Dr. Delbrueck was elected president for the coming year. After an introductory speech by the German Home Secretary, who pointed out that the increased mental and physical strain occasioned by the growth of civilization was leading to an excessive indulgence in drink, Dr. John Bergmann, of Stockholm, read a paper on modern civilization and the struggle against alcohol. At the afternoon session Dr. Segrain, of Paris, spoke on alcoholism and tuberculosis. He said that the use of alcohol predisposes the human system to tuberculosis, and also prevents the cure of it. Alcoholism intensifies the effect of diseases which create conditions best fitted for the ravages of tuberculosis. Since the triumph over tuberculosis, the real individual and social treatment for tuberculosis consists in the strictest abstinence from alcoholic liquors. A lively discussion ensued, Professor Hueppe, of Prague, supporting the views of Dr. Segrain. Professor Labsky, of Cracow, demanded that all luxuries, including alcoholic drinks, be banished from sanatoria for tuberculosis and said the sanatoria must assist the warfare against alcoholism. Dr. Daumm claimed that the experiments of Dr. Cheauvan, made to show that alcohol, even in small doses, was poisonous to the system, have a negative value. Nevertheless, indulgence in alcohol must be avoided by athletes, sailors, soldiers and youths.

In Honor of Dr. Huchard.—Subscriptions are now being collected to pay for a medallion by Boucher, to contain a profile of Dr. Henri Huchard, to be presented to him by his friends and pupils, in honor of the completion of 30 years during which he has been editor-in-chief of *La Presse Médicale*. Dr. Huchard, who is physician to the Necker Hospital, Paris, has recently been promoted to the grade of officer in the Legion of Honor. The chairman in charge of the committee having this affair in charge is Dr. Guyon, the secretary and treasurer is Dr. Fiessinger, 5 Rue de la Renaissance, Paris.

German Otological Society.—The twelfth annual meeting will be held in Wiesbaden, May 29 and 30, with Professor Körner, of Rostock, as president. Professor Denker, of Erlangen, will read a paper upon stapes ankylosis. The secretary is Professor Arthur Hartmann, Roonstrasse 8, Berlin.

Collège de France.—Dr. B. A. Charrin, director of the Laboratory of Experimental Medicine of the Collège de France, has just been appointed professor of pathology, in the chair recently established in that institution.

International Congress of the Medical Press.—This congress was held in Madrid, April 21. After an address of welcome by the Minister of Public Instruction, replies were made by Drs. Wood and Crayer, in behalf of the American delegates.

University Notes.—**Bonn:** The new ophthalmological clinic of the university has just been completed and is soon to be dedicated. It is a perfectly modern building, excellently equipped with all improvements.—**Copenhagen:** Drs. V. Henriques, A. V. Mörkeberg and S. Paulli have been made professors.—**Geneva:** Dr. G. Haltenhoff has been made professor of ophthalmology.—**Graz:** Dr. A. Tobeitz has been appointed professor.—**Halle:** Professor Sobernheim left, 2 weeks ago, for the Argentine Republic, to spend 4 months there inoculating the cattle of the Liebig Company against anthrax.—**Jena:** Professor Felix Skutsch has resigned.—**Königsberg:** Dr. Franz Meschede, professor of psychiatry, has recently resigned as director of the Municipal Insane Asylum.—**Munich:** Dr. Bollinger, director of the Pathological Institute and professor of pathology, celebrated his sixtieth birthday, April 2 last.—**Vienna:** Dr. Isidor Neumann, director of the clinic and department for syphilography, who celebrated his seventieth birthday last year, will be retired this spring.

The Osiris Prize.—As we announced in our issue of April 11, (page 617), the Osiris prize of $20,000 has been unanimously awarded by the Institut de France, to Dr. Pierre Paul Emile Roux, sub-director of the Pasteur Institute, Paris. Dr. Roux is 50 years old and his work, both as an aid to Pasteur, and in co-operation with Dr. Yersin, is well known. The prize is awarded every 3 years for the most remarkable discovery in science, letters, art or industry for anything benefiting the general public. It was awarded to Dr. Roux for his valuable scientific labors, especially for his discovery of a diphtheria serum.

Congress on Thalassotherapy.—This congress was held at Biarritz, France, last week. Dr. Albert Robin read an extensive article upon the condition under which sea-water treatment could be beneficially employed. He pointed out the fact that people with consumption should avoid marine treatment. The congress studied sea-air and sea-water treatment, indications for which are not yet generally known.

Obituary.—Dr. Francisco Colzi, professor of clinical surgery in the Medical School of Florence, Italy, died recently. —The death is also announced of Dr. S. M. Vassilieff, professor of clinical medicine in the Yourieff Medical School.

The Latest Literature.

BRITISH MEDICAL JOURNAL.

April 11, 1903.

1. A Clinical Lecture on the Diagnosis of Pregnancy. W. S. A. GRIFFITH.
2. On Recurrent Abortion, with Special Reference to that Form Due to Deficient Vitality of the Mother, of Both Parents, and Often Associated with Some History of Tuberculosis. JOHN W. TAYLOR.
3. Eclampsia of Pregnancy, with Notes on the Use of Bossi's Dilator. T. ARTHUR HELME.
4. Cases of Dystocia Due to Uterine Myoma; Cesarean Section. GILBERT KEMPE.
5. Pregnancy Complicated by Suppurating Hydatid Cyst of the Liver. RICHARD JONES.
6. Puerperal Hyperpyrexia of Malarial Origin. PERCY B. SPURGIN.
7. The Radical Cure of Inguinal Hernia in Early Infancy. B. H. NICHOLSON.
8. A Note on Some Radiographs Illustrating Congenital Dislocation of the Hip. DAVID MORGAN.
9. Clinical Lecture on the Importance of Early Removal of Doubtful Tumors of the Breast. J. C. RENTON.
10. A Case of Infantile Scurvy. HUGH S. BEADLES.
11. The Physiological Laboratory of McGill University, Montreal. W. S. MORROW and WESLEY MILLS.

1.—Griffith speaks of the difficulty encountered in making the **diagnosis of pregnancy.** He notes the irregularity of the menstrual history, and emphasized the importance of a careful examination of the breasts. An organ which is previously quite passive and which begins to show signs of activity is a very suspicious sign of early pregnancy. An examination of the abdomen, of course, will complete the diagnosis. The uterine enlargement will be found, and 1½ inches should be allowed for each completed month of pregnancy. [W. A. N. D.]

2.—Taylor states that but little has been written on **recurrent or habitual abortion.** He concludes under the title of recurrent abortion only those cases in which from the beginning, or from some definite epoch, the patient has aborted with every succeeding pregnancy, and especially does he restrict it to cases of initial or primary recurrent abortion; that is, to patients who from the beginning of their married life have never been able to bear a living child at term. Syphilis is undoubtedly one of the chief causes of this condition. Intraperitoneal adhesions, especially those associated with chronic appendicitis, are a common cause of recurrent abortion. Another very occasional cause is a deep laceration of the cervix. [W. A. N. D.]

3.—Helme remarks that eclampsia is still a fruitful source of anxiety to the obstetrician. The cause is as yet unknown. Albuminuria occurs without eclampsia (only 25% of albuminurics develop eclampsia), and eclampsia occurs without albuminuria. The liver has been accused of being the seat of trouble, the condition being regarded as an auto-intoxication due to hepatic insufficiency. Others have claimed that thyroid insufficiency is the cause. There is a general tendency to accept the idea that in eclamptics there is a toxic state of the blood; but whether this is due to increased production of normal toxins or diminished destruction or excretion from inadequacy of one or all the emunctories, does not appear. The bacillary origin of the disease has not been proved. The theory of the fetal origin of the toxemia has its adherents. The author is not in favor of Cesarean section or other extreme methods in the treatment of this disease. He would terminate the pregnancy rather than perform some grave surgical operation. [W. A. N. D.]

4.—Kempe records a case of **dystocia due to uterine myoma** in a woman, 34 years of age. A successful Cesarean section was performed. [W. A. N. D.]

5.—Jones reports a case of **pregnancy in a primipara, complicated by suppurating hydatid cyst of the liver,** which had ruptured into the chest cavity. Operation was performed, but the patient expired on the fourth day from exhaustion. [W. A. N. D.]

6.—Spurgin reports a case of **puerperal hyperpyrexia of malarial origin** occurring in a primipara after craniotomy on the after-coming head.The patient had a rise of temperature which was believed to be a tertian ague and which responded to the administration of full doses of quinine, 25 grains of the drug being exhibited every 2 hours for 2 days. [W. A. N. D.]

7.—Nicholson describes his method of operating upon **inguinal hernia in early infancy.** He performs the Bassini operation without opening the scrotum. In congenital hernia he isolates the sac for a short distance only at its neck, not interfering with the distal portion. He applies a collodion dressing and a plaster-of-Paris spica. A wide rubber-tube is attached to the skin of the base of the penis with 4 interrupted stitches, the tube draining into a receptacle on the floor. [F. T. S.]

8.—Morgan publishes a number of **radiographs illustrating congenital dislocation of the hip.** [F. T. S.]

9.—Renton urges the importance of **early removal of doubtful tumors of the breast,** and reports 5 cases showing the wisdom of this procedure. [F. T. S.]

LANCET.

April 11, 1903.

1. The Lumleian Lectures on Infective Endocarditis Mainly in its Clinical Aspects. (Lecture I.) T. R. GLYNN.
2. An Address Entitled a Fragmentary Contribution to the Operative Treatment of Chronic Suppuration Within the Temporal Bone. CHARLES A. BALLANCE.
3. Nerve Suture and Nerve Regeneration. PAUL B. HENRIKSEN.
4. Some Dangers of Hypnotics. NESTOR TIRARD.
5. The Surgical Treatment of Puerperal Pyemia. ERNST MICHELS.
6. An Example of Direct Infection in Typhoid Fever. P. HORTON-SMITH.
7. A Case of Congenital Periosteal Sarcoma in an Infant, Arising in Connection With the Acromion Process of the Left Scapula; Removal. Recovery. HENRY CURTIS.
8. A Case of Goiter in an Abnormal Thyroid Gland. HAROLD S. BARWELL.

1.—Glynn contributes an article on **infective endocarditis mainly in its clinical aspects.** He first sketches the historical side of this disease. He emphasizes the important fact that it is sometimes difficult to differentiate between benign and infective endocarditis, the difficulty being one of degree, and that the distinction may be considered from 3 points of view: (1) The clinical, (2) the anatomical and (3) the bacteriological. He describes the vegetations as being usually numerous, large and fungating, and associated in some instances with ulceration of the valve or endocardium or rupture of the chordæ tendineæ, and that the vegetations, as a rule, contain micro-organisms. The blood may contain bacteria. He divides infective endocarditis into 2 principal forms, one, rheumatic; the other, septic due to pyococci. The vegetations of benign endocarditis may contain micro-orginasms. The condition occurs more often in males than in females. Referring further to the etiology, he points out that in his cases there was a rheumatic history in 53% of the males and in 73% of the females. The aortic and mitral valves together were the seat of a sclerotic lesion in 30 out of 47 instances; in 14 cases both valves were involved by an infective lesion, and in 10 cases the mitral cusps were alone implicated, while the aortic valves were sclerosed in 6 cases out of 47 and were involved in every instance but one in the mycotic process. The mitral valve was more or less sclerosed in 27 cases, and it was the seat of the infective lesion in 20. His next lecture will be a brief discussion of the methods of infection. (To be continued). [F. J. K.]

2.—Ballance presents a **fragmentary contribution to the operative treatment of chronic suppuration within the temporal bone,** discussing at length the various operative procedures and recommending an original operation. Ballance's method is briefly stated as follows: (1) The removal of the disease and the fashioning of the metal flap; (2) one week later the epithelial grafting operation; (3) a few days (from the sixth to the ninth day) after this, and the earlier the better after the graft has taken, the removal of the dead portion of the graft as a deliberate measure; and (4) dry gauze tamponing through the meatus until the gauze comes away unstained. In 3 weeks the inner bony boundary is dry, and any moisture which appears on the plugs later is from the inner surface of the mastoid flap. The critical part of the healing process is thus early completed. What happens afterward is of less moment. In from 5 to 6 weeks from the first operation, in the majority of cases, the operation cavity is soundly healed. The author knows of no other method which can be relied upon to give such results. [J. H. G.]

3.—To be abstracted when concluded.

4.—Tirard discusses **some dangers of hypnotics** from the viewpoint of hoping to diminish the frequency of their use by developing the following propositions: (1) They may all involve danger; (2) the conditions under which they may produce undesirable results are not always dependent upon the dose; (3) the danger may be limited to the patient; (4) the danger may involve the prescriber or the dispenser; and (5) before the employment of a hypnotic the bare symptom of sleeplessness is perhaps the least important factor to be considered. He refers briefly to a number of cases. He is in favor of any step which will tend to prevent their administration except by the medical man or under his immediate directions. From his experience he would prohibit the sale of hypnotics to the public or would allow them only to be dispensed on a freshly dated prescription which should be retained by the druggist or returned to the prescriber. [F. J. K.]

5.—Michels speaks of the **surgical treatment of puerperal pyemia,** a rare form of puerperal infection. He states that within the last 10 or 12 years the treatment of this condition by ligature of the main venous trunks connecting the primary seat of the infection with the circulation has become an established method in surgery, and especially in cases of pyemia originating in infectious disease of the transverse sinus this method has given highly satisfactory results if employed early enough. The application of this mode of treatment to pyemia originating from the puerperal uterus is very difficult, because of the inability to ascertain which of the vessels are the channels of infection. Michels reports a successful case operated upon by him, in which the ovarian vein was involved. On exposing the vein from its exit from the broad ligament to the point of division it was found to be considerably dilated and thickened. It was slit open and a fetid mass of softened thrombus was removed. There was hardly any bleeding. The patient made an uninterrupted recovery. [J. H. G.]

6.—Horton-Smith presents an **example of direct infection in typhoid fever.** He refers to a small epidemic of enteric fever occurring in a family in which the father, mother, three daughters and two sons were attacked. Two of the daughters died. The first person attacked was one of the daughters, 15 years of age, and in quite rapid succession the remainder of the family developed the disease. He reaches the conclusion that there was no special prevalence of typhoid fever in the locality in which this family resided at the time of the epidemic, and, as other sources of infection were unlikely, the condition points so closely to direct infection that any other hypothesis seemed to be unlikely. [F. J. K.]

7.—An interesting case of **congenital periosteal sarcoma in an infant** arising in connection with the acromion process of the left scapula is reported by Henry J. Curtis. The patient was a male infant, 5¾ months old. The growth at birth was the size of a small hen's egg, and there was no history of injury, the child having been born without the aid of instruments. At the time of operation the growth was the size of a large orange, extending from below and in front of the left clavicle to just above the lobule of the left ear. It was movable, excepting at the outer end of the clavicle, to which it was apparently attached. There were a number of nodules varying in size, some of which fluctuated. The skin over the tumor contained a number of large veins, and there was a small but distinct nevus over the prominent part of the swelling. The child was anesthetized and the growth easily removed, together with 3 small glands which were above the tumor. There was comparatively little hemorrhage during the operation, but later the child was very much shocked and required vigorous stimulation. The wound healed promptly. About 3 weeks after the operation the child developed fever and presented an enlarged gland in each groin. Within 2 weeks, however, these glands had returned to the normal size, and the child was apparently well. The growth proved to be a typical mixed, small, spindle- and round-celled sarcoma. There was no evidence of the growth in the enlarged glands, which were removed. It sprung from the periosteum covering the acromion process. [J. H. G.]

8.—Barwell reports a case of **goiter abnormally situated** which was discovered in the dissecting room. [J. H. G.]

MEDICAL RECORD.

April 25, 1903.

1. Observations on Some Limitations of Diagnosis.
   EDWARD G. JANEWAY.
2. The Toxicity of Appendicitis, with a Report of Two Cases of "Appendicular Vomito Negro."
   GEORGE RYERSON.
3. Cardioptosis and Its Association With Floating Liver.
   MAX EINHORN.
4. The Pathogenesis of Diabetes.
   HENRY S. STARK.

1.—Janeway, discussing the **limitations of diagnosis**, calls attention to the importance of emphasizing exceptions to the generally laid-down rules for the recognition of various diseases. Among others he mentions the difficulty of recognizing certain cases of varicella from variola and the former difficulties in distinguishing typhus from typhoid fever. The early recognition of gastric or intestinal carcinoma is essential if cure is to be effected. Limitation of diagnosis is only too frequent in certain forms of heart disease, more particularly those with anginoid symptoms in which no heart murmur is audible. This paper abounds in suggestive thoughts, but does not lend itself well to being summarized. [T. L. C.]

2.—Fowler reports 2 cases of **appendicular black vomit** and discusses the **toxicity of appendicitis**. Distant infection in this condition may be divided into: (1) Displacement and migration of venous thrombi containing the agents of infection. (2) The absorption of pyogenic organisms into the circulation (pyemia). (3) Infection through the medium of lymphchannels at a distance from the original focus. [T. L. C.]

3.—Einhorn discusses **cardioptosis and its association with floating liver**. Cherchevsky (1887) was the first to call attention to movable heart. As to the etiology of the condition, emaciation, enteroptosis and neurasthenia seem to play a part, but they are not alone sufficient to cause cardioptosis. It is much less frequent in women than in men. The **subjective symptoms** are nervous disturbances of the heart, as palpitation, vertigo, etc. **Objective signs:** The relative as well as the absolute heart dulness usually begins about one rib lower than normal. On an average the relative dulness begins at the fourth rib, the absolute dulness at the fifth rib. The heart itself is not enlarged and does not show any sign of organic disease, the sounds being perfectly clean and normal. In nearly half the cases of cardioptosis, a general enteroptosis is found **and in all cases a more or less well-marked degree of hepatoptosis.** Cardioptosis does not endanger life. Its treatment must be based upon improving nutrition and strengthening the nervous system. [T. L. C.]

4.—Stark concludes a study of the **pathogenesis of diabetes** with the following summary: (1) The exact truth of the pathology of diabetes is not known. (2) There are no acknowledged and constant anatomical appearances of liver or of pancreas, associated with diabetes. (3) There are no characteristic lesions in any other organ. (4) An impairment of the physiological functions of the ductless glands may be at the root of the disease. (5) Artificial glycosuria is not diabetes. The facility with which this phenomenon can be elicited, implies its insignificance as a pathological factor. (6) As far as can be ascertained from competent sources, there is hope that the vacuum in our knowledge of the nature of diabetes will soon be filled. [T. L. C.]

MEDICAL NEWS.

April 25, 1903. (Vol. 82, No. 17.)

1. The Treatment of Syphilis. W. D. TRENWITH.
2. The Treatment of Acute Gout. J. R. CLEMENS.
3. Chronic Parenchymatous Pulmonary Tuberculosis.
   WILLIAM N. BEGGS.
4. Spinal Cord Injury, So-called Concussion of the Cord.
   FRANK PARSONS NORBURY.
5. Report of a Case of Monocular Inferior Hemianopsia.
   E. S. SAYLOR.
6. Hydragogin—Some Observations Upon Its Use in Diseases of the Heart and Kidneys.
   M. LOEWENTHAL.
7. The Use of Normal Salt Solution.
   HARRY FRENCH THOMPSON.

1.—Trenwith divides **the treatment of syphilis** into: (1) The secondary incubation or pre-eruptive period; (2) the eruptive stage including the first 6 or 7 months; (3) from the sixth or seventh month to the end of the third year; the late secondary stage; (4) the tertiary stage. The administration of Hg cannot be begun too early, and when the round cells, caused by the syphilitic virus, are still young and more easily acted upon, KI is administered for the elimination of the degenerated round cells and the toxins of syphilis. The Hg is given in ⅛- to ¼-grain doses t. i. d., while an inunction of 50% strength should be rubbed into every portion of the body, especially between the fingers and toes, as well as on the palms and soles. [T. M. T.]

2.—Clemens says that in this treatment we must take into consideration; (1) The sex of the patient; (2) the age of the patient; (3) heredity; (4) physical signs of the gouty diathesis. The general indication for treatment is elimination, and this is produced by mercurials, salines, diuretics. Prevention of re-accumulation and the exhibition of specifics complete the treatment. Colchicum is advised as long as there is pain, to be diminished to one dose in the morning when the pain has subsided. [T. M. T.]

3.—Beggs believes that this form of **pulmonary tuberculosis** is worthy of special attention and recognition for the following reasons: (1) It is a perfectly characteristic type of pulmonary tuberculosis, distinctly different from those generally recognized. (2) It is constant in its progress and bad in its prognosis. It is scarcely less fatal than florid phthisis, though its duration is longer. (3) It is very insidious, and this tends to cause error on the part of the physician and a mistaken sense of security to both patient and medical adviser. (4) The preceding 2 reasons render its early recognition of great importance to both physician and patient. [T. M. T.]

4.—Norbury believes that the so-called **concussion of the cord** is due to disturbances of the circulation and injury to the bloodvessels and lymphatics. Hemorrhage is, he believes, the lesion, and this hemorrhage is into the substance of the cord. [T. M. T.]

5.—Saylor reports a case of **dimness of vision** with eye symptoms resembling embolism of the superior branch of the central artery of the retina and of detachment of the same. After the administration of salicylin the diagnosis of retrobulbar neuritis of rheumatic origin was made, as there followed marked improvement in the vision, etc. [T. M. T.]

6.—Loewenthal says the size of the dose must be guided by the individual; one patient can take 15 or even 20 drops hourly; another will complain of nausea after the ingestion of the second or third dose of 5 drops. He advises 10-drop doses every 2 or 3 hours, but, if nausea, weakness, copious dejections from the bowels or intoxication occur, to suspend the remedy 24 hours, then begin again. The diet should consist of milk and water while hydragogin is being given. Patients suffer no ill effects while taking this drug, and any annoying effect can certainly be avoided if it is given diluted with 4 or 6 ounces of some reliable mineral water. [T. M. T.]

7.—Thompson uses the **salt solution** in all diseased conditions associated with either severe hemorrhage or intense toxemia. In **hemorrhage** it replaces the fluid lost to the tissues and refills the bloodvessels, thereby giving the heart something on which to work. It stimulates the cardiac ganglia, sustains the nutrition of the heart itself, rendering it possible for the remaining blood to be propelled to the vital centers, and sustains life temporarily until new blood can be formed. It raises the temperature to normal and relieves collapse. In **toxic conditions** it excites diaphoresis and diuresis, lowers the specific gravity of the urine, increases phagocytosis, dilutes the poisons circulating in the bloodstream and, by a process of cell lavage, removes the toxin from the paralyzed cell, allowing it to resume its normal function. [T. M. T.]

NEW YORK MEDICAL JOURNAL.

March 25, 1903.

1. The American Italy. CHARLES E. NAMMACK.
2. The Kidney of Pregnancy. JOHN O. POLAK.
3. Report of a Case of Infection by the Bacillus Coli Communis. A. JACOBY.
4. The Surgical Treatment of Empyema. FRANK McMORROW.
5. Fatal Meningitis with Myosis and Salivary Suppression as the Only Symptoms. Autopsy. A Study in Diagnosis by Exclusion. H. ALTSHUL.
6. Sarcoma of the Femur Following Traumatism; Amputation at the Hip Joint by Wyeth's Method. GEORGE S. BROWN.
7. The Surgical Treatment of Ascites of Hepatic Cirrhosis with Report of a Case. L. W. PEARSON.
8. Operation in a Case of Extradural Hemorrhage the Result of Whooping Cough. GEORGE S. BROWN.

1.—Nammack contributes a paper on **American Italy.** The portion of our country forming this territory is that of southern California, below the parallel of 34° north latitude, or only a little north of that of Cairo in Egypt. The author fully describes the peculiar geography of this belt. Agriculture, commerce and climatology are also fully spoken of. The writer says that the feeble and invalid from whatever cause may hope for benefit in this climate. Individuals coming to this country, he says, must come to stay. Southern California has fully as varied a climatology as Italy. It also has extremes of conditions, but it enjoys extremes which are alike favorable to health and longevity. [P. B. B.]

2.—Polak considers the **changes in the kidney during pregnancy, the recognition of these changes and their clinical importance.** The so-called kidney of pregnancy is one in which there are no inflammatory changes, but in which there exists a fatty infiltration of the cells lining the tubules. The cause of this degeneration seems to be imperfectly oxidized metabolic products in the circulating blood. Albumin may be found in traces in 50% of all pregnant women, but it is only of importance when present in abundance. Eclampsia, he thinks, is due to a combined toxemia, resulting from deficient elimination of all the emunctories. The most pronounced danger signal, according to the author, of oncoming eclampsia is a marked drop in the percentage of urea. The pre-eclamptic stage, when recognized, should be treated as follows: Reduce the amount of nitrogenous food; limit the production and absorption of toxic materials and, finally, remove the source of fetal metabolism and irritation by emptying the uterus. In concluding, Polak says that specimens submitted for examination should be secured with the catheter. [P. B. B.]

3.—Jacoby reports the case-history of a patient **infected with the bacillus coli communis.** The clinical picture of the case resembled that of typhoid fever, so much that it was only the negative report of Widal's reaction and the presence of the bacillus coli communis in the urine that rendered a diagnosis possible. The urine examination showed the presence of more or less inflammatory changes in the kidney. The author, therefore, believes that the infective agent was the bacillus coli communis. He also believes that many cases of auto-infection are due to this germ, and that an examination of urine would prove the correctness of his hypothesis. [P. B. B.]

4.—McMorrow reports a case-history of a girl, aged 7 years, who had a left-sided empyema. The patient was operated upon, a portion of the rib being removed, the cavity was irrigated, drainage established, and the child made a good recovery. The author advocates rib resection in preference to intercostal incision. Irrigation, if properly employed, he says, is without danger. [P. B. B.]

5.—Altshul reports the case-history of a patient, 53 years of age, who suffered from a **fatal meningitis.** The only symptoms manifested by this patient were **myosis and salivary suppression.** The condition of this patient was somewhat obscure, hysteria, uremia, masked typhoid, miliary tuberculosis and other diseases being considered. Diagnosis, however, was made by exclusion. The author then asks whether myosis, salivary suppression and somnolence could be regarded as sufficient evidence to warrant the suspicion of the existence of a meningitis. In concluding, the author says that the symptoms named may be the first manifestation of meningitis or pyelitis. Furthermore, that reasoning by exclusion will often enable us to make diagnosis, otherwise impossible of attainment. [P. B. B.]

6.—Brown reports the case-history of a woman, 18 years of age, who developed a **sarcoma of the femur following injury. Amputation at the hip-joint by Wyeth's method** was performed, and the patient made an uninterrupted recovery. [P. B. B.]

7.—Pearson contributes a paper on **the surgical treatment of ascites due to hepatic cirrhosis.** He reports the case-history of a patient, 30 years of age, who was operated upon by Talma's method. The patient, however, did not do well and died the second day after the performance of the operation. The author then reviews at some length the work done in this department of surgery since 1887. [P. B. B.]

8.—Brown reports the case-history of a patient who developed an **extradural hemorrhage during a paroxysm of whooping cough.** The onset of the symptoms was insidious, but more or less characteristic. The patient was operated upon, a small clot was removed from the upper Rolandic area, and his recovery was uneventful. [P. B. B.]

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

April 23, 1903. (Vol. CXLVIII, No. 17.)

1. The Reaction Time of Corrosive Sublimate in Different Dilutions Against Various Species of Bacteria. CHARLES HARRINGTON and HAROLD WALKER.
2. The Cortical Cell Changes in Epilepsy; Their Significance and Clinical Interpretation. PIERCE CLARK and THOMAS P. PROUT.
3. Double Uterus and Vagina. C. H. HARE.
4. A Case of Uterus Bicornis Duplex, with Two Cervical Canals above, One External Os and Stricture of Vagina. W. L. BURRAGE.
5. Pregnancy in a Uterus Bicornis Simulating Extra-Uterin Pregnancy. FRANK A. HIGGINS.

1.—Harrington and Walker's conclusions are: (1) Different species of pathogenic bodies and different cultures of the same species vary very greatly in their resistance to the action of corrosive sublimate. (2) With some species resistance is diminished and to a remarkable degree in a condition of dryness, so that even the 1: 10,000 solution can bring about sterility in a very short time. But some species are not materially affected in this respect by dryness. (3) Corrosive sublimate, in as weak solution as 1: 5,000, is ineffective against the common pathogenic bacteria, and the use of weaker preparations in surgical work and for irrigation and similar purposes should be abandoned. (4) Corrosive sublimate in the 1: 1,000 solution is very low in its action on some of the commonest of the skin bacteria, and, since under the most favorable conditions more than 10 minutes' contact may be necessary, it should not be relied upon to any great extent to insure sterility of the hands and instruments. (5) Corrosive sublimate in any of the strengths commonly employed is a much overrated disinfectant. [T. M. T.]

2.—In Clark and Prout's statement they say that the missing links of our knowledge of epilepsy consist in the fact that the pathogenic and organic anomally of the cortex, which constitute its predisposition, still hold the mystery of frequent relapses. By this study, however, they claim to have narrowed the gap between the terminal gliosis and the toxic and autotoxic agents in the disease pathogenesis, and they believe this is largely comprised in cell changes and those particularly of the nucleus. [T. M. T.]

4.—Higgins points out that with a rapidly growing tumor to one side of, and distinctly from, the uterus, with an irregular discharge of blood, and without the presence of any of the so-called typical symptoms, the diagnosis of extrauterine pregnancy should be made. [T. M. T.]

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

April 18, 1903. (Concluded.)

2. Flatfoot in Infants and Children.
ROBERT W. LOVETT.
3. The Present Position of Gall-stone Surgery.
WILLIAM WOTKYNS SEYMOUR.
4. Ethyl Bromide in Adenotomy and Tonsillotomy.
A. R. SOLENBERGER.
5. Rupture of Gall-Bladder or Duct From Vomiting, With Rupture of Appendix in Same Patients; Two Cases of Appendicitis; Acute Yellow Atrophy of the Liver.
W. W. GRANT.
7. Poisoned Wounds by the Implements of Warfare.
LOUIS A. LAGARDE.
8. Transplantation of Omentum in the Operative Treatment of Intestinal Defects; A Clinical and Experimental Contribution. EMANUEL J. SENN.

2.—Lovett, in discussing **flatfoot in infants and children**, states that the arch of the foot exists from birth, and that flatfoot in infants is a deformity most generally due to heavy children walking early and especially if they are at all rachitic. The condition is easily diagnosed by the way in which the child stands and walks and by an examination of the shoes worn. The deformity differs from that occurring in adults in the fact that there is no tendency toward fixation in the abnormal position in infants. When standing without shoes or stockings, the child presents the appearance of marked flatfoot and a suggestion of knock-knee. The children are often of the most robust and heavily built type. The cause of the difficulty is a disproportion between the weight to be borne and the muscular power. Lovett criticizes the usual shoes worn by infants, and shows that they are not suited for those who present flatfoot. It is a great mistake in these cases to think that the use of moccasins or walking in bare feet will overcome the difficulty. A lacing about the ankle makes it easier for the muscles to exert their force, and a good boot will improve a flatfooted child's standing position as soon as it is put on. The mildest measure which will suffice to correct the deformity of the foot is indicated in infants. The muscles should be as little cramped as possible and rigid support avoided. Making the inner edge of the sole and heel thicker than the outer edge by ⅛ or ¼ of an inch will in some cases correct the deformity, but it throws the foot against the outer leather of the boot and often causes a corn on the little toe. The best method of correction in infants is by means of a graduated pad of leather or felt incorporated in a thin leather inner sole, which should extend the whole width of the foot. In the severer cases a metal or celluloid support may be required, the latter being preferable. The severest cases may require a shoe with an upright rod placed at the outer side of the shoe to which the leg is attached. Practically the same that has been said about flatfoot in infants applies to flatfoot in childhood, excepting that plates are generally necessary as a means of support rather than the soft pads used in infancy. Pain is rarely complained of in flatfoot occurring in infancy and childhood. Not only should the foot be supported in the correct position, but the muscles should be properly trained and massaged. [J. H. G.]

3.—Seymour discusses the **present position of gall-stone surgery**. He states plainly in the beginning that no gall-stone can be dissolved and that hence operation is indicated early, not necessarily after one attack, but certainly after repeated attacks of gall-stone colic. Seymour refers to a patient whose physician asserted that he was cured of gall-stones by medicine, but yet who died within 6 weeks of the time the assertion was made of a perforated gall-bladder which contained 150 stones. The physician thought the patient was cured, but the stones were only quiescent. Gall-stone colic is not directly due to the presence of the stone, but to the inflammation it excites. Jaundice is an uncommon symptom of gall-stones. A distended gall-bladder accompanied with jaundice indicates malignancy. Seymour refers to the great frequency with which the gall-bladder is now removed for the cure of gall-stones and also to the improvement recently brought about in the treatment of stones in the common duct, and the great advantage to be obtained by drainage of the common and hepatic ducts. His remarks are based upon a series of 47 gall-bladder operations. [J. H. G.]

4.—Solenberger discusses **ethyl bromide** as a general anesthetic in the removal of **adenoids and tonsils**. The drug should only be used in properly selected cases and therefore has definite limitations. The following rules are given for the use of ethyl bromide: (1) Do not use ethylene bromide. (2) Do not use an old or impure solution. (3) Do not administer it in repeated and small quantities. Give *en masse*, admit no air. (4) Do not continue its administration longer than one minute. Another essential to success in the use of ethyl bromide in these operations is that the operator shall be quick in his work and, in order that this may be true, a small and accurate instrument must be used. Solenberger presents photographs and a description of an instrument which he has found useful. [J. H. G.]

5.—Grant reports a case of **rupture of the gall-bladder** which he believes was the result of violent vomiting. The appendix in this case was cystic and was also found ruptured when the abdomen was opened. The patient died of a septic peritonitis. At the operation no gall-stones were found, but it was believed that the gall-bladder and ducts were the seat of advanced inflammation. There was some difficulty in making a diagnosis in this case between a perforated gall-bladder and a perforated appendix. There were no symptoms of an inflammatory or ulcerative condition preceding the illness. Two cases of appendicitis are also reported and form the basis of a discussion regarding the advisability of drainage. Grant believes that drainage should be used. A fourth case of acute yellow atrophy of the liver is also reported. [J. H. G.]

7.—LaGarde discusses at great length **poisoned wounds in warfare** and reaches the following conclusions: It is shown that the custom of poisoning the implements of warfare has been practised from the most ancient times to the present day, and that not only vegetable but also bacterial poisons have been employed. By experiments LaGarde has shown that the explosive and the ball are contaminated, the first in 12% and the latter in 47% of instances. The wad and wadding materials are always contaminated. It is also shown that there is nothing in the act of firing either from the heat generated or from the friction which destroys the bacteria existing in the powder, in the wad, on the ball or in the barrel of the gun. LaGarde believes also that there is nothing in the act of firing to destroy the lethal properties of vegetable poisons, and that these are readily conveyed into wounds when they are placed in the powder, on the ball or in the barrel. Animal poisons, like snake venom, can be conveyed in the same manner. The facts rehearsed are so susceptible of proof that it becomes the duty of the surgeon in all criminal attempts to make a thorough examination of the weapon, and the following rules are suggested: (1) If powder grains are found in the clothing or wound, they should be carefully collected for examination. (2) The projectile inflicting the wound when recovered should be at once dropped into media with sterile forceps. (3) If the wound has been the result of a ricochet shot, the point of impact before penetrating the skin should be examined for the presence of poison. (4) The inside of the barrel of the weapon should be examined for specific micro-organisms. (5) The examination should also include a thorough study of all the ammunition remaining in the weapon. (6) The same steps should be observed in examinations for the presence of toxins, animal and vegetable poisons. [J. H. G.]

8.—Senn presents an **experimental and clinical study** relating to the **transplantation of the omentum** in operative treatment of the **intestinal defects** and reaches the following conclusions: (1) Transplantation of omentum over defects in the stomach is an established operation. (2)

Transplantation of omentum over intestinal defects is recommended, but is still in the developmental stage. (3) Transplantation of omentum over defects in the cecum is the most favorable portion of the intestinal tract. (4) Transplantation of omentum over defects in the small intestine should only be done after fixation of the segment of intestine to the abdominal wall. (5) Gauze drainage should be resorted to, excluding the general peritoneal cavity. [J. H. G.]

April 25, 1903.

1. Some Remarks on the Present Status of Medical Education in the United States. VICTOR C. VAUGHAN.
2. Requirements for Admission to Medical Colleges. E. A. de SCHWEINITZ.
3. Requirements for Admission to Medical Schools. JAMES RUSSELL PARSONS, JR.
4. Oblique Inguinal Hernia. A. E. BENJAMIN.
5. Evolution in the Treatment of Cancer of the Rectum. C. H. MAYO.
6. Some Remarks on Sclerema Neonatorum, with Report of a Case with Autopsy. E. R. STILLMAN.
7. Hypertrophy of the Synovial Fringes of the Knee Joint, With a Report of Twelve Cases. EDVILLE G. ABBOTT.
8. The Use of a Mydriatic After the Age of Forty-five. HORACE M. STARKEY.
9. Carcinoma Epibulbæ Planum. B. MATYS.
10. Laboratory Inspection of Vaccine. ADOLPH GEHRMANN.

4.—Benjamin summarizes the history of the **radical cure of hernia**, and discusses the modern methods of operating, describing and illustrating an original modification of Bassini's operation. Silkworm gut is employed as a suturing material for all the structures and is so arranged as to be easily withdrawn. One of the great advantages claimed for the operation is that there are no sutures for the tissues to absorb, and, as the sutures are tied over gauze rolls, there is no danger of necrosis from too much constriction of the tissues. [J. H. G.]

5.—Mayo describes the **evolution** which takes place **in the treatment of cancer of the rectum.** The main objections to the operations of the past are summed up as follows: (1) Ineffectual removal with local recurrence so common in the perineal type. (2) The extensive mutilating character of the Kraske before operative conditions were known. (3) The frequent failure of all methods of union of proximal and distal portions of the bowel which, when united and anus saved, with the destruction of the levator ani and internal sphincter, represented but one-third of the controlling apparatus of the bowel. (4) The frequent formation of stricture either cicatricial or cancerous following operation necessitating inguinal colostomy. (5) The straightening and tension of the sigmoid destroyed it as a fecal container. (6) That sentiment and not chance has proven the main reason for continuing to place an uncontrollable anus in a comparatively inaccessible situation. Mayo advises the combined intraperitoneal and perineal method. This method permits the surgeon to suit the procedure to the individual case. He can either radically remove the tumor and glands, or he may simply do a colostomy. When total removal is done, the proximal portion of the bowel, which is the sigmoid, can be brought out of the abdomen in the left iliac fossa through the gridiron opening of McBurney, which gives a fair control of the bowel and does not destroy the function of the sigmoid as a fecal container. [J. H. G.]

6.—Stillman gives a brief review of the history of **sclerema neonatorum.** He states that the subjects of this disease are usually found among the premature, weakened and poorly developed infants of the foundling asylums. Whether or not hereditary syphilis plays a rôle in the etiology, is still a disputed point. The affection does not, as a rule, develop immediately after birth, but the symptoms are first noticed within the following 7 to 10 days, although according to Hennig they may be delayed as late as the seventh month. Stillman reports a case of this disease and gives the findings of the autopsy. [W. A. N. D.]

7.—Abbott discusses the etiology, pathology, symptoms and treatment of **hypertrophy of the synovial fringes of the knee joint and reports 12 cases.** His conclusions are as follows: From his observations it seems to him that such cases should be considered independently, and not included among the other diseases of the knee joint. A thorough microscopical examination of the tissue which was removed shows it to be a simple inflammatory tissue, and not due to any micro-organism. While the etiology is obscure, it evidently is due to some fault in the weight-bearing structures of the lower extremity, which causes the ligaments of the joint to become lax. In all the cases which he has examined since the matter was brought to his notice, a flattened arch has preceded the knee joint trouble, and the use of a plate has been of great service in treating the disease. The matter of diagnosis is not difficult, although a torn cartilage somewhat resembles this condition. Examination of the cartilages was made in all the cases in which operations were performed, and in all they were found intact. It has been impossible to account for the paralysis of the quadriceps extensor muscle, which he found in 3 instances; but in several of the cases operated on, in which it did not exist before the operation, he has found a similar condition afterward, which was the last symptom to disappear. This shows that sometimes this condition does occur when there is very little to cause it. The question whether a patient should be treated by mechanical methods, or whether he should be operated on, is a matter which must be left to the judgment of the surgeon; as some cases which seem doubtful yield easily, while others which are apparently slight will not improve until the fringes are removed. [J. H. G.]

AMERICAN MEDICINE.

April 25, 1903.

1. On Volumetric Testing for Sugar. JOHN MARSHALL and LEON A. RYAN.
2. A Contribution to the Study of Manubrial Dulness, Especially as Related to Enlarged Bronchial Glands. H. B. WHITNEY.
3. A Study of Weights in Pulmonary Tuberculosis. LAWRASON BROWN.
4. Wounds of the Thorax. ISAAC R. TRIMBLE.
5. Transient Unilateral Ophthalmoplegia Exterior of Peripheral Origin with Atrophy of the Optic Nerve. CHARLES J. KIPP.
6. Glycosuria Gravidarum. WILLIAM RUOFF.

1.—Marshall and Ryan, comparing the value of **Whitney's reagent** with **Fehling's solution** in the volumetric determination of sugar, are of the opinion that it possesses no distinct advantages over a properly prepared Fehling's solution. [T. L. C.]

2.—Whitney reports 4 cases of **enlarged bronchial glands, with especial reference to the study of manubrial dulness.** The chief diagnostic importance of bronchial adenopathy lies in its differentiation from aneurysm or mediastinal growth. The pressure symptoms may be pronounced. If the patient has been engaged in one of the various occupations which involve the constant inhalation of fine particles of dust, if in addition there is a history of chronic cough and expectoration, and if especially there are found in the lungs physical signs of either local or general bronchitis, a plausible explanation of any manubrial dulness is not far to seek. The assumption of adenopathy will then be strengthened by the absence of pulsation, tracheal tug, pain or possibly also of souffle. [T. L. C.]

3.—Brown contributes a study of **weights in pulmonary tuberculosis,** based on the weight-charts of 1,200 patients at the Adirondack Cottage Sanatorium. His conclusions are as follows: (1) Toxin absorption in the tuberculous area causes reduced assimilation and fever. Loss of weight is in all probability due to this. (2) It is not the amount eaten but the amount assimilated that is of value to the consumptive. (3) Carefully regulated rest and exercise are of most importance as regards the bodily weight in pulmonary tuberculosis. Forced musclar activity is always injurious. (4) Assimilation is often markedly increased by change of residence or of climate. (5) Excessive gain in weight is usually first evident on the chest, next upon the abdomen in men and on the hips in women. (7) A quick, constant and continuous loss of weight indicates as surely as any other phenomenon that a patient is rapidly losing ground. (8) A gain of a few pounds is of little value in prognosis, but if the gain is constant and continuous over a period of 2 months, the patient is probably improving. (9) The weight gained affords no sure data for prognosis, but on the whole patients who gain over 20 pounds do better than those who gain less. (10) Sunshine and dryness are not necessary factors of gain in weight. Cold weather stimulates assimilation and gain in weight more than does warm weather. [T. L. C.]

4.—Trimble contributes a paper on **wounds of the thorax** with clinical notes of 5 cases. His paper also includes a series of 7 cases of experimental operation on the chests of dogs. [T. L. C.]

6.—Ruoff has collected from the literature a number of cases of **glycosuria gravidarum** and reports an additional case. His conclusions are as follows: Glycosuria gravidarum may arise at any stage of pregnancy. It is not so serious as when diabetes antedates pregnancy. It may disappear in one pregnancy and reappear in another, and end fatally after successive attacks. It frequently arises during parturition, but is of no great importance. Labor is not materially affected, other conditions being equal. Pregnancy is most likely to be interrupted. Is very destructive to the fetus. More so than syphilis. Maternal mortality is nearly 50%. Diabetics should not marry. Death is usually by coma no case of eclampsia having ever occurred in a diabetic. [T. L. C.]

DEUTSCHE MEDICINISCHE WOCHENSCHRIFT.

March 12, 1903.

1. Remarks Upon the Prussian Plan for the Regulation of Infectious Diseases. C. FRAENKEL.
2. A Contribution Concerning the Identity of Animal and Human Tuberculosis. G. TROJE.
3. Concerning the Specificity of the Albumin-Precipitating Serums and the Determination of Their Activity for Use in Practice. A. WASSERMANN and A. SCHUETZE.
4. Antistaphylococcic Serum. PROESCHER.
5. A Case of Ulcerative Colitis Cured by Operation. I. BOAS.
6. On Exclusion of the Intestine. P. MANASSE.

2.—Troje describes an extremely important case in which Koch agrees with him that it was definitely determined that animal tuberculosis had been transferred to human beings, had produced persistent disease, and had not remained localized. The patient was a man of 19, working in a slaughter-house, who had scratched his arm on the sternum of a cow that had died of tuberculosis, while assisting at the autopsy. The wound was at once treated with carbolic acid. It healed: but 6 weeks later it showed some local inflammation. **Nodules developed** at this point. In spite of local treatment, the **condition persisted and the glands enlarged. The local condition acquired the appearance of lupus. It was extirpated, and the glands were also removed.** In spite of this, the patient returned later **with a return of the local disease, and also with enlargement of the axillary and infraclavicular glands.** Microscopical examination showed that the **condition** was **indistinguishable from human tuberculosis.** Animal inoculations could not be carried out. [D. L. E.]

3.—In forming a standard of precipitating serums, the authors have reached the conclusion that the best method **is to call normal any serum that, in the amount of 1 cc., will produce a distinctly floculent cloud after an hour, and later a precipitate,** when added to 5 cc. of a 0.85 per cent. sodium chloride solution that contains 0.1 cc. of dried blood of the same kind as that with which the animal has been previously treated. **The amount of precipitating substance in 1 cc. of normal precipitating serum is called a precipitating unit.** Using this quantitative method, the authors state that they have, except in the ape, always found that serums that were intended to be specific for human albumins were positively specific. They also suggest that it would probably be of value, instead of using rabbits and other mammals for producing an antiserum, to use geese; or, in other words, **to use animals as far as possible removed from the species for which the antiserum is to be provided.** [D. L. E.]

4.—Pröscher states that he has produced in the goat **a serum that will immunize rabbits against from 5 to 7 times the fatal dose of staphylococcus culture,** when this serum is used in doses of from 1 to 5 cc. In using rabbits, he has been able to standardize this antistaphylococcic serum, infecting the rabbits intravenously. [D. L. E.]

5.—Boas reports a case that did not follow dysentery; it was, therefore, probably not chronic dysentery, but an ulcerative colitis of unknown origin. Persistent treatment had been entirely ineffectual. Operative treatment was undertaken, and **bilateral cecal fistulæ were established.** The intestine was then treated through the fistulæ, iodine solutions apparently being especially valuable. When a microscopical examination of the contents of the bowel had persistently shown the absence of blood, pus and Charcot-Leyden crystals, the fistulæ were closed. **The result was entirely successful.** [D. L. E.]

MUENCHENER MEDICINISCHE WOCHENSCHRIFT.

March 3, 1903. (No. 9.)

1. The Mechanical Sterilization of Rubber Gloves, and Its Value in Practice. O. WANDEL and O. HOEHNE.
2. Spinalgia as an Early Symptom of Tuberculous Infection. J. PETRUSCHKY.
3. Theocine (Theophylline) a New Diuretic. C. DOERING.
4. Contribution to the Casuistry of Tumors of the Pancreas. C. EHRLICH.
5. Scopolamine (Hyoscine) Morphine Narcosis. SCHNEIDERLIN.
6. Suture of the Femoral Vein to Poupart's Ligament, and Its Indications. A. SCHOENWERTH.
7. Poisoning with Spirits of Ammonia. RECKZEH.
8. The Treatment of Fibrinous Pneumonia with Injections of Hetol. KRONE.
9. Cutaneous Ulcers of Gonorrheic Nature. A. SALOMON.
10. Is Lupus Erythematodes a Tuberculid? A. GUNSETT.
11. The Etiology of Professional Diseases in the Distribution of the Median Nerve. STEINER.
12. Casuistic Contribution to Uremic Amaurosis. ROSCHER.
13. Statistical Report of the Royal University Polyclinic for Diseases of Children in Reisingerianum, for 1892. C. SEITZ.
14. Alfred Kast. WEIGERT.

1.—Wandel and Höhne, dissatisfied with the ordinary **methods of sterilizing rubber gloves,** undertook a series of experiments in order to determine how satisfactory was mere mechanical sterilization. For this purpose the gloves were infected with various cultures, then drawn on the hands, washed in water changed once, washed in water and soap with vigorous brushing, or washed in water and soap with vigorous brushing and subsequently immersed in a bichloride solution for several minutes. It was found that mere washing in water was not entirely satisfactory. It sufficed if the infection had been recent and the bacteria had not been allowed to dry, but if there was fat or mucus surrounding the bacteria they resisted numerous changes. Washing with soap and water and the use of the brush, however, almost invariably caused complete sterility. Even although the brush was not used, the results were almost as good. It is important that the surface of the gloves should be smooth in order that the mechanical disinfection should be most perfect. The results of the experiments are given in tabular form. [J. S.]

2.—Petruschky calls attention to the existence of **spinalgia as a symptom of tuberculosis of the bronchial glands.** There is usually tenderness over the spinous process of some particular vertebra which may be increased by repeating the pressure. Usually this vertebra is slightly depressed, the spinous process appears to be broader and softer and more elastic than the others, and ordinarily it belongs between the second and seventh dorsal vertebræ. The diagnosis can be rendered more certain by the tuberculin reaction. Petruschky has collected 79 cases in which this symptom was present, all of which were tested by injections of tuberculin and 77 gave positive reactions. The symptom is not present when there is advanced tuberculosis of the lungs. He does not regard it as an unfailing, but as an important link in the chain of evidence of bronchial gland tuberculosis. [J. S.]

3.—**Doering**, after referring to the fact that paraxanthine and **theophylline** are about twice as effective as diruretin, and increase the flow of urine 6 or 7 times, calls attention to the commercial form of theophylline which is sold under the name of **theocin.** This is soluble in 179 parts of water at 15°, 85 parts of water at 37°. In acidulated water it dissolves more easily. It is less poisonous than theobromine. He reports 7 cases in which it was administered with beneficial effect. The dose is from one half to one gram per day. It does not alter the bloodpressure, but may occasionally produce disagreeable subjective symptoms, such as tingling in the skin. [J. S.]

4.—Ehrlich reports the following cases: A woman, 57 years of age, presented herself at the hospital suffering from a tumor of the abdomen, extending from the border of the ribs to the brim of the pelvis, diminishing toward the left. It was tense, elastic, and there was tympany below it. A portion of the transverse colon crossed it just below the umbilicus. The patient was in fair condition; slightly constipated but otherwise normal. A diagnosis of **cyst of the pancreas was made.** Operation was performed. the cyst was found to have a thick wall and to contain blood and fatty detritus. The patient had severe pain in the abdomen. There was hemorrhage from the wound, and on the fourth day she died. At the autopsy a huge tumor was found in the upper part of the abdomen displacing the organs. The tumor contained the same material as that found at the operation. It was found to be an endothelioma springing from the bloodvessels. A man, 66 years of age, had had pain in the abdomen for one year. An elastic tumor about the size of a man's head was found occupying the upper left portion of the abdominal cavity, and the transverse colon passed across it. A diagnosis of cyst of the pancreas was made and operation performed. and about a liter of dark brown serous fluid with some flocculi was found. A microscopical examination showed that it was a sarcoma. There was profuse discharge from a drainage tube that had been inserted in the wound, and the patient finally died. Histologically the tumor was found to be a spindle-celled sarcoma. The clinical and pathological pictures of these 2 cases are very similar. It must always be remembered that in elderly persons with pancreatic cyst the possibility of malignant growth should be seriously considered, particularly if there has been no previous history of traumatism. [J. S.]

5.—Schneiderlin reports some cases in which he used **scopolamine morphine narcosis.** He believes, as a result of these and his previous studies, that this form of narcosis has the following disadvantages: It must be carefully tested on the patient, and it is necesary to watch the respirations during the operation. It has, however, the following advantages: That it is without danger if carefully tested; the anesthetizer is not necessary, and there is no psychical shock. He believes that the difficulties are usually caused by the fact that it is not sufficiently tested on the patient, that too large doses are given, and that the operator does not wait until narcosis is complete. [J. S.]

6.—Schönwerth reports 3 cases in which during operation on the inguinal region injury of the **femoral vein** occurred, and he was obliged to suture it. All 3 patients recovered with firm scars and no further difficulty. He believes that, in addition to injuries to the vein during aseptic operations, venous suture may be employed in septic cases that are not progressive, and in which the inflammation is limited to the lymphatic glands. In cases of spreading phlegmon, ligature is to be preferred. The suture is performed by clasping the 2 surfaces of the vein together with small smooth-faced vessel forceps and then making a through-and-through suture. Hemorrhage from needle punctures never occurs. [J. S.]

7.—Reckzeh reports the case of a woman, 56 years of age, who swallowed some stronger water of ammonia and immediately had severe pain in the neck. She drank some milk, vomited copiously and was then taken to the hospital. She was dyspneic, complained of burning pains in the mouth, throat and stomach, repeatedly vomited a material that was strongly alkaline and contained some blood, but, as a result of treatment with citric acid and the application of ice externally and morphine internally, gradually improved and recovered. During the poisoning she had a profuse secretion of saliva. The symptoms were partly those of chemical injury to the tissues, partly the dyspnea. The circulation suffered very slightly. In the case reported the central nervous system appeared to be relatively intact. The prognosis is always serious. [J. S.]

8.—Krone has treated 3 cases of **pulmonary tuberculosis with hypodermic injections of sodium cinnamate.** In all there was improvement of the symptoms within 24 hours. Frequently other drugs were used, such as digitalis, caffeine, etc. He also mentions 10 additional cases in which prompt favorable reactions ensued. [J. S.]

9.—Salomon reports a case of **gonorrhea** in a girl of 20 years, in whom an ulcer appeared on the right labium minus. There were no symptoms of syphilis; no evidences of chancroid, and the patient rapidly recovered under persistent cleanliness of the parts. Cultures showed the presence of the gonococcus and staphylococcus, and the same micro-organisms were found in smear preparations. The ulcer had sharp edges and was intensely painful. Finally it was necessary to use silver solution in order to get rid of all the micro-organisms. During the course of the treatment a second ulcer appeared upon the left labia in which only gonococci were found. Only one similar case has been found in the literature. He regards the ulcer as due to the gonococci alone. [J. S.]

10.—Gunsett discusses the arguments for and against the tuberculous nature of lupus. He reports the case of a woman, 44 years of age, who had disseminated erythematous lupus, and who died with enlargement of the lymphglands. There was also bronchopneumonia, but careful histological studies failed to reveal any trace of tuberculosis or tubercle bacilli. The histological picture of the skin lesions was that characteristic of lupus. He believes that such cases prove conclusively that erythematous lupus is a toxic tuberculid. [J. S.]

11.—Steiner reports 2 cases in which **numbness and paresthesiæ in the distribution of the median nerve of the hand** occurred, apparently as a result of occupation. The first, a man working in an iron foundry, was in the habit of holding iron bars in the left hand while striking them with a hammer. The symptoms appeared in the left hand. The second, a letter-sorter, developed the symptoms in the right hand. The first patient was in the habit of taking alcohol to excess. The second patient also admitted using considerable quantities daily. Both patients diminished the quantity of alcohol and recovered sufficiently to return to work. [J. S.]

12.—Roscher reports the case of a boy, 18 years of age, who, as a result of exposure to cold, developed hemorrhagic nephritis. He suddenly became blind and shortly after this developed uremic convulsions that soon caused death. The eyegrounds were examined before the convulsions occurred, but were found to be normal. The pupils were dilated and without reaction. [J. S.]

13.—In the year 1902 12,269 children were treated at the Children's Clinic in Reisingerianum; 3,350 were less than a year, 4,571 less than 6 years, 2,899 less than 11 years, and 1,449 less than 16 years of age. The average number of new patients per day was about 33. There were 374 deaths, chiefly among infants. The diagnoses are classified. [J. S.]

14.—**Alfred Kast** was born on July 25, 1856, in Baden. He studied in Heidelberg, Freiburg and Leipsic: was assistant to Erb in Heidelberg and to Cohnheim in Leipsic. Later he became clinical assistant to Bäumler. There he studied not only in the clinic, but also in the Physiological Chemical Institute. In 1886 he became extraordinary professor. In 1889 he was given charge of the Hamberg hospital, and in 1892 accepted a call to the professorship of clinical medicine in Breslau. He died still occupying this position. on January 7, 1903. He was interested in neurology and in physiological chemistry, but in his later years, on account of his many duties and an urgent private practice, he published but little. [J. S.]

BERLINER KLINISCHE WOCHENSCHRIFT.

March 16, 1903. (40 Jahrgang, No. 11.)

1. The Struggle Against Tuberculosis. E. von BEHRING.
2. Difficult Goiter Operations With Local Anesthesia. RIEDEL.
3. Carcinoma and Diabetes. J. BOAS.
4. The Value of Practice in Hearing, from the Weissensee Deaf and Dumb Asylum. TREITAL.
5. Scleroma in East Prussia. GERBER.
6. The Question of Traumatic Nephritis. H. SENATOR.

1.—Behring describes the technique of his **experiments with an antituberculosis serum in animals only.** By this **means he makes cattle immune to tubercular infection.** A marked acute inflammatory reaction occurred in animals over one year of age. This suggested presence of tubercular disease, which, however, could not be found upon post mortem examination. The injections advised are now given to calves under 3 months old. At this time there is but little reaction. Autopsy performed upon many such animals showed complete absence of tuberculosis. The tuberculin test was also negative. In the future, as a result of these experiments upon animals, Behring believes a serum will be prepared for infants, to confer immunity to tuberculosis at 3 months of age. He has not such a serum yet, however. [M. O.]

2.—Riedel describes in full his technique for performing **difficult operations for removing goiters under local anesthesia.** He compares his proceedings with those of Kocher, and believes that, while both are successful, his operation does less harm than Kocher's, since it spares the tissues more. [M. O.]

3.—**Cancer is rarely observed with diabetes.** Boas found 12 cases of diabetes with intestinal cancer, among 366 patients with gastro-intestinal carcinoma. In 5 cases only was diabetes present; in 7 others it had been present and had disappeared. The effect of the cancer on the diabetes varies in each case. An attempt should first be made to free the patient from his sugar. Yet carbohydrates should only be slightly reduced. Large amounts of fat should be given, if the localization of the carcinoma permits. Diabetes is a serious complication of cancer. Operation should not be performed if there is acetonemia. Otherwise it may be undertaken, if necessary. [M. O.]

4.—After reviewing the literature, Treitel shows **the value of practice in hearing,** from investigations undertaken in the Deaf and Dumb Asylum at Weissensee. The exercises given the pupils are describel in detail. The article is exceedingly technical. [M. O.]

5.—Gerber describes **the characteristics of scleroma,** as observed in several neighboring towns **in East Prussia.** Several cases are described in full, affecting more women than men. In 8 cases histological and bacteriological examination confirmed the diagnosis. [M. O.]

6.—Senator quotes **the recent literature on traumatic nephritis.** [M. O.]

WIENER KLINISCHE WOCHENSCHRIFT.

March 12, 1903. (XVI. Jahrgang, No. 11.)

1. Menstruation and the Corpus Luteum of Menstruation. O. T. LINDENTHAL.
2. A Collar Button Removed From the Left Lower Lobe of the Lung. GUSTAV KILLIAN.
3. Heart and Lung Examination in Vienna School Children. JULIUS ZAPPERT.
4. Pyocyaneus Found in Meningitis. FRANZ BERKA.
5. Thiosinamin in Rhinoscleroma. EMIL GLAS.

1.—Lindenthal reports a case of uterine bleeding following laparotomy, a week after menstruation, followed in 7 weeks by normal menstruation again. He believes that he accidentally injured an ovarian follicle, causing its rupture, with the formation of a corpus luteum of menstruation. That caused early menstruation and 7 weeks amenorrhea. At intervals, after the removal of one ovary, menstruation may be omitted once in a while. The entire process of menstruation depends, then, on **the rupture of the follicles,** followed by the corpus luteum. Lindenthal concludes that, so long as no corpus luteum is formed, the genitalia remain infantile, menstruation is absent, and regressive changes occur, with cessation of menses. Tissue containing follicles is found before and after maturity, also. He thinks that **the ovaries probably functionate alternately.** [M. O.]

2.—Killian reports the case of a man of 40 who, while holding **a collar button** in his mouth, stumbled and **suddenly inspired it.** He then went to a concert at which he was able to sing solo parts without any inconvenience, in spite of the foreign body in the lower lobe of his left lung. This **was found by bronchoscopy** the next day, **and was easily removed.** Full details are given. [M. O.]

3.—Zappert gives many statistics upon **the lungs and the hearts of the school children of Vienna.** Girls are slightly more affected by diseases of the respiratory tract than boys; these diseases are also more frequent in young children (7-8 years) and again in children over 12. Tuberculosis is very rare. Heart disease was also more often found in girls than in boys, and increased markedly in children over 12 years old. Many details are given. [M. O.]

4.—Berka reports a case of **meningitis** in a man of 52, a farmer, brought into the hospital with somnolence, fever, stiffness of the neck, and slight spastic paralysis of the entire right side of the body. Death followed the next day. The autopsy showed meningitis, from the pus of which pure cultures of a **virulent pyocyaneus** were obtained. The literature is reviewed. [M. O.]

5.—After reviewing the subject, Glas reports 6 case-histories of patients with **rhinoscleroma, treated with thiosinamin injections.** He concludes that thiosinamin, clinically and histologically, makes the tissues softer and more flexible, so that bougies can be passed. Without the bougies, the thiosinamin alone does not cause improvement in rhinoscleroma. But it is **an excellent adjuvant,** in high grade rhinoscleromatous stenosis of the nose, **to mechanical treatment.** Marked subglottic swelling, in cases without tracheotomy, contra-indicates this treatment. [M. O.]

ZEITSCHRIFT FUER KLINISCHE MEDICIN.

Band XLVIII., Hefte 1 u. 2.

1. On the Symptom Complex of Basedow's Disease. L. v. SCHROETTER.
2 On the Effects of Experimental Exclusion of the Motor Function and Its Importance in Pathology. MAX ROTHMANN.
3 The Characteristics of Injuries From Electricity. S. JELLINEK.
4 Contribution to the Pathology and Treatment of Basedow's Disease. J. DONATH.
5. Experimentocritical Contribution Concerning Glycolysis. E. BENDIX and A. BICKEL.
6. A Method for Determining the HCl in the Gastric Contents. O. REISSNER.
7. On Late Rachitis (Rhachitis Tarda). E. ROOS.
8. Contribution Concerning Bradycardia. H. SILBERGLEIT.
9. Concerning the Method of Quantitative Determination of Potassium Iodide in the Urine. HEINRICH SINGER.
10. The Quantity of Bacteria in the Human Feces. A. KLEIN.

1.—Von Schrötter reports a case that has especial interest in relation with **the question of pigmentation in exophthalmic goiter,** and also in relation with the question of **the transformation of exophthalmic goiter into myxedema.** The patient was a woman of 27 years, who had had symptoms of exophthalmic goiter for 4 years. It began about the face and spread **in irregular, very marked patches over the body,** particularly on the back and on the left leg. Another striking condition was the change in the skin of the lower half of the patient's body. **The skin of the lower half of the abdomen and of the legs was extxremely voluminous and dense.** A number of cases similar to this have been reported as evidence of a transformation of exophthalmic goiter into myxedema. With this view the author does not agree. The condition of the skin itself was not such as to lead one to think that the change was myxedematous. **A portion of the skin was excised; and the change was found to be due purely to alterations in the subcutaneous fat and in the connective tissue.** The fat had greatly increased, while the connective tissue was unusually small in amount and thin; so that **the fat was not bound down by the connective tissue**, the result being that the skin was usually tensely stretched, and the patient appeared to have an enormous thickening of the lower part of the abdomen and of the lower extremities. [D. L. E.]

2.—Rothmann draws the following conclusions: In all the higher vertebrates, up to the apes, experimental pathology has shown that **the pyramidal tracts do not provide the sole means for transferring motor impulses.** The restitution of a motor function after its experimental exclusion may be carried out to a great extent, the destruction of the motor tracts of one side of the spinal cord producing no permanent paralysis. A comparison of experimental results with those of disease in human beings has shown that acute destruction of the pyramidal tracts alone, the other motor tracts being undisturbed, causes a paresis of the corresponding extremities that is not entirely recovered from. After destruction of the pyramidal tracts with the other motor tracts in the internal capsule or in the spinal cord produces a flaccid paralysis of the corresponding extremities; and, after some weeks, this is followed by an incomplete restitution of the motor function. **Even if half of the spinal cord be completely severed, the origally paralyzed limb will later show some power of movement.** The purely spastic spinal paralysis, due to disease of the lateral pyramidal tracts, produces no paralysis. The constant **hypertonia of the leg muscles cannot be attributed to the loss of the function of the pyramidal tracts**, since it may be absent when these tracts are entirely diseased, and is at times observed without disease of these tracts. The **only constant symptom of the destruction of the pyramidal tracts is, therefore, increase in the knee jerks.** Unilateral lesions of the medulla oblongata show that, even when the other tracts have been entirely destroyed, the **pyramidal tracts are capable of preserving the motor function.** There is a close similarity between experimental lesions in animals and pathological changes in human beings. **The pyramidal tracts are more important in man, and disease of** these tracts is only slowly compensated for; but the power of ultimate restitution is scarcely less in man than it is in animals. [D. L. E.]

4.—Donath gives a study of the condition of the bloodpressure in exophthalmic goiter, using the Basch, Hawksley and Gärtner instruments. With the Basch instrument the pressure was usually normal or somewhat increased; rarely decreased. With the Hawksley instrument the subject showed about an equal division into subnormal and excessive pressure With the Gärtner instrument 2 showed a decrease, 7 showed normal conditions, and 6 exhibited high pressure. The results were much the same, therefore, with all 3 instruments; and the general conclusion reached is that **the bloodpressure in this disease may be normal, decreased or increased, but is usually normal or increased.** [D. L. E.]

5.—Previously abstracted from *Deutsche med. Woch.*

6.—Reissner's article merely emphasizes the value of the method that he has previously described in the same journal, which is a modification of the method of Martius and Lüttke. It is intended to determine the amount of error that is due to the volatile chlorides. [D. L. E.]

7.—There has been much discussion and much skepticism concerning the actual occurrence of a late rachitis. In the first case herein reported, a healthy child was taken ill, in the second year of life, with severe intestinal disease, and it stopped walking for about 2 months. There were no bone changes at that time. She was well from the third to the eleventh year. Her dwelling-place was then changed; and from this time there was a gradual disturbance of gait. In the course of a number of years very **severe changes occurred in the bones of the forearms and of the legs, the epiphyses becoming extremely marked. The ribs and skull were not altered.** The condition of the bones did not correspond with that in any of the other rare diseases of bone, such as Paget's disease or osteotabes infantum. X-ray examination of the bones in this case, also, showed the same conditions as are seen in rachitis. Another patient who was observed for only a short time, had shown rickets in early life; and this had persisted for a number of years. From the seventh to the fifteenth year, however, she had been well. At the latter period a change in the bones similar to that in the preceding patient developed. A study of the literature follows, and the fact is dwelt upon that many surgeons recognize a late rachitis, while physicians usually disbelieve in its occurrence. The conclusion reached by Roos is that **rachitis may appear in the second decennium or may reappear at this time, after having been present in infancy. The skull is less likely to be affected at this time**, and there are other modifications of the disease. The author believes that the disease occurs more frequently in late childhood than has been suspected. Further pathological studies are extremely desirable, in order to decide positively whether these conditions are actually due to rachitis or merely to some disease not now clinically distinguishable from rachitis. [D. L. E.]

8.—Silbergleit reports 2 cases of cardiac bradycardia. In the first there was **marked arteriosclerosis with probable disease of the coronary arteries.** In the second, the chief **lesion present was aortic stenosis.** One of the most striking features in both cases was the extremely slow pulse, both patients having shown as few as 30 pulsations in the minute. A study of the literature follows. The author decides that **bradycardia may be without effect upon the heart for years, and it is not possible to state off-hand that it produces an extra demand upon that organ.** Indeed, bradycardia may be a favorable condition for the heart; for it is comparable to the effect of digitalis. The contractions become stronger, and the diastolic distension of the ventricle is increased. It is possible that bradycardia does, in some instances, cause heart-strain. Silbergleit believes, however, that those authors are in error who consider that the weak heart always responds by frequent contractions. [D. L. E.]

9.—Singer describes in detail his method of determining potassium iodide in the urine, and gives some control results that indicate its accuracy. It is intended only for the quantitative determination of the inorganic iodine in the urine. [D. L. E.]

10.—Klein believes that his method of microscopically counting bacteria is much more accurate than the gravimetric method recently described by Strasburger in the same journal. The latter's method is unsatisfactory, because it includes other substances than the bodies of bacteria; and because, also, it does not determine in any way how many of the bacteria are living and how many are already dead. The author thinks that **no important facts have been determined until one knows how many living bacteria are present in the feces.** [D. L. E.]

RUSSKY VRATCH.

January 11, 1903. (Vol. 11, No. 2.)

1. Contemporary Problems of Pharmacology and Materialism. N. P. KRAVOFF.
2. On the Technique of Abdominal Section (Laparoceliotomy). V. S. GRUZDEFF.
3. On the Question of Gastric Digestion in Jaundice. S. S. ZIMNITSKI.
4. Tannoform for Chafing in Infants. S. E. OSTROVSKI.
5. Ligation of the Carotid Artery on Account of a Gunshot Wound in the Region of the Lower Jaw. V. S. MIKLASCHEVSKI.

1.—Kravkoff discusses the **mootpoints in connection with living protoplasm and the action of poisons upon it.** The reason for our lack of knowledge of the relation of living protoplasm to poisons he sees in our ignorance of the chemical composition of the former. The study and knowledge of the chemical composition of dead protoplasm can throw no light on the mechanism of the action of poisons on living protoplasm. This action, he believes, is not purely chemical. It probably depends on the ionic disassociation of the protoplasmic molecules. Materialism with all its remarkable advances is not going to solve the problem of life, which can be solved only by the psychological method. After all the hidden mechanical and chemical processes have been disclosed, there will still remain the conception of matter and motion, just as an atom is only a concept. He, therefore, believes that materialism will not shake or destroy our religious concepts, ideals and poetry of life. [A. R.]

2.—Gruzdeff reports briefly 100 **laparotomies performed for the removal of the diseased uterus and adnexa.** The following is a summary of the cases: Hysterectomy was performed in 8 cases; in 3, on account of cancer of the uterus; in 3, fibromyomata; in one, sarcoma of the uterus, and in one, a double pyosalpinx. Supravaginal resection of the uterus was performed on 18 patients on account of uterine fibromyomata. In addition to these there were retention cysts of the tubes in 3, ovarian cystoma in one and umbilical hernia in one. In one case an uterine fibromyoma was removed. Ovariotomy on account of new growths was performed 42 times. In 4 of these dermoid cysts were present, in 2 sarcoma of the ovary and in one endothelioma. In three-fourths of the patients complications were present. Removal of the Fallopian tubes on account of retention cysts was resorted to 10 times. In 9 cases extraperitoneal tumors were extirpated. Ventrofixation was performed on 8 patients, and radical operations for ventral herniæ on two. Laparotomy on account of peritonitis was performed on 5 patients, one of whom was pregnant at the time and went on to term. Cesarean section was made once, and exploratory laparotomy 6 times. In this great variety of operations both the so-called dry and wet methods were used. The latter consists in the introduction into the abdominal cavity before closing of large quantities of normal salt solution. The results obtained show that the wet method was followed by the least mortality. The beneficial results of this method the author explains on the ground that the large quantities of saline solution flush the abdominal cavity and thus remove mechanically stray bacteria which gain entrance during the operation; there is also brought about an effectual removal of blood, contents of cysts, etc., which serve as a good pabulum for bacteria. Phagocytic action is probably stimulated as well as the heart. In addition to this, the salt solution is excreted through the kidneys and thus helps to remove toxins. Finally, the large volume of solution remaining within the abdominal cavity keeps up the intra-abdominal pressure which is materially lessened after the removal of tumors. [A. R.]

3.—From a series of observations on **gastric digestion during an attack of jaundice,** Zimnitski draws the following conclusions: (1) Jaundice, or conditions which bring about the retention of bile in the body, produces hypersecretion of gastric juice followed by asthenia of the peptic cells. (2) In acute as well as chronic jaundice, as for instance in hypertrophic cirrhosis of the liver, the same changes take place in the secretory activity of the stomach. (3) In chronic jaundice, or hypertrophic hepatic cirrhosis with jaundice, there are observed transitional changes in the secretory activity of the stomach from hypersecretion to hyposecretion, these changes depending on the condition of the peptic cell (asthenia), only in various degrees and periods. (4) The diminution of the gastric secretion in certain stages of hypertrophic hepatic cirrhosis with jaundice, with a preservation of the digestive power, indicate that the formation of pepsin is more permanent than the secretion of hydrochloric acid. [A. R.]

4.—Ostrovski employed **tannoform as a local application in 50 cases of intertrigo in infants.** The application was made either in the form of a powder with equal parts of starch or a 10% vaseline ointment. The application was preceded by a wash with a 2% solution of boric acid. The results obtained in all cases were exceptionally good, and the author feels justified in recommending this drug very highly. [A. R.]

5.—Miklaschevski reports the case of a man who, while hunting, discharged his gun accidentally, the charge entering his neck in the region of the left lower jaw. The man was able to walk, assisted, about 2 miles. Considerable hemorrhage followed which was controlled by packing. When examined 2 days later, considerable pus issued from the severe, lacerated wound. The suppuration increasing, the wound was cleaned on the fourth day, and a number of necrosed splinters of bone were removed together with a portion of the lower jaw. Repeated alarming hemorrhages followed at intervals, necessitating the ligation of the common carotid. A month later, after a favorable progress, the patient developed right-sided hemiplegia, from which he recovered slowly. The author ascribes the hemiplegia to the ligation of the artery. He also suggests the temporary ligation of the carotid artery during capital operations on the neck as a safe method of controlling hemorrhage. The case illustrated the propriety of pulling the larynx and trachea forward in order to find the carotid artery, as recommended by Tillaux. [A. R.]

January 18, 1903. (Vol. II, No. 3.)

1. On Means of Fighting Surgical Tuberculosis. A. A. BOBROFF.
2. On the Question of Determining the Boundaries of the Stomach by Inflation. A. K. ZIVERT.
3. On a Soluble Form of Plastein. V. V. ZAVJALOFF.
4. The Contemporary Status of the Question of the Application of Steam in Gynecology and Surgery. M. F. KOZLENKO.
5. On the Question of Treatment of Fecal Fistula. Unusual Consequences of Complete Exclusion of the Intestine. I. I. GREKOFF.
6. On a New Portable Apparatus for the Prolonged Action of a Constant Electric Current. N. P. DOMASCHNEFF.

1.—Bobroff has observed that a sojourn on the southern coast of Crimea exerts a beneficial influence on **localized tuberculosis,** especially in children. The sea air, the sun and sea baths improve nutrition and with it the forces which finally overcome the tuberculous affection. The infiltrations become absorbed, the granulations healthier, fistulæ close, and general improvement sets in. He has also convinced himself of the curative action of the sun rays on tuberculous foci, and, in treating surgical tuberculosis, he had his patient expose the affected parts, covered only by a sheet, to the direct action of the sun. The author recommends the establishment of sanatoria on southern sea coasts. [A. R.]

2.—Zivert had undertaken to establish **the relative value of the various methods of determining the boundaries of the stomach** and, as a result of a considerable number of observations, arrived at the following conclusions: (1) The boundaries of the stomach as determined by means of inflation with small amounts of gas coincide with those determined by other methods, as percussion and auscultation. The method of inflation, however, possesses the marked advantage of enabling the examiner to locate not only the lower, but also the right and upper borders. The determination of the right border, as found by the author, is of great importance in the diagnosis of pathological dilatation of the stomach. The advantage of inflation over auscultation with a phonendoscope is that by its means the boundaries of the stomach can be directly located, while in the case of auscultation it is necessary first to locate the viscus. Moreover, inflation may be employed on an empty stomach. (2) The boundaries of the stomach determined by inflation with large amounts of gas differ materially from those determined by means of small quantities of gas. Therefore, by introducing large quantities of gas we determine not the real boundaries, but those of a distended stomach, a feature which is, of course, undesirable. On the other hand, the use of large quantities of gas enables us to detect gastroptosis by rendering the outlines of the stomach visible through the abdominal walls. (3) The question whether during inflammation the stomach is distended equally in all directions is answered in the negative. [A.R.]

3.—Zavjaloff discovered and described a substance which is the product of the action of gastric juice on albumoses and which he has called **plastein.** This substance as hitherto obtained is insoluble. He now describes a method by which soluble plastein may be obtained. The method consists in adding large quantities of artificial juice freshly prepared from a hog's stomach to fibrin. At the end of 15-20 minutes the solution is freed from syntonin and albumin by the usual methods and concentrated by evaporation. The concentrated solution of albumoses is then mixed with half the volume of artificial gastric juice and allowed to stand for 24 hours at room temperature. At the end of that time the mixture contains plastein in solution. The latter may be precipitated by neutralization, slight acidulation with acetic acid or boiling. The precipitate is soluble in weak alkalis and excess of acid, and precipitated again by neutralization. Saturated solutions of plastein give rise on boiling to abundant flocculi which congeal in the form of a jelly. The soluble form of plastein is again converted into an insoluble form when the solution is allowed to stand at room temperature for 2 days. It was found that plastein is already formed at the commencement of gastric digestion. [A. R.]

4.—Kozlenko reviews the **progress made in the application of steam as a hemostatic and cauterant** ever since its introduction by Prof. Snegireff, 15 years ago. This agent proved of exceptional value in the treatment of various pathological conditions of the endometrium and as a hemostatic in operations on the liver. A complete bibliography on the subject, including 81 titles, is appended. [A. R]

5.—Grekoff discusses **Maisonneuve's operation of entero-anastomosis for the relief of fecal fistula**, and reports the case of a woman who was successfully treated by exclusion of the affected portion of the intestine. The patient suffered from a hernia of the new-formed intestinal cul-de-sac, as a result of heavy lifting. The author's conclusions are: (1) Complete exclusion (uni- or bilateral) may have as a result entire inversion of the excluded intestine. Therefore, a patient should not be permitted to leave so long as the fistulous opening is not closed, especially if the excluded portion of the intestine is of small size. On such patients secondary resection of the excluded intestine should be performed before they are discharged. (2) With Maisonneuve's operation such a result need hardly be expected (at least such a marked prolapsus), and this operation, therefore, should from this standpoint be preferred to complete exclusion. (3) For the success of Maisonneuve's operation for the relief of fecal fistula it is necessary in the majority of cases to employ local measures (cauterization, excision of the mucous membrane, direct closure of the fistulous opening, etc.). (4) The local treatment with incomplete exclusion may be applied at the time of the operation. Unlike in the case of complete exclusion, closing of the fistula in Maisonneuve's operation presents no danger and does not lead to retention of the excrement in the excluded intestine, inasmuch as the latter is in free communication with the rest of the intestinal tract and the feces have an unobstructed exit. The fact has not received due appreciation from the surgeons, and yet it is important and deserves attention. (5) In order that normal relations may be established and possible complications prevented in the future, it is desirable after all forms of exclusion to practise secondary excision of the excluded intestine and sewing up of the eventration. [A. R.]

6.—Domaschneff describes **a small portable battery** which may be conveniently employed for the application of a prolonged and continuous current. [A. R.]

MEDITZINSKOIE OBOZRENIE.

Vol. LVIII, No. 23.

1. On the Casuistics of Cholelithiasis. S. B. VERMEL.
2. On the Pathology of the Broad Ligament. I. M. LJVOFF.

1.—Bermel reports a case of **cholelithiasis in a man**, 43 years old, who has been suffering for 15 years from obscure symptoms of gastro-intestinal derangement of a periodic character. The true nature of the disease was not discovered until the patient, during an attack of influenza complicated with perihepatitis, passed a large number of gallstones. The passage of the latter was not accompanied with pain, and the author supposes that they passed through a fistula which formed during this attack. The literature bearing on the subject is discussed. [A. R.]

2.—Ljvoff reports 2 cases of **hard fibroma of the broad ligament** in multiparæ, 30 and 39 years old respectively. The clinical manifestations were insignificant, pain being the only symptom in one case. The new growths were found to have arisen independently of the uterus. He also reports 2 cases of echinococcus of the broad ligament. In both, the cysts were removed with favorable results. [A. R.]

Vol. LVIII, No. 24.

1. On the Symptomatology of Cerebral Syphilis. V. V. MURAVJEFF.
2. Seven Cases of Congenital Cerebral Hernia (Cephaloma) in the Moscow Sophia Pediatric Hospital. D. E. GOROCHOFF.
3. The Importance of Mineral Waters in the Treatment of Cholelithiasis. M. I. RADKEVITCH.

1.—Muravjeff reports 2 cases of **cerebral syphilis**, one hereditary and one acquired, presenting divers psychical and motor disturbances. In both patients the condition, although grave, was relieved by specific treatment. [A. R.]

2.—Gorochoff gives a full description of 7 cases of **congenital cephaloma** together with some statistics of the results of operative intervention. His conclusions are: (1) The size of a cerebral hernia is more often dependent on the size of the defect in the skull. (2) The more gliomatous tissue there is in and around the bony defect, the less the latter. (3) The bony defects formed at the expense of the lachrymal and ethmoid bones and reflecting the nasal bones, ran an unfavorable postoperative course, 2 of the 6 cases having resulted fatally. (4) Favorable results were obtained in the cases in which little or none of the cerebral fluid was lost. [A. R.]

3.—Radkevitch discusses the value of **mineral waters in the treatment of cholelithiasis** and gives the following contra-indications to their employment: (1) In cases of prolonged fevers with the possibility of the existence of suppurative processes in the bile-ducts. In such cases, according to Kehr, the expectant treatment with mineral waters is much more dangerous than laparotomy. (3) Persistent and recurring attacks of pain which do not yield to a repeated course of treatment. In cases in which there is a suspicion of the existence of adhesions, hydrops, empyema or tumor of the gall-bladder. In practice, however, it is quite different to establish these contra-indications on account of the frequent uncertainty in the diffferential diagnosis. [A. R.]

JAHRBUCH FUER KINDERHEILKUNDE.

January, 1903. (Volume 57, No. 1.)

1. The Treatment of Scarlet Fever with a Scarlet Streptococcus Serum. P. MOSER.
2. The Changes in the Cartilage in Rachitis. DANTE PACCHIONI.
3. The Effect of Sterilizing Milk upon the Infant's Assimilation, Especially with Reference to Bone Formation. W. CRONHEIM and ERICH MUELLER.
4. The Diagnosis of Infantile Cardiopathies. CARL HOCHSINGER.
5. A Rare Case of Erythema Nodosum. E. FUHRMANN.
6. The Various Types of Anaerobic Butyric Acid Bacteria in Normal Feces. E. PASSINI.
7. Phosphaturia in Childhood. CORNELIA de LANGE.

1.—See **Philadelphia Medical Journal**, November 8, 1902, page 652.

2.—Pacchioni describes **the changes in the cartilage in rickets**, with the pathogenesis. The changes found in the cartilage are due either to change in nutrition or to intoxication. Both bone and cartilage changes are due to malnutrition, not to inflammation. The fundamental disease process lies in the cartilage, not in the bone, i. e., in the protoplasm and nucleus of the cartilage cells. The literature is reviewed. [M. O.]

3.—Cronheim and Müller describe **experiments** undertaken upon 2 large, healthy **infants** without rachitic symptoms, **given sterilized milk** for a time, **then unsterilized, raw milk** for a time. Fats and proteids were better assimilated upon sterilized milk. But, because of the inability of the infants to absorb lime salts from sterilized milk, it should never be kept up a long time, since it then affects the growth of bone. Besides, ferments are all destroyed by sterilization. [M. O.]

4.—Hochsinger reports 3 rare cases of **heart disease in children.** One was greatly hypertrophied heart in a boy of 9, following articular rheumatism, tubercular pleurisy and tubercular mediastinopericarditis, the pericardium being found adherent to the thorax. There were also mitral and aortic insufficiency, and the heart was drawn to the left side. The second case was in a boy of 13, with congenital cardiac hypertrophy, patent ductus Botalli, showing aneurysmal dilatation as did the pulmonary artery. The isthmus of the aorta was stenotic near the origin of the left subclavian artery. The third case occurred in an infant, 11 months old, a blue baby without a complete septum of the truncus arteriosus communis, with transposition of the origin of the aorta, rudimentary development of the beginning of the aorta, dilatation of the pulmonary artery and patulous ductus Botalli. [M. O.]

5.—Fuhrmann reports a case of **erythema nodosum in a newborn infant**, a rare occurrence. Yet the prognosis is good. The literature is most fully reviewed. [M. O.]

6.—Passini, who has regularly found pure cultures of 3 different types of **strongly anaerobic butyric acid bacteria in the normal feces of infants**, hopes that further study will show how these anaerobic bacteria reach the digestive tract, whether they take part in digestion, and whether they can produce pathological processes in the intestines.

7.—A girl of 4½ years, anemic, having lost flesh, was irritable and complained of seat worms and pruritus, for about 9 months. **The urine, on being examined, showed great quantities of phosphates.** While clear at times during the day, it was always cloudy when passed in the morning. On a good diet, iron, exercise and much water, she recovered. The cause may have been the oxyuris. [M. O.]

ARCHIVES OF PEDIATRICS.

February, 1903. (20th. Year, No. 2.)

1. The Prognosis of Tuberculous Peritonitis in Children. G. A. SUTHERLAND.
2. The Effects of Tight Diapers. A. C. COTTON.
3. Two Instructive Case of Cerebral Pneumonia and Their Treatment. LOUIS FISCHER.
4. Pilocarpine in the Treatment of Scarlet Fever. E. W. SAUNDERS.
5. A Case of Paroxysmal Hemoglobinuria in a Boy, Four Years Old. CHARLES HERRMANN.

1.—Sutherland presents a study of the **prognosis in 41 cases of tuberculous peritonitis.** He finds that, in uncomplicated cases of tuberculous peritonitis, the prognosis is good; and even when tuberculous pleurisy is also present the prognosis is still favorable. The following features render the prognosis less favorable: (1) A strong family history of tuberculosis; (2) an infancy passed under bad hygienic and dietetic conditions; (3) feeble resisting power of the patient; (4) a history of severe infectious disease early in life; (5) the presence of continued pyrexia, rapid wasting, persistent diarrhea, rapid pulse, or recurrent acute exacerbations, and (6) the presence of such complications as tuberculous ulceration of the bowel, extensive caseation of the mesenteric lymphnodes or of tuberculous masses, localized suppuration from infection through lymphnodes of the intestine or obstruction of the bowels. When a suppurating lymphnode ruptures or an intestinal ulcer perforates or if there is pulmonary tuberculosis, tuberculous meningitis or general miliary tuberculosis, the prognosis is bad. Sutherland is of the opinion that a simple celiotomy does not affect the prognosis. [J. M. S.]

2.—Cotton presents a paper illustrated by 6 X-ray pictures to show the effect of **tight diapers** on the skeletons of infants. He rightly says that the clothing of an infant should be as loose as possible, and he advocates pads of absorbent cotton, retained by a T-bandage or cheese cloth and secured to the shirt by safety pins, to replace diapers. Among the osseous lesions attributed to tight diapers are justo minor pelvis and genu valgum. [J. M. S.]

3.—Fischer reports 2 cases of **cerebral pneumonia** that presented the following uncommon symptoms: Constant unilateral spasms of the muscles of the shoulder, arm, leg and foot, twitching of the muscles of the eye, retraction of the head, absence of the patellar reflex and slight plantar reflex on the affected side, convulsions and marked stupor, nervous depression and hyperesthesia which lasted for many weeks. After the pneumonic crisis the cerebral symptoms disappeared. [J. M. S.]

4.—According to Saunders, **pilocarpine** is of great benefit **in scarlet fever.** This beneficial action is due to the effects of the drug upon the salivary and the muciparous glands. The researches of the Pasteur Institute show that the saliva possesses great toxilytic power. Therefore, when the saliva can be brought directly to play upon the toxins at the site of their production, we do the best practical thing. If an idiosyncrasy is observed after the first dose, atropine, the perfect physiological antidote, will remove all disagreeable consequences. The beneficial effects of the drug are the reduction of temperature. relief of suffering due to the parched and fissured mouth and lips, improvement in the state of the faucial and oral mucous membranes and prevention of glandular infection. [J. M. S.]

5.—Herrmann reports a case of **paroxysmal hemoglobinuria** in a boy, aged 4 years and 3 months. Between the attacks the microscopical examination of the blood showed no changes except those of a simple anemia. Blood drawn into capillary tubes showed no changes in its clotting power, after the application of cold, the serum was pale yellow, and the red bloodcorpuscles were unaltered. An elastic ligature was placed around one of the patient's index fingers, and his hand and forearm were placed in water at 45° F. for 10 minutes. The hand became swollen and cyanotic, and the blood showed a red serum, although the clotting was normal. [J. M. S.]

LA RIFORMA MEDICA.

March 4, 1903.

1. Hysterical Fever. G. B. UGHETTI.
2. A Contribution to the Surgical Treatment of Heteroplasia of the Bladder. G. BENDANDI.
3. Paroxysmal Tachycardia of an Epileptic Nature. G. BELLISARI.
4. Febrile Pertussis. Daily Intermittent Type. A. CESARANI.

1.—Though **hysterical fever** is of infrequent occurrence, well-authenticated observations of eminent clinicians have proved that fever of purely hysterical origin does exist. Ughetti reports the case-history of a hysterical patient in whom daily intermittent fever persisted for months. The author details the characteristics upon which the diagnosis rests in such cases as follows: But little light is thrown upon the subject through study of the temperature curve; as this shows all the gradations from the continuous fever of the typhoid type to that of the intermittent malarial. Patients have been observed in whom there was no difference between the morning and evening temperature, and in others there has been an inversion of the usual daily course of fever; but the salient characteristic of hysterical fever is its instability, as shown by a drop of from 4 to 5° under hypnotic suggestion or after light application of the faradic current; an immediate rise of temperature taking place when these influences were no longer in operation. Another striking feature is the cessation of hysterical convulsions during pyrexia; but perhaps one of the most important diagnostic points is found in the dissociation of temperature, pulse and respiration, in contradistinction to their parallel course in infectious fevers. This dissociation is not constant, but when seen, the author believes, is absolutely diagnostic. [R. L. F.]

2.—Bendandi reports 2 case-histories of patients upon whom he operated for **tumor of the bladder.** In one 2 epithelial tumors, covered with villosities, were removed, and a complete cure was effected. In the second, removal of a malignant cancerous growth brought about a temporary cure, but a recurrence ensued within 5 months. The author thus describes his method of operating: The patient was placed in the Trendelenburg position, and a large incision was made from the symphysis pubis to the umbilicus, the former being partially resected in the first. The bladder being reached, an ample incision was made in that organ, and the tumors were removed with the Paquelin and galvanocautery, half a centimeter of the healthy mucosa being included, and cauterization being carried down to the muscular coat of the surrounding tissue. The bladder wall and abdominal parietes were then sutured. A more extensive infiltration existed in the second patient, judging from the early recurrence. [R. L. F.]

3.—To be abstracted when concluded.

4.—In the first stage of **pertussis fever is the rule; but the second, or spasmodic, stage is generally admitted to be apyretic. An exception to this rule is found in the case** described by Cesarani in which an irregular intermittent fever was present, and which fell by crisis to the normal on the eleventh day. Malarial fever was excluded from the diagnosis by the history, absence of enlarged spleen and resistance of the fever to quinine. The question of the pathogenesis of fever in these rare cases is still *sub judice* and, in the author's opinion, will not be solved till the microbe of pertussis is discovered. From his study of this subject Cesarani concludes: (1) Pertussis is not always apyretic. There are cases in which, during the spasmodic stage, fever of various types and running dissimilar courses may occur without the presence of complications of any kind. (2) The gravity of the prognosis is not increased by pyrexia. (3) The course of the fever is not modified by any drug given in pertussis; neither does quinine influence it. [R. L. F.]

BULLETTINO DELLE SCIENZE MEDICHE.

(Year LXXIV, Series VIII, Vol. III, Fasciculus 2.)

1. Changes in the Chemical Composition of the Liver Following Injections of Sodium Chloride Into the Portal Circulation. C. VERONESI.

1.—All observers agree that sodium chloride exerts an influence upon the chemical composition of the organism, and many investigators have studied this question; yet not all are agreed as to the exact nature of this influence. Veronesi has taken up that part of the problem which deals with the **influence of sodium chloride upon the liver**, and describes in detail an interesting series of experiments upon dogs, which goes to show that **after injecting sodium chloride into the portal circulation the liver tissue contains a decreased amount of potassium in direct proportion to the increase of the former.** This finding coincides with that of Novi in his study of the influence of sodium chloride upon the chemical composition of the brain. [R. L. F.]

CRONICA MEDICO-QUIRURGICA DE LA HABANA.

February, 1903.

1. Diagnosis of Foreign Bodies Upon the Surface of the Eye. J. S. FERNANDEZ.

1.—Fernandez finds that, in a certain proportion of cases, **foreign bodies upon the surface of the eye** are difficult of diagnosis; and the **instillation of fluorescine** has proven of great value in his hands in **rendering them more distinct.** This substance infiltrates any part of the conjunctiva in which there is a breach in the continuity of the epithelium, and those areas are stained by it a vivid green. Thus, as the tissues immediately surrounding a foreign body are more or less injured, a green color appears in them after instillation of fluorescine, and the foreign body is clearly brought to view. The author has also found this substance valuable in the diagnosis of certain corneal affections, for example, loss of epithelium in ulcers, iritis, glaucoma, etc., and also in the diagnosis between old and recent corneal opacities: the coloration not appearing in the former. It is also serviceable in the differentiation of diseased tissue from the healthy, when the galvanocautery is to be applied for infectious corneal ulcer; and its application previous to operations serves to indicate the limits of the area to be treated. [R. L. F.]

REVISTA MEDICA CUBANA.

March 1, 1903.

1. Leprosy. Its Treatment. M. F. ALFONSO.

1.—In his experience with this disease, Alfonso has found that it is not extremely contagious, and that the gravity of the condition is not always indicated by the number of the pathognomonic signs found; as in comparatively mild lesions they have been known to be present in large numbers, while in some severe cases they were entirely absent from the serum withdrawn from the diseased areas, and were found only in the ulnar nerve, which in this condition almost always exhibits inflammatory induration. The author finds that **appropriate alimentation and hygienic care** fill as important a rôle in the **management of leprosy** as they do in tuberculosis; and for internal administration **oil of chaulmoogra** has proven almost a **specific** in his hands. **Tannic acid** given internally has also yielded good results; the complete cure of a child having been effected by him through administration of that drug, beginning with 50 cm. and increasing to 5 cm. daily. Hot baths of 15 minutes' duration given every night before retiring have proved a valuable aid to the cure of the disease. The thermocautery or tincture of iodine is advised for local application to tubercles, and ulcers are said to yield promptly to ointments made up of vaseline with salol, ichthyol or iodoform. [R. L. F.]

March 15, 1903.

1. Central Hematocolpos. Imperforation of the Hymen. R. SOCARRAS.
2. Bilious Hemoglobinuric Fever of Malarial Origin. M. A. de VILLIERS.

1.—A young girl of 15 years came under Socarra's care who had never menstruated, and in whom examination revealed an enlarged abdomen; upon palpation a painful, fluctuating **tumor**, which crowded the uterus upward, was found. The patient had sought relief for urinary retention of 3 days' duration, and subsequent developments proved that compression of the bladder by the tumor was responsible for this difficulty, as it was found that the hymen was imperforate, and its incision was followed by the slow discharge from the vagina of 2 quarts of a chocolate-colored, odorless fluid; with the release of this, the patient's distress was at an end, and normal menstruation was established. [R. L. F.]

2.—**Hemoglobinuria of malarial origin**, as shown by the presence of the plasmodium in the blood, and accompanied with various hepatic symptoms, has been seen in a number of cases by De Villiers. Of these, some gave a history of repeated malarial seizures, and hemoglobinuria was associated with slight fever, anemia, feeble, rapid pulse and infarction of the liver and spleen.. Examination of the urine revealed the presence of both albumin and biliary elements. In other instances, hemoglobinuria appeared during the chill of a malarial seizure, became most intense at the fever's height and subsided when perspiration set in. Such seizures were accompanied with bilious vomiting, slight icterus and albumin in the urine, which was most marked when the fever reached its maximum. Other cases were characterized by continuous fever, the hemoglobinuria increasing and decreasing with the rise and fall of the fever. [R. L. F.]

IL POLICLINICO (SEZIONE PRATICA).

February 14, 1903.

1. Contribution to the Study of Postimpetiginous Nephritis in Infants. A. FILIA.
2. Hernia of the Left Ureter Into the Crural Canal. G. MARIOTTI.

1.—Only in recent years has the attention of pediatrists been directed to the influence of impetiginous eczema in the production of nephritis, says Filia, who reports 5 cases in which nephritis seemed unquestionably to owe its origin to impetigo. Bacteriological examination of the affected skin revealed numerous and various bacteria, prominent among which were the staphylococci and, associated with them in one instance, streptococci. The same organisms were found in the urine, and their elimination persisted for some time after albumin and casts had disappeared. Injections, in animals, of the cultures of staphylococci and streptococci found in the urine proved the organisms to have acquired a high degree of virulence compared with cultures obtained from other sources. Examination of the blood after such injections showed staphylococcic septicemia in 29 cases out of 33, thus proving that fluid to be the intermediary between the skin and renal organs. [R. L. F.]

2.—But 2 cases of ureteral hernia are said to be found in surgical literature, and both these occurred in the inguinal canal. Mariotti reports in detail the third, a crural hernia. [R. L. F.]

Society Reports.

MANHATTAN DERMATOLOGICAL SOCIETY.

Meeting held April 3, Dr. L. Weiss, president, in the chair.

Dr. Weiss presented a case of **pityriasis rosea,** which had been accompanied with headache and general malaise when the eruption first appeared, 4 weeks before. He believed that this condition was distinct from herpes maculosus and squamosus, being probably of reflex origin, while the latter is mycotic. Dr. J. Sobel said that he could find no proof of infection in pityriasis rosea. Dr. E. D. Cooks showed a man with **Addison's disease,** with gastro-intestinal derangement, tachycardia and bronzing of the skin. The patient was taking 73 grains of suprarenal extract a day. Dr. B. F. Ochs claims that the patient is improving. Dr. Cocks also presented a case of **herpes maculosus and circinatus,** in which the eruption was quite general, consisting of oval and circular patches with raised borders. In the centers there was healing, with slight scaling.

Dr. W. S. Gottheil showed a boy of 8 with large, flat, scaly papules on the extensor surfaces. The face was never involved. There was some thickening of the integument, the eruption appearing in crops, leaving marked pigmentation. He called it **chronic papular eczema** with unusual manifestations. Dr. J. P. Oberndorfer thought it resembled lichen scrofulosorum. Dr. Whitehouse was inclined to call it neurotic eczema; Dr. A. Bleiman recognized some resemblance to prurigo, believing that the highly inflammatory nature of the eruption was sufficient to exclude lichen scrofulosorum; Dr. E. Pisko said it looked like mild prurigo, while Dr. Cocks termed it chronic papular eczema. Dr. Gottheil then showed a case of **lupus affecting the leg.** Dr. Weiss said the chronicity and general appearance of the eruption suggested atrophic lichen planus. Dr. Gottheil reported that no treatment had had any effect upon the case of **chronic indurated eczema** which he had shown at the January meeting. He also presented a man with **erythema multiforme,** and another patient with **chronic folliculitis** of the beard, the left half of the face showing scaling and alopecia, while the right half showed pustulation and induration. Finally, he showed a specimen of a **hard chancre** excised some months previously. Secondary symptoms had not yet appeared.

Dr. Pisko showed a case of **acne necrotica,** lesions having been present on the chest, back, extremities, face and scalp, for about 7 weeks. He also showed a case of **psoriasis guttata,** showing the appearance of the eruption before treatment. Dr. Bleiman showed a case of **lichen pilaris,** in a man, with minute reddish papules on the extremities, closely grouped, fading gradually into normal skin. Dr. Oberndorfer showed a case of **lichen acuminatus.** the man having an eruption of pale pink papules all over the body, somewhat scaly and itching slightly. He also showed a case of supposed **epithelioma** on the nose, which had been cured in 2 weeks by 5% pyrogallic ointment. Dr. Ochs presented a woman with **lichen planus,** showing the development of the lichen papules after scratch-marks. He also showed a case of **lupus vulgaris,** affecting the left buttock only.

NEW YORK OBSTETRICAL SOCIETY.

Meeting held March 11, the president, Dr. E. H. Grandin, in the chair.

Dr. Francis Foerster presented 4 specimens of **uterine fibromata showing twisting of the pedicle,** in 3 of which attention was called to the existence of the tumors by peritonitis; in the fourth, by severe hemorrhage. In one case the occurrence of the menopause did not prevent the appearance of later symptoms. He also presented a **very large cyst of the broad ligament,** the cyst having completely filled the abdomen. Dr. H. F. Vineberg spoke of the frequent appearance of symptoms of fibroids after the menopause and thought that the age of the patient should not be considered. Dr. S. Marx believed that such tumors should be removed whenever a diagnosis was possible from the symptoms and examination. Dr. J. E. Janvrin believed that 3 out of every 4 cases of fibroids ceased causing symptoms after the menopause. Dr. Gandrin believed in the removal of fibroids at all times, irrespective of symptoms.

Dr. G. G. Ward, Jr., showed a **uterus with markedly elongated cervix and a dermoid cyst,** which he had removed in the course of vaginal hysterectomy for complete prolapse of the uterus. Dr. Vineberg carefully distinguished between hernia of the pelvic organs, which even hysterectomy sometimes fails to cure, and hypertrophy of the cervix with prolapse of the vaginal wall, which is ordinarily relieved by plastic operations and vaginal fixation of the uterus. Dr. A. J. Downes, of Philadelphia, presented his instruments for **electrothermic hemostasis,** explaining their methods of use by drawings. Dr. Clement Cleveland, after a large experience with Skene's clamps and the angiotribe, has given up the use of both, except in performing vaginal hysterectomy, because of the improvement in the preparation of catgut. While Dr. Downes' instrument was an improvement over the older instruments, and his method of resecting the intestine was a superior method, he doubted if this instrument would find general application. Dr. Janvrin expressed great satisfaction in the angiotribe. Dr. J. R. Goffe preferred the angiotribe or ligatures to Dr. Downes' instrument. Dr. H. J. Boldt thought such a method desirable in malignant disease. Dr. Jewett's experience with Skene's clamps has been unsatisfactory, while Dr. LeRoy Broun still prefers Skene's clamps in hysterectomy, in cancer cases and in all abdominal cases, if there is pyosalpinx near the uterus. Dr. Downes, in closing, related his experiences with the use of these clamps since 1892, in all forms of abdominal work. He has had no deaths from hemorrhage and believes that much time can be saved by their use. His chief claim to their superiority over ligatures is that adhesions are less liable to form, and there is less pain because no nerves are constricted.

Dr. C. A. von Ramdohr read a paper upon **hygiene and gynecology.** After an enumeration of the various causes of pelvic disorders, such as early marriage, marriage between syphilitics, latent gonorrhea, poverty, crowded tenements, sweat-shops, etc., an outline of the proper method of diagnosis was given. An accurate diagnosis would show, not only the necessity for the surgical treatment of certain local lesions, but also a large number of conditions, for which a more careful regard for certain hygienic measures, such as proper exercise, dress, food, bathing, etc., would be productive of better therapeutic results. Dr. Vineberg referred to the greater liability of infection from latent gonorrhea, among women who had suffered from endometritis or endocervicitis prior to marriage. Dr. G. T. Harrison also referred to the frequency of infection from latent gonorrhea. Dr. A. F. Currier thought that more attention paid to such points would be of great value in the prevention of many diseases that are now only amenable to surgical treatment, particularly malignant disease.

ARCHIVES DE MEDECINE DES ENFANTS.

February, 1903. (Volume 6, No. 2.)

1. Buttermilk as an Infant Food. G. JACOBSON.
2. A Case of Congenital Myxedema. ROCAZ and CRUCHET.

1.—In a long article on the use of **buttermilk as a food** for well and dyspeptic **infants,** Jacobson gives the history, preparation, analysis, indications, administration, mode of action and results obtained from buttermilk, reporting a case-history in detail. After reviewing the literature he concludes that buttermilk is easily digested and assimilated, even by infants with congenital dyspepsia, cachexia or chronic gastro-enteritis. It has proved far superior to other prepared foods, and had a better effect in some cases than either cows' or mother's milk. It does not cause rickets. Its digestibility is explained by the acidity, absence of fat and the presence of finely coagulated casein. Buttermilk can be given to breast-fed infants whenever the mother is absent, and it is inexpensive. [M. O.]

2.—Rocaz and Cruchet report in full a case of **congenital myxedema** in a girl of 2½ years, who died of bronchopneumonia following pseudomembranous stomatitis due to colon bacilli. The full autopsy notes are given. [M. O.]

Original Articles.

A CASE OF PERFORATED ULCER IN TYPHOID FEVER.

By JAMES C. WILSON, M. D.,
and GEORGE G. ROSS, M. D.,
of Philadelphia.

In reporting the following case of perforated typhoid ulcer, we have in mind the value of negative evidence. With the classical signs and symptoms of intestinal perforation during the course of typhoid fever, an early diagnosis can be made with reasonable positiveness, or at least so strong a probability can be established that operative interference is indicated.

It is, however, in the presence of atypical cases that great difficulties present themselves, rendering early diagnosis uncertain, if not impossible.

Wm. K., aged 29 years, machinist, a well-developed and well-nourished male. Family history negative. His personal history good. Had had diseases of childhood and urethritis. Used tobacco and alcohol moderately. He was admitted to the German Hospital on or about the eighth day of the disease, with a history of a typical onset of typhoid fever. Examination at this time confirmed the diagnosis. The disease ran a moderately mild course until the sixteenth day, when he developed a cough. Resonance at both bases was slightly impaired; a few subcrepitant rales could be heard. He perspired very freely at this time. On the eighteenth day the patient became nervous and very restless and perspired profusely.

About 11 P. M. on the twentieth day the bowels moved, and immediately thereafter he complained of an agonizing pain in the glans penis. The evacuation was small and easily passed. The abdomen was soft, not distended and not painful. Very slight general tenderness could be made out. He was very restless, but his mind was clear. The temperature was 104° and remained so, there being no drop recorded. There was no collapse either preceding or following the attack of pain. He complained of pain in the right arm. Perforation was considered by the resident physician, but was ruled out on account of the location of the pain, the high temperature without a fall, the absence of abdominal pain and signs of collapse.

On the following morning, 9.30 A. M., the patient still complained of the intense pain in the glans penis. The abdomen at this time revealed rigidity of both recti muscles, more marked, however, on the right side. There was a small area of exquisite tenderness over McBurney's point. The right iliac fossa was dull on percussion. Both flanks were free from pain and tenderness, and a normal percussion was noted. The pulse was rapid, but of good quality. During the night he had had a chill, and at 5.30 A. M: he was perspiring profusely. Blood count, 10 A. M., showed a leukocytosis of 13,400.

11.30 A. M., twenty-four hours after onset of the pain in the penis, his abdominal pain had increased, as had also the tympanites. The tenderness in the right iliac region had markedly increased. At this time the area of liver dulness had become diminished. Dr. Wilson saw the man at 5 P. M., at once diagnosed perforation and advised immediate operation. The question of gangrenous and perforative appendicitis was considered as a cause of the man's peritonitis, the latter view being favored by the assistant physicians and the operator. The advisability of operation was agreed to by all. Five valuable hours were consumed in searching for the family and explaining to them the necessity for operating. It was deemed unadvisable to operate without their consent.

Under ether anesthesia a six-inch incision was made through the right rectus muscle, just inside the outer edge. There was a free escape of gas and pus upon opening the peritoneum. There was no attempt at localization of the peritonitis, as the pus was free in the peritoneal cavity, although the greatest amount of pus was discovered in the right iliac fossa, corresponding to the area of flatness and greatest tenderness. The appendix was at once brought into view, and found to be covered with lymph and pus, but not involved as a causative factor. The ileum was picked up at its junction with the cecum, and a systematic search made for the perforation. As the search proceeded, the gut was wiped free of lymph and pus by gauze sponges. As the perforation was approached, it was noticed that the amount of lymph markedly increased, so that it was possible to say that we were near the perforation, some three or four inches away. In separating two adherent knuckles of gut the perforation was discovered, the opening being about one-sixteenth of an inch in diameter. This was immediately closed by Lembert sutures and the search continued for other possible perforations, but none was discovered. After making a thorough toilet of the peritoneum and providing for adequate drainage, the abdominal wound was closed and the patient returned to bed. He died in three hours of general purulent peritonitis.

The following points impressed themselves upon us in studying the case:

(1) Eighteen or twenty hours prior to the probable time of perforation the patient became extremely nervous and restless and perspired very freely. Could this have been evidence of threatening perforation? Could the deep ulceration of the bowel wall, until it approached the peritoneal coat, have caused sufficient vasomotor disturbance to account for the vasomotor symptoms?

(2) Perforation in which the initial pain was referred to the penis and there persisted for twelve hours without being referred to the abdomen. Could this pain in the penis be due to the proximity of the inflammatory area to the ureter or bladder?

(3) Perforation without collapse. This man's temperature remained high, he had no syncope, no vomiting, sweating or pain in the abdomen.

(4) The unavoidable delay in making a positive diagnosis.

(5) The difficulty in securing the family's consent and the loss of five hours of valuable time consequent thereto.

It has been noticed in many cases that there has been an absence of explosive symptoms, indicating the serious intra-abdominal condition in perforation, and it is probably due to the depressed condition or inactivity of the patient's mental and nervous system.

REPORT OF A CASE OF PAINLESS AMPUTATION OF THE LEG AFTER THE INTRANEURAL INJECTION OF COCAINE.

By JOHN H. GIBBON, M. D.,
of Philadelphia.
Professor of Surgery, Philadelphia Polyclinic; Surgeon to Bryn Mawr Hospital, and Out-Patient Department of the Pennsylvania Hospital.

American surgery has much to be proud of in the advancement of local and regional anesthesia, and probably more to her credit than any other country in what may be called the practical or clinical side of this work. One associates at once with this subject the names of Hall, Corning, Halsted, Matas and Crile. The last two named have, within the past few years, made the most valuable additions to our knowledge regarding the employment of local anesthesia, and done much to remove the scepticism which still lurked in the minds of many surgeons. Local anesthesia has earned for itself a wide and ever widening field of usefulness, and if it proves a failure in operations well suited for its employment, it is only because it has not been properly used. My own failures at first were numerous and discouraging, but since carefully following out the technique of the infiltration method described by Matas (**Philadelphia Medical Journal,** November 3, 1900), the failures have been rare, and in cases well suited for local anesthesia, such as strangulated hernia in old people, I have generally employed it and with the most satisfactory results. I have operated upon a number of cases of strangulated hernia within the past few years in which the patients have doubted that the operation was really performed. I am not, however, one of those who believe that we should use local anesthesia in every operation for hernia, but in emergency operations and when a general anesthetic is contra-indicated I do think we should resort to the infiltration method. The success which has accompanied my efforts with local anesthesia caused me in the case here reported to use the intraneural injection of cocaine first practised in surgical work by Crile and thoroughly explained by him in the *Journal of the American Medical Association*, February 22, 1902. His clinical work had for its basis numerous experiments upon animals, the results of which it practically entirely confirmed. It should be said, however, in this connection that Matas, independently and but a little later, successfully employed the intraneural method in the amputation of an arm.

S. K., aged 50 years, was admitted to the Pennsylvania Hospital August 19, 1902, suffering from a far-advanced tubercular disease of the ankle joint and bones of the tarsus. He had suffered from cough and night-sweats, but both were better at the time of admission. He had, however, some slight fever and was greatly emaciated. Because of the patient's age, his general condition and the extent of the disease, it was deemed wise to consider only amputation. The patient was told that, before amputating, however, an incision would be made into the diseased tissues for the purpose of learning whether or not it would be advisable to make an attempt to save the extremity, and that this could be done painlessly by the injection of cocaine into the two large nerves of the leg. He readily consented to this and to amputation if necessary. He was not told, however, that amputation would be done immediately, as I did not wish to alarm him with the thought that the leg would be amputated while he was conscious. Fifteen minutes before beginning the operation the patient was given morphine, gr. ¼, and atropine, gr. 1-150, hypodermically. The sciatic and anterior crural nerves were then exposed by infiltration anesthesia (Schleich's fluid), and injected with a 1% cocaine solution. The introduction of the fluid into the nerve was not painful, probably because of the solution already injected about it. I expected a prompt anesthesia of the parts supplied by these nerves, but in this I was disappointed, it being about eight minutes before anesthesia was complete. And even at this time the patient insisted that he felt us manipulate the part, but it was found that a free incision into the ankle joint and thorough exploration produced no pain. The part being found beyond the hope of a less radical operation, immediate amputation at the middle third of the leg was decided upon and quickly done. One feature of the amputation which impressed me greatly was the fact that, when the circular division of all the soft parts was made, the patient felt absolutely no pain. This was shown by the fact that he did not hesitate in a statement he was making on the subject of politics to the house officer who was stationed at the head of the table to engage him in conversation. When the bones were being sawn he said: "He's not taking it off now, is he?" His mind being again diverted, the operation was completed without a complaint of pain and without the patient knowing that his foot had been amputated. During the operation and after it there was no evidence of shock except a slightly increased pulse-rate. The temperature immediately after operation was 99 2-5°, pulse 112, respiration 20. Due to my own fault, and not to any in the method, my exposure of the sciatic nerve did cause the patient some pain, but not sufficient to make him object to the continuance of the operation. It can be said, however, that, after the sciatic and anterior crural nerves were injected, he had absolutely no pain. The patient made an uneventful recovery, the wounds healing nicely, and he was discharged, showing no ill effects from the injection of the nerves with cocaine, on September 19, 1902.

I have recently seen and examined the patient and find no evidences of any late changes taking place in the nerves which were injected. The sensation of the stump is good, and the patient tells me that he has entirely lost those sensations in the foot and toes which are so frequently observed after amputation.

This case impressed me very much, but I cannot report it without a word of warning to those unfamiliar with the infiltration method which is employed in the exposure of the nerves. The solution used must be pure and fresh and the technique perfect in order that it give good results. Local anesthesia has failed and will fail because of the doubting and half-hearted way in which the drug is employed. One must study carefully the method of infiltration and must have used it successfully in small operations before he can employ it in the more extensive ones with any degree of satisfaction.

Crile learned by his experiments that a 1% solution of cocaine injected into a nerve trunk produced in a few minutes an absolute physiological "block" to both efferent and afferent impulses, and that hence any operation might be done on the parts supplied by the nerve without the production of shock. This is certainly more than can be claimed for any general anesthetic, these agents but slightly influencing the afferent impulses which produce the shock. Crile states that the general anesthetic abolishes the afferent impulses which produce pain, but does not abolish those affecting the vasomotor, respiratory and cardiac mechanisms. He says the injection may be looked upon as a temporary physiological amputation of the part. By the intraneural injection method Crile has amputated five times below the knee, once at the shoulder joint, and once he removed the entire upper extremity with satisfaction.

In closing this report I reiterate my belief that this method of producing anesthesia should be limited at this time to cases in which general anesthesia is contra-indicated, although it would certainly seem to have a wide field in the future practice of surgery.

PRACTICAL POINTS ON PESSARIES, MANY OLD, SOME NEW.

By A. ERNEST GALLANT, M. D.,
of New York.
Professor of Gynecology in the New York School of Clinical Medicine.

Of pelvic ills from which womankind suffers, uterine displacements out-number all others, not only in frequency and misery produced, but also as the most obstinate and difficult to cure.

A review of 500 consecutive histories of patients in my class at the Roosevelt Hospital, O.-P. D., shows very graphically how frequently this condition is met with, and, when grouped in hundreds, the relative uniformity is quite striking.

Cases	801 900	901 1000	1001 1100	1101 1200	1201 1300	Total	Per cent.
Anteflexion cervix (fundus on bladder)	13	13	14	16	14	70	14
Anteflexion cervix and retroversion	15	16	14	10	12	67	13.4
Retroversion	9	8	15	12	16	60	12
Retroflexion body	2	6	2	0	0	10	2

making a total of 207 cases, 41.4%, of which 130 cases or 26% were anteflexion of the cervix; 127 or 25.4% retroversion; as compared with 10 cases or 2% retroflexion of the body. It must be borne in mind that in all of this class of cases the uterus lies nearer the vulvar outlet than normal, constituting a greater or less degree of prolapse or descent. Relieve them we may, but a positive cure, anatomically and symptomatically, can but rarely be honestly promised, either by mechanical or operative means. The writer arrived at this conclusion some years ago, after a careful study of the results of the numerous operations proposed and practised by the best gynecologists; and he was thereby led to a more careful consideration of the pessary for this purpose.

In this search he was surprised to note the scanty details given in text-books on (a) how to select the case for the pessary and (b) how to select and fit the pessary to the case.

I. The Case.—The uterus normally lies with its fundus or anterior portion of the body in contact with the roof of the bladder, rising and falling as that viscus is in systole or diastole, its cervical end resting upon or near to the coccygeal apex, bridging over the vulvar outlet to maintain and support the pelvic and abdominal viscera, and while it remains in this relation renders prolapse a practical impossibility (Figs. 1-2). On the other hand, when retroverted or the cervix becomes anteflexed it is converted into a wedge-like body, lying in the axis of the vaginal canal, (Fig. 3) ready to be driven down toward the vaginal outlet by all the force of intra-abdominal pressure applied at the fundus (Figs. 4-5-6-7-8-9.)

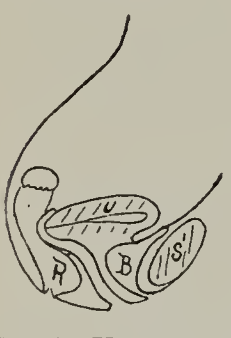


Fig. 1.—Uterus overlying bladder, vagina and rectum.

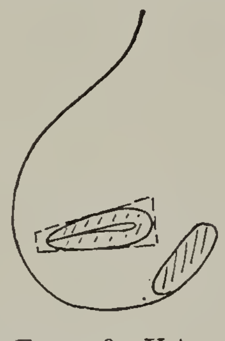


Fig. 2.—Uterus bridging over vulvar outlet.

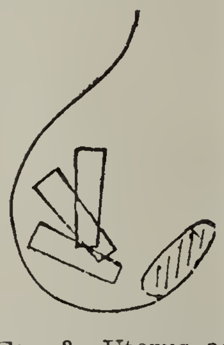
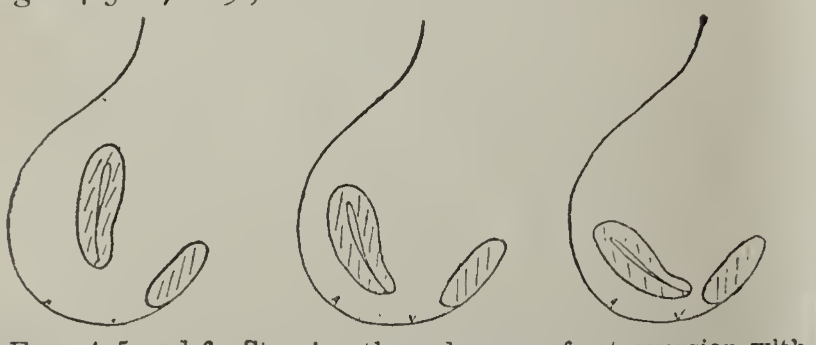


Fig. 3.—Uterus as a wedge sliding down pelvic floor.



Figs. 4, 5 and 6.—Showing three degrees of retroversion with prolapse.

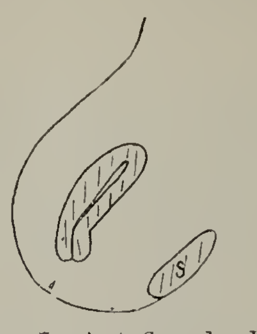


Fig. 7.—Anteflexed cervix lying over anus.

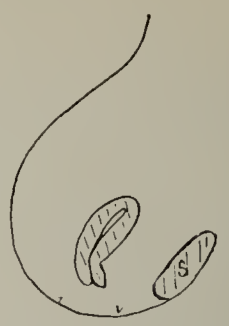


Fig. 8.—Anteflexed cervix lying over perineum.

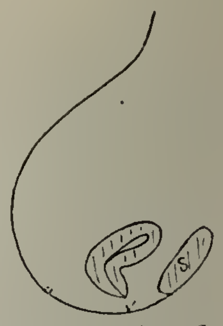


Fig. 9.—Anteflexed cervix lying over vulva.

Retroflexion of the body is usually associated with but a minor degree of prolapse, but causes great discomfort. Figs. 10-11-12.)

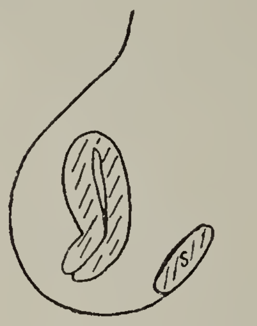


Fig. 10.—Retroflexion fundus below promontory.

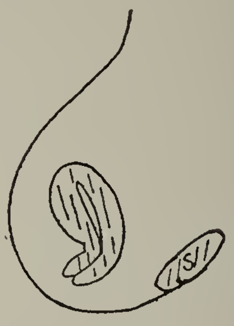


Fig. 11.—Retroflexion, fundus in pelvic hollow.

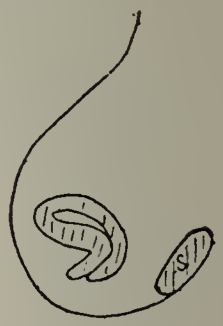


Fig. 12.—Retroflexion, fundus on pelvic floor.

The diagnosis and degree of uterine displacement can be measured and recorded by noting the distance within the hymen to which it is necessary to introduce the examining finger, each joint corresponding to about one inch. When examining a normally placed cervix, the finger comes in contact with the anterior lip, not the external os; when retroversion or anteflexion of the cervix is present, the finger comes in contact with the external os and enters the vagina to a shorter distance.

Uterine mobility.—Normally the uterus can be moved up and down, from side to side, and anteroposteriorly, with remarkable freedom and absence of pain; any limitation of this motion with or without pain indicates some deviation from the normal. In acute uncomplicated displacements restoration in the knee-chest posture, tamponade and, after tenderness has subsided, the wearing of a pessary for three or four months will usually result in a complete cure.

The most common cause of limited uterine mobility is contraction and subsequent shortening of the uterosacral ligaments, inducing a sense of bearing down and pain located in the sacral region. Among other conditions producing limited motion we find adhesions between the body, the ovaries, broad ligaments and Douglas's cul-de-sac, which do not permit of immediate replacement. Under these circumstances we place the patient in the Sim's or, preferably, the knee-chest posture, insert two fingers into the vagina and by pressure and stretching loosen the organs from their abnormal attachments. After a few minutes of this manipulation carried to the point of tolerance, the vaginal vault should be liberally coated with pure ichthyol or with a combination of zinc stearate and ichthyol (25%), and the vagina filled with boroglyceride tampons, to be repeated twice weekly.

In some cases Brandt's massage must be carried out under anesthesia; at the same time after freeing the uterus introduce a dilator, curette and insert the authors' bivalve uterine drain, pack the vagina with sterile gauze for a few days, and later fit a comfortable pessary to retain the uterus in its normal position. The pessary must be worn continuously, or the organ will fall back to its abnormal position.

If it be found impossible to free the uterus by the means above described, many can be relieved from symptoms by the use of triweekly tamponade, and, when the organ can be partially elevated, a carefully adjusted pessary can be worn and give comfort. Under these circumstances some patients have become pregnant, and, with careful watching and wearing a pessary until the uterus rises out of the pelvis, they avoid miscarriage and go on to term.

We have for some years endeavored to prevent post partum displacements by the use of sterile gauze tampons for one or two weeks after the uterus has involuted down to the pelvic brim, thus compelling that organ to resume its normal position, and often, after this treatment and the wearing of a pessary for two or three months, the patient is practically cured of her old displacement.

Brandt's massage or lifting can best be carried out with the patient lying upon her back; insert two fingers into the vagina, lift the cervix upward and backward, at the same time grasp the fundus through the abdominal wall and, with the external and internal hands working in unison, lift and stretch the uterus in any direction needed to render tense the adhesions and tear them loose. This is always a painful maneuver, which may be carried to the point of tolerance, but must not be attempted when pus-tubes are present.

The immobile or fixed uterus.—When carefully conducted efforts toward releasing an adherent uterus fail; when pus tubes, ovarian or broad ligament cysts or other neoplasms are present in the pelvis, lifting efforts are positively contra-indicated, and the use of pessaries must not be attempted; but, on the other hand, much relief from suffering may be secured by the persistent use of tampons, and operation (the one curative measure) be deferred for years—years which may be punctured with acute exacerbations.

Operation.—Persistent pain—sacral, suprapubic, or pelvic—with bearing down and "a feeling as if everything were coming out," unrelieved by rectal douching, tampons, etc., with inability to wear a pessary, in nulliparous, sterile, married women demands that the uterus and adnexa be dissected free and suspended in their normal position. Celiotomy, vaginal or abdominal, is also indicated in multiparæ, for the same reasons, or when any enlargement in the pelvis causes suffering unrelieved by palliative measures; but in women over 40 years. who have borne children and been sterile for some years, in whom local measures have been of no avail, it has been our practice to remove the uterus per vaginam or supravaginally, as the only sure plan, leaving behind one or both ovaries or at least a remnant of ovarian tissue to prevent the discomfort of a premature menopause.

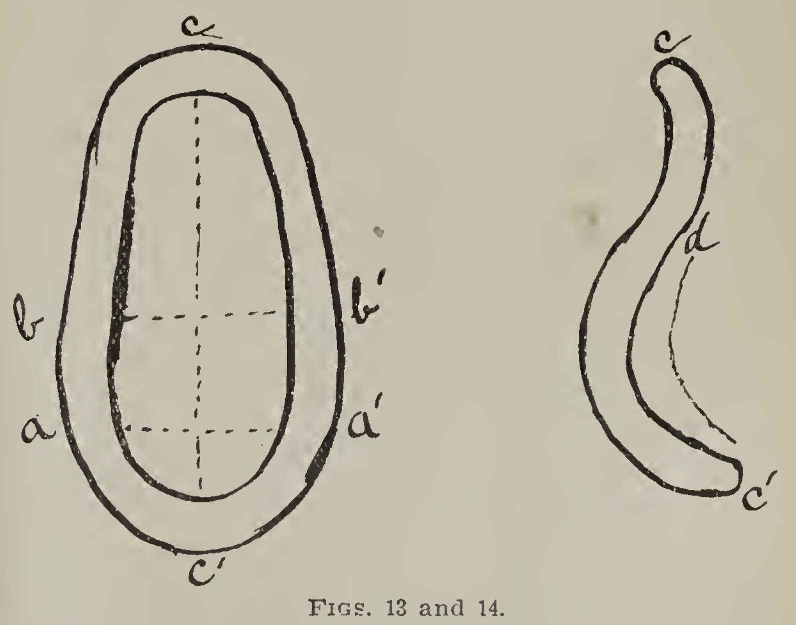
As regards laceration of the cervix and perineum, during the child-bearing period and under conditions other than those mentioned above, we prefer to fit a pessary if it will remain in place and sustain the uterus, in preference to operation.

But few repaired perinei can withstand the assault of a subsequent labor without again being lacerated, and hence a repetition of the operation is rendered necessary; but when the perineum is so lax or lacerated that the cervix cannot be held well up in the posterior fornix, thereby causing sterility and suffering in such cases, perineorrhaphy ought to be carried out without delay.

II. The Pessary.—Having by preliminary local treatment eliminated all pelvic tenderness and secured the necessary mobility, the successful use of a pessary will then depend upon the good judgment displayed in selecting one of an appropriate style and size, modified to the proper shape, introduced in the least disagreeable way, removed and cleaned at regular intervals and worn continuously so long as the patient and her husband are unconscious of its presence.

Styles.—For virgins, after manual dilatation under anesthesia, in nulliparous and married women, the Hodge or Albert-Smith pessary will answer all purposes. Women who have borne children and who have relaxed pelvic floors and lacerated perinei, first or second degree, with more or less rectocele and vesicocele, require a pessary which has been widened, shortened and a less acute angle. Some with extreme relaxation or gaping of the vulva must be supplied with a round, solid rubber ring, or a hard or soft hollow rubber pessary. The latter variety is objectionable on account of the disagreeable odor generated, liability to irritate the vagina, and that, after being worn for a month, they are unfit for further use.

Size.—To determine the size and shape of a pessary, introduce two fingers within the canal (patient on her back) and note (1) the width of the posterior portion of the pubic arch; (2) separate the fingers, determine the width of the midvaginal canal; (3) the length from the pubic arch to the apex of the posterior fornix when the cervix is pushed backward and the fundus forward; and (4) make a mental note of the curve while the uterus is held in this position. (Figs. 13-14.)



FIGS. 13 and 14.

Measurements for fitting pessary:
1. Width behind public arch, (a-a1).
2. Width of midvaginal canal, (b-b1).
3. Length from pubic arch to apex of posterior vaginal fornix, (c-c1).
4. Vaginal curve, (c1-d).

Shape.—A solid rubber pessary, after being heated in boiling water, can be moulded to almost any shape, but if allowed to remain in the boiler it will revert to its original round ring shape. While hot, shorten, widen, straighten and immediately dip in cold water to fix it.

Introduction.—Some years ago the writer, while removing pessaries, noticed that in several instances the instrument had reversed its position and lay within the vagina "end for end." A little thought and a few trials brought the conviction that this position is the most logical way to place a pessary, as the broad end conforms more closely to the posterior surface of the symphysis, retains its position better, does not slip between the labia and, whenever the patient makes any straining effort by raising the vesicovaginal septum, tends to relieve vesicocele. The narrow end engages the cervix more snugly, prevents wabbling and fits the posterior fornix better than the broader extremity, gives more comfort, maintains its position, supports the uterus and, unless the perineal floor is very lax, cannot come down. The lower end being well behind the symphysis, it cannot interfere with marital relations.

The introduction of the pessary can be most easily accomplished when the patient is in a recumbent position, less readily in the Sim's or the knee-chest position. To insert the instrument (1) place the index finger of the left hand within the hymen, press the perineum well backward; (2) hold the pessary by its broadest end between thumb, index and middle fingers of the right hand, convexity toward the patients' right thigh, enter the pessary sideways two-thirds of its length through the vulvar slit; relax hold on the lower end, and, with the right index finger against the upper bar, carry the pessary along the right vaginal wall and rotate it posteriorly so that the cervix slips within the upper end.

Precautions.—When the pessary is in position (a) the vaginal wall should never be tense; (b) the lower bar must lie just behind the symphysis, invisible at the vulva; (c) it should be somewhat movable up and down and free from discomfort during coitus; (d) the wearer should not at any time feel conscious of its presence (e) it must be removed at the end of the first week and the vagina examined for pressure points or any signs of irritation, it should then be replaced, and again removed at least once every four weeks, cleaned, polished with a dry towel, and reinserted; (f) the wearer must use daily a warm douche, to which may be added a tablespoonful of common salt, or two teaspoonfuls of sodium bicarbonate. These vaginal douches are of service only for cleansing purposes. Vaginal douches for the reduction of pelvic inflammation are injurious if not continued for at least 20 minutes, whereas rectal injections or continuous irrigations for an hour, once or twice daily, will exert an almost marvelous effect on recent pelvic inflammation, and in alleviating pain and tenderness, and for removing exudates in the old cases. For rectal injections we use 2 quarts of water at 120° F. to which have been added 2 oz. hamamelis; the patient lying upon her right side, her hips raised as high as possible and the legs flexed upon the abdomen; allow the mixture to run in slowly, a few ounces at a time; encourage her to retain it as long as possible and lie still for an hour. In many instances the whole two quarts will be retained and will do her good. For continuous irrigation Kemp's tube has afforded the most satisfactory results.

It is always wise to inform your patient that a pessary will but rarely cure uterine displacement, but will afford symptomatic relief as long as it is worn and properly cared for.

Contra-indications.—Pessaries ought never to be used when there is present a purulent vaginitis; fixation of the uterus, ovaries or tubes, pus tubes or pelvic enlargements.

THE RADICAL CURE OF INGUINAL HERNIA IN INFANTS AND YOUNG CHILDREN.

By CHARLES GREENE CUMSTON, M. D.,
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The treatment of hernia forms, without doubt, one of the most important chapters of surgery, and in all ages the medical profession has been deeply impressed with the question as to how to free humanity from an affection which is not only a menace to life and good health, but is also in itself a burden to those whom it afflicts.

A glance at the history of hernia will show that in olden times operation was not infrequently undertaken, but later on, with the advent of the truss, radical measures were abandoned, because this treatment by mechanical means found great support by both patient and physician, since it should be recollected that in the older operations for hernia the testicle was removed.

With the new operative measures, the testicle and the spermatic cord were left intact, and an attempt was made to reproduce new anatomical relations of the parts. Since the advent of the antiseptic and aseptic era it has generally been admitted that a radical operation is the treatment of choice and in most cases successful and devoid of danger. Although the radical operation on adults has been acknowledged for some years past as the proper course of pursue, the same cannot be said of the general opinion regarding the operation in infancy and early childhood, and it is only until within the past few years that it has come into more general use, because it was pointed out that it was both a difficult and a dangerous undertaking in the young, and was only justified by urgent complications, such as strangulation, etc.

Many surgeons were timid as to the use of narcosis, while others feared infection of the wound by the soiling of the dressings with urine by little children who had not yet been taught to attend to their wants. On the other hand, many others laid great stress on the fact that a large proportion of herniæ are cured by the use of the truss, and the excellent results reported have discouraged many surgeons from undertaking the radical cure.

In this paper it will be attempted to demonstrate that the radical operation for hernia in infancy is indicated under certain circumstances, and that its results are not only permanently successful, but that the operation is not attended with any more risk in babies and young children than in adults. Time forbids referring to the able writings of Steele, Kocher, Coley, Annandale, von Nussbaum, Shede, Barker, Phocas, Berger, Félizet, Bassini, Lucas-Championnière, Küstner, Wölfler, Broca and many others who have contributed to the subject now under consideration, and only a few of the most recent results will be given.

Félizet, in his remarkable treatise published in 1894, entitled: "Les Hernies Inguinales de L'Enfance," relates the cases of 19 children operated upon for hernia between the ages of 7 and 21 months, and the case of one child five weeks old. Out of these twenty cases there was one death, but this was due to an operative accident and was in no way related to the age of the patient nor to the type of hernia operated on.

In his work on "The Surgical Diseases of Children," published in 1895, D'Arcy Power makes the following remarks: "The radical operation for the cure of hernia has been very frequently employed during the last few years, but we still need more evidence of its ultimate effect, as it is too soon to dogmatize. It is applicable to any age, from earliest infancy to puberty, though there are many surgeons who prefer to wait until the child has reached four years of age before they undertake it. I have no hesitation, however, in considering its advisability in every case of congenital hernia in which the methodical and sufficient application of a truss has failed to effect a cure."

At the time of publishing his important paper in 1890, Bassini had operated on 12 cases of hernia occurring in children varying from 13 months to five years of age, with good results. In 1891 Bayer reported 12 cases of radical operation in young children, with good recovery in all. In five of the patients there was no sign of relapse at the end of one to 3½ years, but the ultimate result in the remaining seven was unknown. In 1894 Gordon reported 250 cases of radical operation for hernia in children varying from less than one year to 16 years of age, performed at the Hôpital Trousseau in Paris. All these patients recovered without any complication, and, as far as could be ascertained, no recurrence of the hernia could be found.

In the same year Karewsky reported 15 cases which were all successfully operated upon, and five years later the same authority recorded 19 more, 13 of which were reducible and 6 had become incarcerated. Of these patients only one died after the operation, but in this one, besides the incarceration of the hernia, there was torsion of the spermatic cord and necrosis of the testicle; the child being almost moribund at the time the operation was undertaken. All the other patients went through the operation in the most satisfactory manner and no recurrence was observed, although two of the patients were seen eight years after the operation, three over seven years and two more than five years afterward.

At a meeting of the French Surgical Congress in 1897, Froelich, of Nancy, advocated more frequent resort to the radical cure of hernia in infants than has been usually considered advisable by most operators. He had at this date operated on 82 children under two years of age, with a mortality of 4% and 6% of relapse. The operative tehnique of this surgeon I believe to be most defective, as he simply sutures the neck of the sac without either opening or resecting it. It should here be remarked that a number of other operators have advocated similar so-called simple methods, but I cannot conceive how these methods can be termed radical, and it would also appear as though they were more or less blind and consequently not devoid of danger.

During 1899 an important paper appeared from the pen of Frænkel entitled: "Hernia Operations in Children," in which he reported the cases of 16 patients all of whom made good recoveries, and perfect results followed the operation. It is well to point out that Frænkel used the typical Bassini operation in all his cases. Phocas, Kœnig and Szumann have also operated on very young children with excellent results. In all the above mentioned series of cases the surgeons were dealing with both reducible and incarcerated inguinal herniæ. During the last few years a number of instances of incarcerated hernia have been reported by various authorities, and, although this condition appears to be relatively infrequent in babies, still it would appear to the writer that it is a much more common occurrence than is generally supposed.

In 1902 Wolff reported ten cases of inguinal hernia occurring in babies, varying in age from six months to two years. The patients were operated upon in the surgical clinic of the University of Bonn. Buchholz has recently put on record nine cases, the ages of the patients being 7 weeks, 11 weeks, 12 weeks, two of five months, one of three months, one of eight months, one of nine months and one of twenty-two months. This latter series was operated upon at one of the Hamburg clinics. They all made perfect recoveries, and were found to be free from recurrence many months after the operation. Of the ten cases reported by Wolff, three of the patients died, one from pneumonia and one from rachitis gravis, while the cause of death in the third could not be ascertained.

In a personal communication to the writer, Dr. John F. Erdmann, of New York, says that he has operated on a strangulated left oblique hernia, without narcosis, in a male infant, thirteen days old. Bassini's operation was done with excellent results.

From the cases here mentioned as well as from the histories of seven more patients who were operated on by myself, and who have been seen from one to four years after the operation and all of whom were found to be radically cured, it would appear that the danger of operating on very young children is not so great as has generally been held, and it also shows that a radical cure may be obtained with about as much certainty as in the adult This is not at all to be wondered at, as the tissues in infancy are certainly in the best condition to heal and remain in place, on account of their great elasticity. But there is one point upon which we will particularly insist, and that is, in doing a radical cure for hernia in very young children no antiseptics should be employed, as the tissues in young subjects tolerate them badly, and for this reason a perfectly aseptic technqiue should be carried out during the entire operation.

In all the cases it will be seen that the typical Bassini operation was employed, and was not found at all difficult of execution. The skin incision was made freely over the hernia parallel to Poupart's ligament and reaching well below the external inguinal ring. After going through the skin and subcutaneous fat, the sac and spermatic cord were exposed by careful dissection, but, on account of the minute size of the parts, it was more or less difficult to isolate the sac from the cord, because in many cases it was found that the latter was spread out over the sac, and for this reason we found it better practice not to isolate the sac at its exit from the inguinal canal, as is usually done, but to open it at its apex. By thus proceeding with the finger introduced within the sac, it was quite an easy matter to dissect it off the cord and to isolate it above, while at the same time the size and condition of the pillars could be ascertained. When the sac has been completely dissected off the cord, it should be ligated as far up as possible and the stump allowed to drop into the abdomen.

The orifice of the inguinal canal will usually be found relatively large in young children. For sutures I have only employed dry sterilized kangaroo tendon for the muscles and fascia, and silkworm gut for the skin. Dry sterile gauze and a plaster spica were the dressings used in all my cases. The spica was removed at the end of the week, after which time sterile gauze covered with oiled paper was applied and held in place by an ordinary spica bandage. This was left on for five days, after which time collodion over the line of incision was all that was necessary. No truss or bandage of any description was used after the operation in any of these cases.

CASE 1.—Boy, 9 months old, had had a left inguinal hernia since birth, which had been attentively cared for by a truss without any result, in fact, the hernia appeared larger when the instrument was removed. The parents desired a radical cure to be attempted, and at their request I operated, as in other respects the child was a robust and healthy boy. Physical examination showed that the thoracic and abdominal viscera were in perfect condition. The hernia was easily reduced, but it had a tendency to extend into the scrotum. Narcosis. Bassini's operation. The dissection of the sac from the spermatic cord was somewhat difficult. Dry dressing, plaster spica. Stitches removed in ten days. Result perfect. The child was seen four years and three months after the operation, and no evidence of any recurrence was present.

CASE 2.—Male, eleven and a half months old, presented a large right-sided congenital inguinal hernia. He had been treated by trusses at one of the hospitals, but, as the hernia was rather increasing in size than otherwise, radical operation was advised. The child was physically strong, and his tissues were in excellent condition. The hernia was easily reduced. Narcosis. Bassini's operation. Sac easily dissected off the cord. Dry dressing. Plaster spica. Stitches removed thirteen days after the operation. Recovery perfect. Seen three years and a half after the operation, but no recurrence of hernia was manifest.

CASE 3.—Male, thirteen months old, presented a large right-sided congenital inguinal hernia, and a marked degree of phimosis. Although the child was in what might be called a good physical condition, he had, nevertheless, suffered from more or less bronchitis ever since birth, and it had been found difficult to keep the hernia reduced by various forms of mechanical appliances. Operation was advised, and, after a preliminary medical treatment directed toward the bronchial irritation, the radical cure was undertaken. Bassini's operation. Circumcision. Dry dressing. Plaster spica. Stitches removed in nine days. Recovery perfect. Seen two years and eleven months after the operation without any recurrence of the hernia.

CASE 4.—Male, five months old, had had a left-sided inguinal heria since birth. From the age of twelve weeks on a worsted truss had been applied which had retained the hernia in place until he was seized with an attack of acute bronchitis at three and a half months. This was rather severe, the cough continued and the child strained considerably, so that, according to the statement of the parents, the hernia had remained down for several weeks. I was hurriedly summoned to see this child, who had presented symptoms of intestinal obstruction for about twelve hours, and diagnosticated a strangulated hernia. Gentle taxis was tried, but the gut could not be reduced, so, therefore, I operated at once. Bassini's operation. Intestine found somewhat injected, but not sufficiently so to justify any fear as to its vitality. It was reduced into the abdomen. A small amount of serum escaped when the sac was opened. The latter was readily dissected off the cord, according to the method that I have described, and the remainder of the operation was easily accomplished. Dry dressing, plaster spica. Stitches removed at the end of the week. Recovery perfect. Seen three years and a half after the operation without recurrence of the hernia.

CASE 5.—Male, seven and a half months old, poorly nourished and presenting evident signs of rickets, showed a left-sided inguinal hernia which had never extended much beyond the external orifice of the inguinal canal. Treatment with the truss had been more or less neglected by the parents, and on one or two occasions the hernia had become slightly incarcerated, but had been reduced by taxis. When the child was seen he had evidently been suffering from strangulation of the hernia for about thirty-six hours. Little or no gas had been passed per rectum; the pulse was rapid and of poor quality; the temperature subnormal and the respirations forty. Surgical measures being urgent, I operated on the child about two hours later, although on account of the poor condition of the subject I had decided fears as to the ultimate outcome of the case. The sac was opened, and the contents, which were found in a still fairly good condition although somewhat adherent to the sac, were reduced, the sac was with some difficulty dissected off the cord, and, as the patient appeared to be holding his own, Bassini's operation was done. Dry dressing. Plaster spica. Stitches removed in eight days. Perfect recovery. Child seen twenty months after operation in much better health and without recurrence of the hernia.

CASE 6.—Male, eighteen months old, presented a right and left inguinal hernia, apparently of congenital origin, both having been present since birth. Truss treatment had been persevered in, but apparently was unsuccessful, since both herniæ were increasing in size. The child was a well-nourished, lusty boy, with fine muscular development, but he presented a marked degree of phimosis, and, upon questioning, the parents stated that the child appeared to have much difficulty in micturition and that he strained considerably. Taking the case in all its aspects, I decided to operate on the right hernia first, as this was the largest, and also on the phimosis. Both herniæ were easily reduced. Bassini's operation was done with considerable ease a few days later, and circumcision at the same time. Dry dressing. Plaster spica. Stitches removed on the eighth day. Recovery uneventful. Seven weeks later a Bassini operation was done on the left hernia without any complication. The child was seen twenty-five months after the second operation and no recurrence had taken place.

CASE 7.—Male, twenty-one months old, presented a left-sided congenital inguinal hernia, complicated with hydrocele. Treatment with truss was begun when the child was eight months old, but had been unsuccessful as the hernia came down when the child cried. The patient was fairly well nourished and had no affliction which seemed to contra-indicate surgical interference. Narcosis. Bassini's operation. Radical cure of the hydrocele by resection of the tunica vaginalis. The sac was extremely adherent to the cord, but was finally dissected off intact. Dry dressing. Plaster spica. Stitches removed on the eighth day. Recovery uneventful. Seen nineteen months after the operation without recurrence having taken place.

As will be seen, the cases here reported presented different clinical phases. In two of them strangulation had taken place, one presented a double hernia, while the remaining four had a simple hernia one one side. With the exception of one case the children were in good physical condition and well developed, and all of them stood the operation remarkably well. The recovery in both cases of strangulation was really remarkable. It also seems that the ultimate results have been most successful, as none of them has presented any recurrence of the hernia after a number of years or months. In none of the patients was any atrophy of the testicle detected.

The uniformly good results which have been reported by various operators, who have undertaken the radical cure on young subjects, show that the operation is without danger, and that the various reports that it is dangerous in infants is in reality without foundation. As far as I am able to judge, it is no more dangerous than in adults, because young subjects generally show as much resisting power as their elders.

It is, however, well not to prolong the operation beyond undue limits, and, although in this respect the Bassini operation has been criticized, I must say that at my hands it could always be performed satisfactorily within half an hour or less. It is certainly the most reliable operation in its ultimate outcome, and I think that, if interference is called for at all, the operation to be selected is that one which is more liable to give a permanent result.

As to the indications of radical cure in young children it may be said that no hard and fixed rules can be laid down. Of course, the most important indication is, certainly, strangulation, and it has been pointed out by various authorities that in this class of cases the danger of a radical operation in young children is especially serious, and that, before resorting to operation, taxis should be tried. On this point, however, I must dissent, because the reports of various cases of patients that have been operated on certainly demonstrate that it is poor judgment to defer the operation. In these cases one is usually dealing with feeble and poorly nourished infants, but, if the operation is undertaken in time so that no serious changes have occurred in the gut, they will stand the operation very well.

All authorities are in accord that forcible attempts to replace the strangulated gut must be avoided, for the reason that hemorrhagic infarcts are apt to follow prolonged attempts at reduction, and may be followed by gangrene of the testicle. As a matter of fact, even after slight attempts at reduction, which were in reality only made for diagnostic purposes, subcutaneous hemorrhages have been noted, and also in the sac of the hernia. It would, therefore, seem that, in every case of strangulated hernia in an infant, an early surgical interference is indicated. Brutal endeavors to replace the contents of the sac should be avoided, because it is simply a loss of time and, under certain circumstances, renders the condition of the patient dangerous.

As far as I am able to judge, strangulation of inguinal herniæ is very much more frequent during the first three months of life than later in childhood. In 1894 Stern published an account of eight cases of strangulated hernia in infants less than one month old, while more recently Funke has recorded two more. Six of Stern's patients recovered, while both of Funke's were saved by operation, although in one atrophy of the corresponding testicle resulted.

Broca has had to deal with a strangulated hernia in 9 out of 200 cases requiring a radical cure during infancy, while Tariel has been able to collect 128 cases of strangulated hernia in infants. Goleff says that strangulation of inguinal hernia is frequent in young infants, and is most frequently encountered in male babies from one to nine months of age, usually on the right side. He records twenty cases.

The strangulation is occasionally due to the inguinal rings, but usually it is the neck of the sac that gives rise to this complication. The symptoms are the same as in the adult, only in infants they are more rapid. The diagnosis is only rendered difficult if an inflamed ectopic testicle is present.

The radical operation is also indicated in cases in which the hernia is so large that it cannot be retained by the truss. If in such cases an early operation is not resorted to, the hernia will increase in size, especially during the first few years of life, because babies force down the gut when crying. Another point that should be noted is the presence of phimosis, and, if found, it should be dealt with at the same time that the hernia is operated upon.

As a matter of fact, there is no doubt that a large proportion of smaller herniæ is cured by the application of a truss, but I see no reason why a radical operation should not be undertaken if the parents should ask for it and prefer it, because it should not be forgotten that infants and children are at all times exposed to the danger of strangulation and its consequences, and still more the constant wearing of a truss is oftentimes badly borne by the skin which becomes sensitive from the constant pressure and irritation of the mechanical device. A severe eczema may result, which will become worse from the contact of urine in young patients, and the skin lesion will often defy all treatment.

Then, if we consider the poor hygienic conditions under which poor children are obliged to live and how little care they receive from their parents from lack of time, it is easily imagined what the results of a truss treatment mean. On the other hand, the expense of a truss also plays an important part, for the instruments become rusty and brittle, and new ones are frequently required. Then again, these children will in all probability have to work hard, and, for a person who must rely exclusively on hard physical labor to obtain his bread, the constant wearing of a truss is a great obstacle, even if he is not completely prevented from attending to his work.

A child in no matter what social condition is more or less of an invalid when wearing a truss, as it keeps him from enjoying those sports and pastimes which are so necessary for the well-being and development of little children. For this reason they are oftentimes physically undeveloped.

From what has been said I would formulate the following conclusions: (1) Experience has demonstrated the innocuity of radical operation for hernia in infants. (2) The operation is indicated in all cases of strangulation, in all cases in which the contents of the sac cannot be retained by a truss, and in every case in which irritation of the skin is produced by the mechanical appliance, and in children of the poor who cannot receive the necessary and proper attention at their homes.

THE PARADOXICAL REACTION OF THE PUPIL IN ACCOMMODATION, WITH A REPORT OF THREE CASES.*

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The paradoxical reaction, or "perverse reaction," of the pupil in accommodation has been observed by W. Vysin, but is apparently of very rare occurrence. This phenomenon is not the same as the better-known paradoxical reaction to light, in which the pupil becomes larger when the eye is exposed to light. The two abnormal forms of pupillary reaction are not necessarily present in the same person. Dr. G. E. de Schweinitz tells me he has never seen the paradoxical reaction in accommodation, and Dr. W. C. Posey says that, except in the two cases I have presented to him for examination, he also has never observed it. I know of no cases reported in the literature except those of Vysin. I have not been able to obtain Vysin's original paper, but I have translated the following from a recent article by J. Piltz:[1] "W. Vysin published two cases of perverse pupillary reaction. The perversity of the pupillary reaction consisted in the very interesting observation that the pupils enlarged in accommodation while they diminished in size while looking into space. In order to answer the objection that the eyes were more exposed to light while looking into space than in looking at a near object, Vysin selected as distant point of fixation a dark wall ten meters away, and then made the examination while the eyes were illuminated by means of concentric light (lens). The pupils, contracted on account of the intense illumination, enlarged very perceptibly in the fixation of a near object, while they became smaller in looking into space. One was a case of traumatic neurosis, the other presented the phenomenon of perverse pupillary reaction temporarily and only at the time of an attack of migraine. The abnormal phenomenon of the pupils disappeared always on the cessation of an attack. According to Vysin, this second case is proof that (1) migraine is a disease caused by changes in the cerebral cortex, and (2) that the reaction of accommodation is likewise under the control of the cerebral cortex. The diseased cerebral cortex does not influence the movements of the pupils in the normal manner. When in this patient the attacks of migraine ceased and the control of the cerebral cortex returned, its influence was observed in the reflex pupillary movement."

This explanation may be more convincing in Vysin's original paper than it appears in the abstract from Piltz's article. Apparently Vysin did not observe this perverse reaction of the pupils in convergence.

I have observed three cases in which the pupil became smaller in fixing a far object, and larger in fixing a near object, and larger when the eyeball was directed downward and inward, the other eyeball being covered. I believe at present that this phenomenon is not necessarily indicative of organic disease, but, as it has rarely been observed, it is well to be cautious in its interpretation. At present no satisfactory explanation suggests itself to me.

Piltz says that in most cases of paradoxical reaction of the pupils to light the dilatation is an associated movement with the divergence of the eyeball resulting from paresis of the adductor. In such cases, when a near object is fixed, the pupil remains contracted until the internal rectus becomes exhausted and the eyeball deviates outward, at which time dilatation of the pupil occurs as an associated movement. This cannot be the explanation of two of my cases at least, and probably not of the first, because the weakness of the internal rectus was slight in one case and absent in another. The dilatation in fixing a near point occurred immediately after fixation. The dilatation in looking downward and inward occurred when the eyeball was exposed to strong daylight, and the phenomenon was absent in other persons exposed to the same test.

Piltz says that until the present time the paradoxical reaction in accommodation has been observed only in functional cases. The first of my three cases was unquestionably one of organic nervous disease.

CASE 1 was in the Philadelphia Hospital during my term of service in 1902. The diagnosis of the patient's nervous disease was uncertain, as I could obtain no history of its development. She was a woman of middle age, and when I saw her she had much weakness and edema of the lower limbs. The patellar reflex was a little exaggerated on each side, and patellar clonus was obtained on the right side, but not on the left. Ankle clonus was not present on either side. Babinski's reflex was obtained on each side. She complained of pain in the right lower limb. Objective sensation in the upper and lower limbs was normal. Station, erect, was good, but her steps were short and made with great effort, and she barely lifted her feet from the ground. She was emaciated. The grasp of the hands was good. Resistance to passive movements in the upper limbs was normal. The tendon reflexes of the upper limbs were exaggerated. The left eye deviated outward from weakness of the left internal rectus. The pupils were equal, and the irides reacted promptly to light. **The pupil dilated when the eyeball was directed downward and inward, but contracted in looking at the ceiling. The same phenomenon was observed in accommodation, the contraction occurring in looking at a far object and the dilatation in looking at a near object.** The examination of the pupils was made in the hospital ward while the patient was lying upon her back. The patient died from carcinoma of the uterus, but the necrosy was incomplete, and the spinal cord and brain were not obtained.

CASE 2 was one in my service at the Polyclinic Hospital. The patient was a man, thirty-three years of age, who, about sixteen weeks previously, began to have pain in the left hip, extending down the back of the thigh to the toes. He has also had pain in the corresponding part of the right lower limb, and he has been treated for sciatica. He walked much before the pain developed. He had some tenderness along the course of the sciatic nerve, and flexion of either thigh on the abdomen with the leg extended caused some pain along the course of the sciatic nerve. The Achilles jerk was a little prompter than normal on each side. The patellar reflex was slightly diminished on the left side and still more so on the right side. His gait and station were normal. The pupils were nearly equal, and the reaction of the iris was prompt on each side. When he looked upward or directly in front of him, the pupils became smaller. In fixing a near object without any upward movement of the eyeball, the pupil became larger without any previous contraction. This phenomenon was more distinct in the left eye. In looking downward and inward with the left eye when the right eye was covered, the left pupil contracted momentarily and then dilated distinctly. When both were uncovered, the dilatation of the pupils in convergence was not distinct. The case was probably a functional one.

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* Read in abstract at a meeting of the Philadelphia Neurological Society, January 27, 1903.

[1] J. Piltz (Neurologisches Centralblatt, Nos. 20, 21 and 22, 1903).

As I desired to have the report of an experienced ophthalmologist upon the ocular phenomena of this man, I sent him to Dr. W. C. Posey, whose report is here given:

"Pupil of O. D. 3 mm. in size, O. S. 4 mm. When O. D. is covered and O. S. fixing in distance, the pupil contracts after the shading hand is removed, but then quickly dilates and remains dilated. When the eye regards a near point, the pupil grows larger. These changes are also present in O. D., but to a less extent. Both are myopic, the left markedly so. O. S. shows tendency to diverge. It was thought that the unusual pupillary changes were due to an incoordination between convergence and accommodation, the result of the latent divergence in O. S. No changes are present in fundi or optic nerves. Testing with correcting glasses, vision in O. D. 5/12, O. S. 5/30, reduction being due to nearsighted astigmatism. Muscle balance at 5 m. hyp. 2°, ex. 20°."

In both the cases described above there was weakness of one internal rectus. The third person in whom I observed the phenomenon was a physician. I examined her for the sake of comparison and found the perverse reaction in accommodation in her also; this observation was confirmed by Dr. Posey. Hippus was observed in fixing a far object after the contraction of the pupil. This physician is a woman apperently in perfect health. Dr. D. J. McCarthy has observed that in many normal persons the pupil contracts when the eyeball is directed upward, I have, therefore, in testing the contraction or dilatation of the pupil, avoided the upward movement of the eyeball.

A STUDY OF THE BRAIN-WEIGHTS OF MEN NOTABLE IN THE PROFESSIONS, ARTS AND SCIENCES.

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That the very slow accumulation of brain-weights of distinguished men, or of successful members of the liberal professions, has contributed to the existing diversities of opinion concerning the significance of the weight of the brain in its relations to the intelligence is clear to anyone familiar with recent essays on the subject. Particularly disconcerting to some writers has been the not infrequent occurrence of unusually heavy brains in idiotic persons, while certain low brain-weights of men ranking high in intelligence have prompted not a few anatomists and anthropologists—not content to defer judgment until a sufficient number of data had been collected—to make the flat assertion that the weight of the brain is absolutely unrelated to the psychical faculties.*

It were indeed strange if we had thus to overthrow the general principles governing the functions of the brain as an apparatus of thought. Aside from the well-established proofs of the interdependence of brain-size and intelligence in the animal series, there exist the very convincing craniological studies of Ranke, Manouvrier, Vircrow and many others, pointing in no uncertain way to a decided relation between the cranial capacities of men and their psychical powers. If, as Broca has shown, the skulls of modern Parisians are larger than those of the seventh century, if the cranial capacity of townspeople is, as a rule, greater than that of the peasants of the environs (Ranke)*, and if the heads of university students have been found to be "on the average greatest and growing for the longest time in the group of most successful men" (Venn),** it would certainly seem that the size of the brain assumes, relatively speaking, that significance due this organ of mind quite as much as, for example, the large size of the vestibular nerve in the cetacea and phocidæ relates to their remarkably skilful equilibristic movements.

A great number of unusually heavy brain-weights found among idiots, imbeciles, criminals, insane and other defectives, as well as a number among obscure bricklayers, blacksmiths and common laborers, are fondly thrust before us to be taken in a manner as a refutation of the "unfounded doctrine that the intelligence depends upon the size of the brain." Such cases are nearly always explained by pathological hypertrophy, either congenitally acquired or later developed during disease, and, in the case of idiots and imbeciles, invariably characterized by grave defects in structure, such as abnormal increase of the neuroglia with profound diminution of ganglion cells or abnormal gyral development, and so on. It were as unfair to include such unhealthy brains in a comparative study of brain-weights in their relation to the mental functions as it would be to assert the large liver in a case of hypertrophic cirrhosis to be better able to perform its functions than the smaller but healthy one. A pathological hypertrophy impairs the functions of any organ, but such is not the form of increase noted in the brains of certain men distinguished for mental ability. The proposition here dealt with concerns the relation which the weight of the brain bears to healthy psychical functionating, and this study is based upon the collection and analysis of the actual brain-weights of men who in their lifetime have become more or less distinguished in some branch of the professions, arts or sciences, or who have been noted for their energetic and successful participation in human affairs.

Before proceeding to this analysis, it must be emphasized that the weight of the brain in itself is not the all-important factor which still another class of writers avers it to be. Aside from the fact that a certain volume and weight of brain is absolutely essential to mental integrity, the external appearances of the cerebrum often give the best indication of the individual's psychical powers. The recent morphological studies of Retzius[1] on the brains of the astronomer and mathematician Hugo Gyldèn, the mathematician Sonya Kovalewski, and the physicist and pedagogue Siljeström; of Hansemann[2] on that of Helmholtz; of Guszman[3] on that of the musical composer Rudolf Lenz; of Duval[4] on that of Gambetta; of Rüdinger[5] on those of several scientists; and of those on the brains of the two physicians Seguin, father and son,[6] tend to show that the index of an individual's prominent characteristic is to be found in certain individual peculiarities in the development of one or another cortical region. If the older investigators have been disappointed in their search for definite areas of differentiation in different brains, it has been because there did not yet prevail a thorough appreciation of the complex and but recently understand mechanisms involved in cerebration, and because of the small extent of knowledge of the cerebral topography. The evidence that has been gathered by the above mentioned observers, while arguing for territorial differentiation of the cortex, has, as a supplement to the anatomical investigations of Flechsig, furnished us with a comprehensive understanding of certain distinctions between brains of high and low order. Psychologically speaking, perhaps the most important difference between the human mind and that of the brute lies in the great powers of association possessed by the former. To a slighter degree the same differentiation may be made in comparing human minds with each other. When then, to return to the anatomical aspect of this theme, in addition to large brain-size we likewise have a superior development and arrangement of the cerebral gyri and of special cortical fields in particular (Gauss' brain remains the best example of this), we see in such a case the establishment of a true parallelism between the potency and efficacy of every psychical function and the size and architecture of the brain.

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*Sernoff says: "....The brains of eminent men do not differ from those of ordinary persons in regard to size, weight or surface morphology." Hansemann (Ztschr. f. Phys. u. Psych. d. Sinnesorg., XX., 1.) likewise denies any interdependence of brain-weight and mental capacity and says: "We know that the weight of the brain depends least of all upon the ganglion cells and nerve fibers, but chiefly upon the mass of the neuroglia, and the amount of blood contained in it." The gross error herein hardly requires exposition; however, see the proof of the preponderance in weight of the neuraxones in Donaldson's "Growth of the Brain."

*Ranke (Beitr. z. Biol., 1882) found the average cranial capacity of 100 males of the city population to be 1523 cc.; (max. 1815, min. 1288) while among the peasants the average was 1503 cc. (max. 1260, min. 1780).

**Venn measured the heads of Cambridge University students and found that throughout the entire student period the head increased in size. (Nature, 1890.)

The subject of the brain-weight in men of distinction has already been treated by other writers, notably Wagner, Welcker, Broca, Manouvrier and Donaldson. More than a decade has elapsed since the appearance of the last of the important and original treatises upon the subject, and the accumulation of additional data prompts the writer to review the subject, and to analyse still further the material thus collected, in so far as the degree of the intelligence may be correlated with the weight of the brain.

The writer has been able to bring together 114 such brain-weights, of which 96 could be selected as available in this analysis.* The mythical figures for the brains of Cromwell (2330 gm.), Byron (2238 and 1807), General Abercrombie (1758) and certain others are entirely left out of consideration. In still another category have been placed those noted individuals who died insane, viz:

Frank Collier, (*circular insanity*) 1720 gm.
Altmann, anatomist (*paresis*)[7] 1460 gm.
Donnizetti, composer, (*paresis*)[8] 1391 gm.
R. Schumann, composer, (*melancholia*)[9] 1352 gm.
Ludwig II., sovereign (*paranoia*)[10] 1349 gm.
Smetana, composer, (*paresis*)[11] 1250 gm.

Others which are dismissed here with the mere mention are those of a "Scotch Army Officer, of marked intelligence,[12] (1693 gm.); "an obscure journalist, formerly a clergyman"[13], (1588 gm.); the notorius "Jim" Fisk[14] (1644 gm.); E. L. B. Curtis,[15] an educated farmer (1348 gm.); R. D. Milne,[16] "newspaper reporter," (1135 gm.) and that of Washington I. Bishop* (1135 gm.)

Still others omitted from the table are those of the physiologists Harless and v Döllinger, and that of Gambetta. The first two were not weighed until after long immersion in alcohol, and Bischoff[17] attempted an estimate by adding 41% to this weight, obtaining for Harless 1238 gm., and for v. Döllinger 1207 gm. Gambetta's brain lost much of its weight on account of the use of a zinc chloride solution, the figure being 1160 gm.; an hour later 10 gm. less. Duval's[4] experiments with a similar fluid led him to estimate the original weight as 1247 gm.

The writer has as yet been unable to verify the following, and they are, therefore, omitted from the table for the present:

Eduard Lasker, 1300 gm.
Andrew Combe, 1616 gm.
Janos Vajda, 1500 gm.

On the other hand, the writer is not at all persuaded to exclude, as has been urged, the brain-weights of Turgeneff[18] and Cuvier.[19]. That of the former is an extraordinary figure (2012 gm.), but it is quoted from a very reliable source and was accepted by contemporary authorities, notably such careful men as Manouvrier and Topinard. The physicians who performed the autopsy, namely: Brouardel, Segond, Descout and Magnin, are certainly exempt from the charge of carelessness in observation or dishonesty of purpose. The Russian poet was a tall man, but not extraordinarly so, but his head was large, and the report that there was noted a tendency to symmetry of the cerebral gyri may have some significance in this connection. As for Cuvier's brain, his alleged hydrocephalus, if it existed at all, did not in any way impair the magnificent mental powers of this founder—and most productive worker—of the modern natural history. His death occurred at the age of 63, with mind unclouded. Cuvier's skull was large, macrocephalic,** but who can say from its inspection that it was not simply and normally kephalonoid, or whether it was thus enlarged by an undue accumulation of fluid. The alleged hydrocephalus of Helmholtz[2] seems to be based entirely upon the history of slight attacks of vertigo, of very rare recurrence; attacks which he might have had from a multitude of causes other than hydrocephalus—of which there were no physical signs observable in the shape of his head. Hansemann's vague reference to a "slight dilatation of the ventricles" are best explainable by the two apoplectic hemorrhages which terminated Helmholtz's life six weeks after. If the suggested theory of Perls and Edinger is to have for its foundation cases like these, the arguments in favor of the "advantages of a moderate hydrocephalus" (i. e. if followed by a recession) as a means of increasing the brain and the intellectual powers are of a very problematical nature indeed.

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* Up to the time of reading proof, the writer has received an additional brain-weight, that of Prof. Carl v. Kupffer, aged 73. Prof. Bollinger found its weight to be 1400 gm.

*This individual suffered from hystero-epilepsy, wore himself out through imprudent wakefulness and self-prescribed doses of antipyrine for nervousness and cephalalgia, and died in a "trance," the consequence of cerebral exhaustion. The case created a sensation on account of the accusation that Bishop's physicians had performed an autopsy upon a living man while in a "trance." This was proven to be unfounded, however.

**Although Cuvier figures as a French naturalist, he was in reality a native of Wuerttemberg, and belonged to the North German, not the Celtic, race.

The actual weight of the brains of each of the individuals in the table has doubtless been influenced to a varying extent by the conditions and causes of death. These variations must, however, be disregarded here, except to mention that, as a general rule, the figures are rather lower than they should be by reason of atrophy from old age, or from wasting diseases, or both. In a few cases there is ample proof of this diminution of weight, as, for example, in that of the phrenologist and anatomist Gall,[20] who died at the age of 70, after a most active career, and whose brain had shrunken considerably, weighing only 1198 grams. The report of the autopsy mentions this atrophy as well as the existence of "four or five ounces of fluid." The skull of Gall had an internal capacity of 1692 cubic centimeters, from which we may fairly infer (employing the low co-efficient of Manouvrier, 0.87) that the brain must at one time have weighed fully 1475 grams or more. Bischoff[17] for a like reason would raise Tiedemann's 1254 gm. to 1422 gm., and v. Liebig's 1352 gm. to 1450 gm. at least. At the autopsy on v. Liebig there was found "considerable fluid under the arachnoid," and that "the brain had already lost much in its nutrition during the last days of life" may be deduced from the fact that it lost in weight very rapidly after immersion in alcohol, namely, 34% in the first month and 50% after about six years. Daniel Webster[21], with a cranial capacity of 1995 cc., probably had a brain weighing 1735 gm., whereas after death it weighed over 200 gm. less. Spurzheim,[22] with a skull capacity of 1950 cc., which would indicate a brain-weight of 1695 gm., had an actual weight of only 1559 gm. The brain of v. Pettenkofer[23], who died at the age of 82, showed, Dr. Bollinger writes, a mild degree of beginning atrophy. The brain of the ethnologist and geologist J. W. Powell[24] showed distinct signs of atrophy, and those of Whewell, C. Bischoff and Fallmerayer are similar examples. That of the Hon. B. G. Ferris,[15] an active lawyer and politician who lived to be 89 years old, is doubtless another instance of such senile atrophy.

Aside from these atrophic changes there occur the inevitable errors due to variations in the amount of fluid and blood contained in the cavities and the brain-substance itself, and in the thickness of the pia-arachnoid. These recur so frequently in brain-weighings that in the absence of special data they may be neglected, since relativity of the weights is not much impaired. So far as I know, all of the brains here tabulated* were weighed with the pia-arachnoid. As those of Bischoff's and Marchand's tables, used here for comparison, were weighed under like conditions, no further allowance need by made.

Other factors known to affect brain-weight, such as stature, nationality, body-weight and build, etc., cannot well be considered in these cases; the necessary data are insufficient for the purposes of a critical estimate of these influences. Marshall[25] has essayed to do this with the brain-weights of Thackeray, Grote, Grant Babbage and DeMorgan.

In Table 1, are tabulated the 96 brain-weights which are suitable for the purpose of our analysis. No attempt at correction for the various deteriorating influences above-mentioned has been made, and all further discussion is based upon these figures exclusively.

TABLE I.

NAME	OCCUPATION	AGE	BRAIN-WEIGHT
Ivan Turgeneff,[18]	Poet and novelist	65	2012
G. Cuvier,[19]	Naturalist,	63	1830
E. H. Knight,[26]	Physicist and mechanician,	59	1814
(Theologian; Professor in Freiburg University),[27]		42	1800
John Abercrombie,[28]	Physician,	64	1786
Ben Butler,[29]	General and lawyer,	74	1758
Edward Olney,[30]	Mathematician,	59	1701
Herman Levi,[31]	Composer,	60	1690
W. M. Thackeray,[32]	Humorist,	52	1658
Rudolf Lenz,[3]	Composer,	—	1636
John Goodsir,[33]	Anatomist,	53	1629
Hosea Curtice,[15]	Mathematician,	68	1612
C. G. Atherton,[34]	U. S. Senator,	—	1602
W. v. Siemens[2]	Physicist,	68	1600
George Brown,[35]	Editor,	61	1596
A. Konstantinoff,[63]	Litterateur,	—	1595
R. A. Harrison,[35]	Chief Justice, Canada,	45	1590
F. B. W. v. Hermann,[17]	Economist and statistician,	73	1590
J. K. Riebeck[36]	Philologist,	61	1580
Hans Büchner,[31]	Hygienist	51	1560
K. Spurzheim,[22]	Anatomist and phrenologist,	56	1559
Edward D. Cope,[37]	Palaeontologist,	57	1545
G. McKnight,[15]	Physician and poet,	57	1545
Harrison Allen,[37]	Anatomist.	56	1531
J. Y. Simpson,[38]	Physician,	59	1531
P. Dirichlet,[39]	Mathematician,	54	1520
C. A. DeMorny,[40]	Statesman,	54	1520
Daniel Webster,[23]	Statesman,	70	1518
Lord John Campbell,[41]	Lord Chancellor (England),	82	1517
Chauncey Wright,[15]	Philosopher,	45	1516
M. Schleich,[5]	Writer and orator,	55	1503
Thos. Chalmers,[42]	Theologian,	67	1503
Garrick Mallery,[24]	Ethnologist and explorer,	63	1503
Edward C. Seguin,[6]	Neurologist,	55	1502
Napoleon III,[36]	Sovereign,	55	1500
K. H. Fuchs,[39]	Pathologist,	52	1499
Louis Agassiz,[43]	Naturalist,	66	1495
C. Giacomini,[44]	Anatomist,	58	1495
DeMorgan,[13]	Mathematician,	73	1494
K. F. Gauss,[39]	Mathematician,	78	1492
Ch. Letourneau,[45]	Anthropologist,	71	1490
J. W. Powell,[24]	Geologist and ethnologist,	68	1488
K. v. Pfeufer,[17]	Physician,	63	1488
Wülfert,[5]	Jurist,	64	1485
Paul Broca,[46]	Anthropologist,	55	1484
G. de Mortillet,[47]	Anthropologist,	77	1480
Lord Francis Jeffrey,[48]	Justice and editor,	76	1471
L. Asseline,[49]	Journalist,	49	1468
M. D. Skobeleff,[50]	General,	39	1457
Ch. H. E. Bischoff,[17]	Physician,	79	1452
Hugo Gylden,[1]	Astronomer,	55	1452
Lamarque,[51]	General,	63	1449
F. R. v. Kobell,[36]	Geologist and poet,	79	1445
Mihalkovicz,[52]	Embryologist,	55	1440
H. v. Helmholtz,[2]	Physiologist,	73	1440
Dupuytren[53]	Surgeon,	58	1437
P. A. Siljeström,[1]	Physicist and pedagogue,	76	1422
Franz Schubert,[2]	Composer,	70	1420
A. T. Rice,[54]	Diplomat and editor,	35	1418
J. E. Oliver,[15]	Mathematician,	65	1416
Melchior Meyr,[17]	Philosopher and poet	61	1415
Joseph Leidy,[37]	Morphologist,	67	1415
Philip Leidy,[37]	Physician,	53	1415
George Grote,[25]	Historian,	75	1410
Nussbaum,[31]	Surgeon,	61	1410
Joh. Huber,[17]	Philosopher,	49	1409
C. Babbage,[25]	Mathematician and inventor,	79	1403
Jules Assezat,[55]	Journalist,	45	1403
A. Bertillon,[56]	Anthropologist,	62	1398
Fr. Goltz,[57]	Physiologist,	68	1395
Coudereau,[58]	Physician,	50	1390
Wm. Whewell[59]	Philosopher,	72	1389
Henry Wilson,[24]	U. S. Vice-President,	61	1389
Rüdinger,[31]	Anatomist,	64	1380
Szilagyi,[60]	Statesman,	—	1380
H. T. v. Schmid,[36]	Litterateur,	65	1374
A. A. Hovelacque,[47]	Anthropologist,	52	1373
T. L. W. v. Bischoff,[36]	Anatomist,	76	1370
K. F. Hermann,[39]	Philologist,	51	1358
Justus v. Liebig,[17]	Chemist,	70	1352
v. Schagintweit,[36]	Naturalist,	51	1352
J. P. Fallmerayer,[17]	Historian,	71	1349
John Hughes Bennett,[61]	Physician,	63	1332
Max. v. Pettenkofer,[23]	Chemist,	82	1320
Seizel,[51]	Sculptor,	50	1312
J. G. Kolar,[11]	Dramatist,	84	1300
R. E. Grant,[25]	Astronomer,	80	1290
Walt Whitman,[37]	Poet,	72	1282
Robert Cory,[62]	Physician,	55	1276
Edouard Seguin,[6]	Psychiatrist,	68	1257
Fr. Tiedemann,[17]	Anatomist,	79	1254
v. Lasaulx,[17]	Philologist,	57	1250
L. v. Buhl,[17]	Anatomist,	64	1229
J. F. Hausmann,[39]	Mineralogist,	77	1226
B. G. Ferris,[27]	Jurist,	89	1225
F. J. Gall,[21]	Anatomist and phrenologist,	70	1198

The average (arithmetical) brain-weight of the 96 individuals is 1473 grams, exceeding the various averages given for the European brain by 75 to 125 grams, and this without allowing for the advanced age of this series; the average of 92 being 63 years.

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*Coudereau's was weighed both with and without the pia.

A better appreciation of the greater average brain-weight of these notable persons can be formed from a glance at the chart (Fig. 1.) showing the distribution of "ordinary" and "eminent" brain-weights. It shows a relatively greater number of heavier brains among the noted individuals, and the chart in Fig. 2 shows the same relation in another manner. It is further shown that the period of decrease with age is deferred for fully a decade among the more intellectual persons, a point already alluded to by Donaldson, and significant in connection with the longevity of healthy persons endowed with high intelligence.

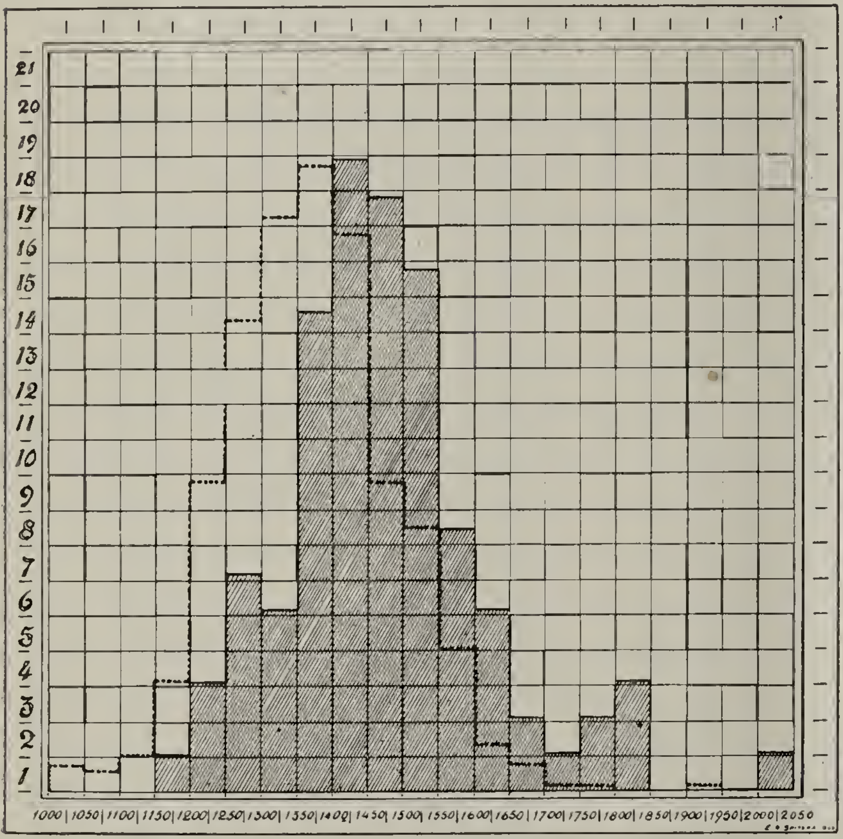

FIG. 1. This chart shows the relatively greater number of heavier brains among the (96) "eminent men" (shaded), as compared with the distribution of the ordinary brain-weights of the combined Bischoff and Marchand series (in dotted outline). Both the 800 ordinary and the 96 brain-weights of the eminent series are tabulated, for comparison, on the basis of 100 cases.

So far as nationality goes, our 96 noted persons are nearly all Western Europeans and Americans. They are distributed as follows:

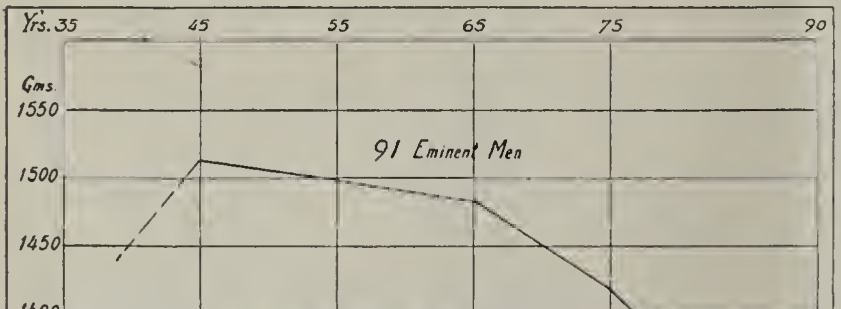

FIG. 2. Curves of average brain-weights per decade in the series of (91) "eminent" men whose age is recorded in Table I, compared with the Broca-Bischoff-Boyd series. The curves show that in the eminent series senile decrease occurs a decade later than in the "ordinary" series.

Germany and Austria	38
United States and Canada	21
France	17
British Islands	14
Russia	2
Sweden	2
Italy	1
Bulgaria	1

The average brain-weights according to nationality are:

	No. of Cases	Average Brain-Weight.
United States and Canada	21	1518 gm.
British Islands	14	1473 gm.
Germany and Austria	38	1443 gm.
France	17	1440 gm.

In proceeding to a further analysis it seems best to distribute these men of eminence among the three categories of science, creative arts and action. In submitting these lists, the writer feels constrained to repudiate any intention of maintaining the classification adopted to be one meeting all the requisites involved. The simple divison into representatives of science, creative arts and action is necessitated by the smallness of numbers; a proper rubrication would leave more than one important division represented by only one or two individuals. Aside from the failure of three groups to provide for the various branches of mental activity as manifested in various professions—here conventionally adopted—it were doubtful if mature reflection would endorse such classification. The latter is far from a natural one, for it does not regard the intrinsic physiological relations of the professions, arts and sciences. For example, the sharp demarcation of art and science leaves music and mathematics abruptly and remotely separated; yet, whatever justifiable presumption exists as to the relations of cortical fields would assign both to closely situated, nay, in almost identical areas, tracts, and neurons of such. Again, to place, for example, generals in one group, is to throw in a chaos of unrelated units, the mathematical genius, the geographical explorer, the expert physicist, with the strategic adventurer and opportune gambler of the battlefield chessboard.

With these limitations, the following table expresses the results of such classifications in condensed form:

TABLE II.

Categories.	No. of cases.	Average Age.	Average Brain-W't.
I, a. Exact Sciences	12	67.5	1532.0
I, b. Natural Sciences	45	63.3	1444.3
[All Sciences]	[57]	[61.2]	[1463.0]
II. Fine Arts, Philosophy &c. . . .	25	59.0	1482.2
III. Men of Action [Government, politics, military, &c.] . . .	14	65.0	1490.0

It is readily seen that the representatives of the exact sciences, such as the mathematicians and astronomers, possess the heaviest brains; in the present series of 12, all have brain-weights of over 1400 grams, except the very aged Grant. Next come those in the category of "Men of Action," i. e. statesmen, politicians and military men. The "Creative Arts" come next, containing, among others, three opera composers (Levi, 1690; Lenz, 1636; Schubert,

1420) with an average of 1582 gm.. The average of 45 representatives of the natural sciences is the lowest of all, but still well above the average of ordinary brain-weights. In this category we find seven anthropologists and ethnologists, averaging 63 years of age, with 1459.3 gm.; ten anatomists and surgeons of the same average with 1436.3 gm.; while six morphologists and naturalists (Cuvier, Cope, Agassiz, J. Leidy, and v. Schlagintweit) average 1519 gm.*

Of course, every rule has its exceptions, and, with this limitation, the inference that the intellectual status is in some way reflected in the mass and weight of the brain seems generally correct. But further than this our analysis shows that the brains of men devoted to the higher intellectual occupations, such as the mathematical sciences, involving the most complex mechanisms of the mind, those of men who have devised original lines of research (Cuvier) and those of forceful characters, like Ben Butler or Daniel Webster, are generally heavier still. The results are fully in accord with biological results.

1. Retzius, Biol. Untersuch., 1898—1902. Stockholm.
2. Hausemann, Zeitschr. f. Psych. u. Physiol. d. Sinnesorgane 1899, 1.
3. Guszman, Anat. Anz., XIX, 1901, 239.
4. Duval, Bull. Soc. d'Anthrop., 1886.
5. Rudinger, Anat. des Sprachcentrums, 1882, p. 43.
6. E. A. Spitzka, Phila. Medical Journal, April 6. 1901.
7. Nacke, P., Hubertusburg, Germany.
8. Cappelli, Arch. ital. per le mal. nervos, 1887, 135.
9. Richarz, in Wasilewski's "Life of Schumann", 1871.
10. Rudinger, cit. in Jour. Ment. Sci., 1886; Med. Record, 1886.
11. Matiegka, Sitzber. d. k. Böhm. Ges. d. Wiss., 1902.
12. Boileau, Lancet, 1882, II, 485.
13. Bastian, Brain as an Organ of Mind, 1880, p. 392.
14. Flint, Physiology.
15. B. G. Wilder, Cornell University, Ithaca.
16. Los Angeles Times, Dec. 26, 1899.
17. Bischoff, „Das Hirngewicht des Menschen", 1880.
18. Procès verbal, etc., par Brouardel, et al, 1883 [Paris].
19. Berard, Gazette Médicale, May 19, 1832.
20. London Med. Gaz., 1828, p. 478.
21. Jeffries Wyman, Am. Jour. Med. Sci., 1853, p. 110.
22. Phrenological Journal, IX, p. 566.
23. Prof. Bollinger, Munich, Germany,
24. D. S. Lamb, Washington, D. C.
25. Marshall, Jour. Anat. and Physiol., XXVII, p. 30, 1892.
26. Bost. Med. and Surg. Jour., 1883. p. 184.
27. Prof. Wiedersheim, Freiburg University, Germany.
28. Goodsir, et al, Edinb. Med. Jour., 1845, p. 231.
29. Med. Record, 1893, p. 186.
30. Prof. W. J. Herdman, Univ. of Mich.
31. Daffner, "Das Wachsthum des Menschen", 1902, p. 275.
32. London Times, Dec. 25, 1863, cit. by Marshall[25].
33. Chiene and Stierling, Goodsir's Anat. Mem., 1868, 1, p. 195.
34. Boston Med. and Surg. Jour., 1854, p. 512.
35. "The Lost Atlantis and other Ethnographic Studies", 1892, p. 376.
36. O. Ammon, "Die natürl. Auslese b. Menschen", 1893.
37. In Collection of American Anthropometric Society, Philadelphia, Pa.
38. Lancet, 1870, I, p. 717.
39. Wagner, Vorstudien, 1860—1862.
40. Thurnam, Jour. Ment. Sci., 1866.
41. Acton, Lancet, 1861, II, p. 193.
42. Bennett, Edinb. Mo. Med. Jour., 1851, p. 205.
43. Wyman, Med. and Surg. Rep. [Phila.], 1874, p. 131.
44. Sperino Gior. d. R. A. di Med. di Torino, 1900, No. 8.
45. Jour. Ment. Pathol., 1902, p. 269.
46. Kuhff, cit. by Topinard, "Anthropologie". p. 553.
47. Dr. Georges Herve, Paris.
48. Miller and Christison, cit. by Calderwood, "Relations of Mind and Brain", 1884. p. 23.
49. Duval, Chudzinski and Herve, Bull. Soc. d'Anthropol., 1880 and 1883.
50. Neiding, Bull. Soc. d'Anthropol., 1882.
51. Manouvrier, "La Quantité dans l'Encephale", 1895.
52. Orvisi Hetilap, 1902, p. 8.
53. Broussais. et al, Gaz. des Hôpitaux, 1835, p. 78.
54. Autopsy by Keyes, Chetwood, Janeway, et al, N. Y. World, May 18, 1889.
55. Duval, et al, Bull. Soc. d'Anthropol., 1883.
56. Chudzinski and Manouvrier, Bull. Soc. d'Anthropol., 1887.
57. Prof. Ewald, Strassburg Univ.
58. Laborde, Duval, et al, Bull. Soc. d'Anthropol., 1883.
59. Humphrey, Lancet, 1866. I, p. 279.
60. M. Sugar, Orvosi Hetilap, 1902, p. 8.
61. Cadge, Brit. Med. Jour., 1875, 454.
62. St. Thomas Hosp. Autops. Rec., 1900.
63. Watjoff, Arch. f. Anthropol. XXVI, p. 1080.

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*It is worth while to quote at this juncture the interesting results of Matiegka's inquiry into the relations of brain-weight and occupation (11). He distributed 235 cases among six groups, ascending as follows: Day-laborers, 1410 gm.; steadily employed laborers, 1433.5 gm.; porters 1435.7 gm.; mechanics, trades,workers, 1449.6 gm.; business-men, teachers, clerks, 14 68.5 gm.; scholars, physicians, etc., 1500 gm.

A CASE OF ENDOTHELIOMA OCCURRING WITHIN THE NASAL FOSSÆ.

By WM. HITSCHLER, M. D.

and GEO. B. WOOD, M. D.,

of Philadelphia.

Probably endothelioma is the most uncommon of nasal tumors, very few cases having been reported. Acerbia (*Arch. Ital. di Laring.*, 1896, No. 3), on examining under the microscope a piece of tissue spontaneously ejected from the nose of a patient supposed to be suffering from rhinitis caseosa, found that the growth was a typical endothelioma. Several cases of endothelioma of the antrum have been reported and likewise one or two of the alveolar process; but in these the involvement of the nasal cavities was purely secondary. The following case is therefore reported because of its uniqueness.

M. L., 44 years of age, a farmer by occupation, was referred to Dr. Hitschler, by Dr. John Biever, on November 4, 1901. There was no history of malignancy in any of his family and, except for a rather marked tendency for catching cold, he had enjoyed almost perfect health up to the time of the present trouble. About 2 years previous bleeding began from the left side of the nose, followed shortly afterward by a gradual closure of the left nasal fossa until respiration through that side became impossible. The attacks of epistaxis, which usually resulted from some slight traumatism, were fairly frequent, although the amount of blood lost at each time was generally insignificant. About a year ago hemorrhage occurred for the first time from the right side, and breathing on that side then became somewhat obstructed, though never sufficiently so as to prevent nasal respiration. He had had little or no pain, except for an occasional dull headache in the left frontal region. A short time previous to his examination a slight creamy discharge, possessing at times a more or less fetid odor, had appeared, coming from the left nostril. He had never had any sore throat or ear trouble, though he complained of a slight postnasal dropping. His eyes gradually became weak, being easily tired, especially after reading or looking out of a railway car window, but he had never had any diplopia. During the past two years polypi had developed within the nose, requiring removal by Dr. Biever on five different occasions. About five months ago he first noticed a forward and outward bulging of the left eyeball, which was attended by a feeling of tension just inside the inner canthus.

Examination gave the followings results: There was no enlargement of the cervical or other lymphatics. The left nasal fossa was completely obstructed by a grayish, shining, soft, lobulated mass,—apparently a bunch of polypi. A portion of the mass situated next to the inferior turbinal, though not a part of it, was reddish in color and firm in consistency. All portions of the growth were free from adhesions, though its large size mechanically restricted motion to a greater or less extent. The reddish mass bled freely when touched by the probe, though the application of suprareneal readily controlled the hemorrhage. The anterior end of the inferior turbinal was smooth and normal in appearance, and could just be seen beneath and to the outer side of the mass. The right nasal fossa was partially obstructed by several grayish polypi hanging down over the inferior turbinal. There was some bulging of the left side of the postpharyngeal wall, but no evidence of acute inflammatory change. The vault and right choana were free. The left choana was completely obstructed by a grayish lobulated mass consisting of compressed polypi, and by a reddish band 3/16 of an inch in width, which stretched across from the left Eustachian prominence to the edge of the septum. The left tympanic membrane was slightly retracted. The left eyeball was forced externally and anteriorly so that the pupil was displaced 9 mm. outward from its normal position. Above and to the inner side of the internal canthus there was a small firm swelling about a quarter of an inch in diameter. The folds of the eyelids were nearly obliterated. No especial tenderness could be elicited over any part of the eyeball or over the frontal sinus. Examination of the left eyeground by Dr. Wendell Reber afforded only negative data. After cocainization, a large part of the mass filling the left nasal fossa was snared off, including 6 or 8 polypi of various sizes and a piece of the firmer tissue, which latter was kept for microscopical examination. No pus was evacuated, but the copious hemorrhage, uncontrolled by suprarenal, necessitated temporary packing of the nasal fossa and cessation of the operative precedure. Before sending the patient home the packing was removed, the fossa cleansed, insufflated with bismuth formic iodide, and repacked firmly with iodoform gauze. The next day, when the packing was removed, the bleeding started afresh, but in less quantity than the day before, and was easily controlled by repacking. The bulging of the orbital tissue was not quite so pronounced after the operation, and the sensation of tension at the inner canthus was considerably relieved.

On November 27, 1901, a report from Dr. Biever says: "Bleeding continued upon removal of the packing for a week or so, none for the past 10 days. Feeling well otherwise. Eyes seem to be a little more affected."

Pathological examination. The small portion of the firmer part of the mass, which was removed for microscopical examination, was hardened in alcohol and imbedded in paraffin. The sections were stained with hematoxylin and eosin. Under the microscope the growth was seen to be made up of a connective tissue stroma, supporting numerous alveoli. These alveoli vary greatly in size and shape, and are formed by more or less regular rows of cuboidal cells, the nuclei of which are round and fairly deeply stained. The walls between the larger spaces are, as a rule, only one or 2 cells in thickness, showing the tendency of the cells to spread laterally, either enlarging old alveoli or making new ones. On the other hand, in some parts of the growth a more malignant disposition is manifested in that the alveoli are small and numerous and surrounded by walls many cells in thickness, and in a few places the cells have so multiplied as to form dense masses of considerable size. Most of the alveoli are filled with granular débris containing a few leukocytes, and only in a few of the larger spaces are there any bloodcorpuscles. In some portions of the growth the connective tissue is entirely wanting, the whole mass being made up of the alveoli placed one against the other. In other places the connective tissue stroma is quite marked and is characterized by the irregularity of the arrangement of its fibers and by the presence of numerous spaces, apparently the results of an edematous infiltration. There are some spaces scattered through the stroma, which are lined with flattened endothelial cells and ocacsionally filled with bloodcorpuscles, though more frequently they are empty. These probably are lymphspaces, and the presence of bloodcells is purely accidental. The pathological diagnosis is endothelioma, probably of lymphatic origin. The growth had so invaded the surrounding structures that the only hope for a permanent cure was through an external operation, removing probably the greater part of the superior maxillary bone on the left side. Knowing the little tendency of endothelioma to recur after it has once been completely removed, the operation was proposed to the patient as a very possible way of getting rid of his trouble. The patient, however, after a good deal of hesitation, finally decided against operation and went back to his home. Since then he has fallen into the hands of a country cancer doctor, and his subsequent history is lost.

Health Reports.

Health Reports: The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon-General, U. S. Public Health and Marine-Hospital Service, during the week ending April 18, 1903:

SMALLPOX—United States.

ALABAMA:	Mobile	April 4-11	2	
CALIFORNIA:	San Francisco	Mar. 29-April 5	10	
COLORADO:	Denver	Mar. 28-April 4	27	
FLORIDA:	De Soto County	April 4-11	28	
	Duval County, Jacksonville included.	April 4-11	6	
		Mar. 4-Apr. 15	30	
GEORGIA:	Atlanta	April 7	6	
	Lumpkin	April 4-11	1	
ILLINOIS:	Belleville	Mar. 281Apr. 11	37	3
	Chicago	April 4-11	2	
	Galesburg	April 4-11	2	
INDIANA:	Evansville	April 4-11	4	
	Indianapolis	April 4-11	3	
KANSAS:	Wichita	April 4-11	5	2
			2 imported	
LOUISIANA:	New Orleans	April 4-11	1	
MAINE:	Biddeford	April 4-11		1
MARYLAND:	Baltimore	April 4-11	1	
MASSACHUSETTS:	Fall River	April 4-11	3	
	Lowell	April 4-11	1	
	Northampton	April 4-11	1	
MICHIGAN:	Ann Arbor	April 4-11	7	
	Detroit	April 4-11	4	
	Port Huron	April 4-11	1	
MISSISSIPPI:	Natchez	April 4-11	2	
MISSOURI:	Kansas City	April 5-12	5	
	St. Louis	April 4-11	2	
NEBRASKA:	Omaha	April 4-11	7	
NEW HAMPSHIRE	Manchester	April 4-11	5	
	Nashua	April 4-11	1	
NEW JERSEY:	Newark	Mar. 28-April 4	1	
NEW YORK:	Binghamton		Imported	
	Buffalo	April 4-11	2	
	Rochester	Mar. 31-Apr. 14	16	1
OHIO:	Dayton	April 4-11	3	
PENNSYLVANIA:	Altoona	Mar. 28-Apr. 11	5	
	Butler	April 4-1	1	
	Carbondale	Mar. 31-April 7	1	
	Johnstown	April 4-11	1	
	Philadelphia	Mar. 28-Apr. 11	43	7
	Pittsburg	April 4-11	29	3
			2 imported	
	Williamsport	April 4-11	1	
TENNESSEE:	Memphis	Mar. 28-Apr. 11	13	
	Nashville	Mar. 28-April 4	2	
UTAH:	Salt Lake City	Mar. 28-Apr. 11	17	
WISCONSIN:	Milwaukee	Mar. 28-Apr. 11	3	

SMALLPOX—Foreign.

AUSTRIA:	Prague	Mar. 14-28	13	
BELGIUM:	Antwerp	Mar. 14-21	2	1
	Brussels	Mar. 14-28		6
BRAZIL:	Rio de Janeiro	Mar. 6-13		5
CANARY ISLANDS	Las Palmas	Mar. 7-21	44	
COLOMBIA:	Barranquilla	Mar. 15-22		2
GREAT BRITAIN:	Dublin	Mar. 14-28	33	1
	Leeds	Mar. 14-28	26	
	Liverpool	To Mar. 28	68	7
	London	Mar. 21-28	5	
	Manchester	Mar. 21-28	18	1
	Nottingham	Mar. 7-28	11	
	Sheffield	Mar. 7-21	4	
INDIA:	Bombay	Mar. 3-17		157
	Calcutta	Feb. 28-Mar. 14		1
	Madras	Feb. 28-Mar. 6		1
MEXICO:	City of Mexico	Mar. 22-29	7	4
RUSSIA:	Moscow	Mar. 14-21	4	1
	Odessa	Mar. 14-21	6	1
	St. Petersburg	Mar. 14-28	169	9
	Warsaw	Mar. 14-21		3
TURKEY:	Alexandrette	Mar. 14-21	3	1
	Constantinople	Mar. 15-22		1
	Smyrna	Mar. 1-8		1

YELLOW FEVER.

BRAZIL:	Rio de Janeiro	Mar. 6-13		38
COLOMBIA:	Panama	Mar. 26-Apr. 2	4	1
ECUADOR:	Guayaquil	Mar. 14-21		4
MEXICO:	Vera Cruz	Mar. 28-Apr. 11	12	2

CHOLERA—Insular.

PHILIPPINE ISLANDS:	Provinces	Feb. 14-21	172	117
		Not previously rep'd 953 cases, 756 deaths		

PLAGUE—Insular.

PHILIPPINE ISLANDS:	Manila	Feb. 14-21		2

PLAGUE—Foreign.

BRAZIL:	Rio de Janeiro	Mar. 6-13		1
CHINA:	Hongkong	Feb. 14-28	15	15
INDIA:	Bombay	Mar. 3-17		2300
	Calcutta	Feb. 28-Mar. 14		1574
	Karachi	Mar. 8-15	199	169
MEXICO:	Siqueros	Mar. 8-22	3	2
	Villa Union	Mar. 8-22	3	1

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The American Medical Association.—Numerically, and in much else that counts for success, the the American Medical Association may justly be said to be successful. If there were strength in mere numbers, the Association would unquestionably be the strongest medical body in America. It has a wide and fairly representative membership—just as by rights it ought to have—and it is certainly not open to the reproach of being narrow or sectional so far as either its personnel or its interests are concerned.

In such a country as ours—so extensive and so diversified—we have always said that the office of the American Medical Association was of the first importance. It represents the *whole* profession as no other oragnization can. This, in fact, is what it is intended to do. Its first duty is to bind together the medical profession in America, and in a sense to be its spokesman. Its characteristic, therefore, is to be democratic, and this characteristic it has always maintained. But, just as in all democracies, the Association suffers somewhat from its own democratic instincts, among which are the tendencies to run to politics and, secondly, to be not always too critical about the character of the work done under its auspices.

For the politics of the Association we have no care in these columns; but we are not indifferent to the quality of the scientific output of this imposing organization. To say that this has been heretofore decidedly unequal, is but to express in print an opinion which at every meeting of the Association is expressed quietly by word of mouth everywhere. Last year at Saratoga the inequality of the work in most of the sections (except in one or two in which it was almost uniformly poor) was generally remarked. We said at that time in these columns that there was too much poor material admitted into the transactions of the Association, and that the fault lay in a lack of proper supervision. A democracy is not incompatible with great excellence.

We are not uttering a captious criticism, nor is it our own alone. Some of the best work done in America goes before the Association—and also some of the poorest. There should at least be none of the latter. Our desire is that the American Medical Association shall rank in scientific importance (not in mere numbers) with the best, and we trust that the meeting at New Orleans, which is about to convene as we write, will show a step in advance.

Dr. Billings' Address.—In his Presidential Address, which we publish as a special article in this number of the **Journal**, Dr. Frank Billings, of Chicago, has presented a truly masterly criticism of the subject of medical education in the United States. The paper is a formidable indictment of the proprietary, or private, medical college. By this characterization Dr. Billings refers to the large number of small and inadequately equipped medical schools in this country which are conducted as mere adjuncts to the private work of the members of the faculty. The President of the American Medical Association thinks that many of these small colleges must go. He points out that they can no longer keep up with the expensive requirements of advanced medical education. He evidently believes that they will suffer a process of weeding out. It is to be a question of the survival of the fittest, and the fittest will be those which have endowments to support them. Medical education cannot much longer be a matter of private enterprise for gain in this country. Already our rich men are seeing their way clear to endow medical research, and when this fashion once prevails the days of the unequipped medical school will be numbered. This is a process which in a sense can be left to itself.

Dr. Billings' address sounds a clear note in favor of advancing the standard of medical education. This is in the air everywhere, and must ere long prevail. But it is a good thing to have it so forcefully presented by the man who occupies the presidential chair of our great national Association. That the American people can continue to be satisfied with anything but the best in medical education is inconceivable. It is not according to their genius. Dr. Billings, like a wise man and an accredited spokesman, rides upon the crest of the wave which is advancing with irresistible speed and force.

The Congress of American Physicians and Surgeons.—This important body, or confederation, is undoubtedly the most representative association in America of the scientific spirit and scientific attainment of the profession. This is not said for the purpose of drawing invidious comparisons. It is said, rather, for the purpose of paying a deserved tribute to the leaders of scientific thought and enterprise in the medical profession, who will gather next week in Washington. The fact cannot be too much or too often emphasized that the functions discharged by the Congress are of inestimable benefit to the profession in this country. First, but not greatest, is the opportunity which the Congress affords every three years for a gathering of the leaders and an interchange of thoughts and courtesies.

But the second, and most important, function of the Congress is that which really is discharged by its component societies. These associations are in effect sections of specialists, who without much, if any, dispute will be allowed to comprise among their numbers many, if not most, of the leaders in the specialties in this country.

We are of wide geographical range in the United States, and from that very fact we tend a little too much in some places to provincialism. We need in medicine and surgery some centralized influence which shall occasionally tend to stimulate our best endeavors, to correlate us with the outside world, to prune away some of our native exuberance of raw growth, and, above all, to set up the high standards to which we should all struggle to attain. The Congress, we are assured, does all these things in a more truly efficient and practical way than any of our national bodies. There is no incentive for mediocrity to seek its protection, and there is every inducement for the best-trained and best-endowed of our professional workers to contribute to its success. We trust and believe that this success for this year is already assured.

The Surgery of Cirrhosis of the Liver.—It is not often that we have the pleasure of reporting two more instructive and more practical papers than those by Dr. Thomas R. Neilson and Drs. Keen and Fisher on surgical intervention in cirrhosis of the liver, which we publish in this number of the **Journal.** Talma's operation, which consists in suturing the omentum to the peritoneum, is still comparatively new. As Dr. Neilson shows, only about 122 cases have been reported, and these with varying results. His own case, and that of Dr. Fisher, have now been observed for a sufficiently long period of time to allow the conclusion to be drawn that remarkably good results have been obtained. In Dr. Neilson's case, indeed, the result is astonishing, and may almost be called a cure. When we consider the character of the disease, it seems almost incredible that the relief of a mere symptom can have such an apparently beneficial action on the pathological process.

Cirrhosis of the liver has always been justly regarded as one of the most inveterate of diseases. The ascites is but one of its manifestations or results. And yet, in Dr. Neilson's case, the relief of this one symptom has been followed by a general amelioration in the condition of the patient that even the most optimistic person could hardly have anticipated. We doubt not that these two papers will be incentives to others to try to afford relief in this obstinate disease, and that they will take rank in the literature of the subject as most important contributions.

The Cause of Smallpox.—We think it premature to express in these columns an opinion on the momentous announcement that comes from Boston that Dr. William T. Councilman has discovered the germ of smallpox. We have at this writing only the newspaper reports of Dr. Councilman's paper, which was read last week before the Boston Society of Medical Sciences, and we are naturally averse to forming an opinion without an opportunity to read that paper in its original and authentic form. Dr. Councilman's reputation, however, is so well assured, and the accounts, as published, are so apparently full, that we are impelled by the transcendent importance of the subject to express, with due reservation, our interest in this announcement.

Dr. Councilman, it is reported, has claimed that he has discovered an animalcule in the lesion of smallpox, which he believes to be the cause of that disease. This animalcule is a protozoon, which seems in some respects to ally variola with the malarial diseases—at least to the extent that both affections are caused, not by vegetable or bacterial bodies, but by members of the lowest group of animal forms. According to the discoverer, this protozoon passes through two cycles of development: During the first stage it causes only vaccinia, but, during its second or fully developed stage, it causes variola.

It is needless to say that this announcement by Dr. Councilman will cause widespread interest. His methods and results will have to pass through a stage of very searching criticism—with what ultimate results we, of course, cannot foretell. It shall be our care, however, to follow this criticsim with close attention, and to reflect it in these columns. If Dr. Councilman's claims shall ultimately be accepted, it goes without saying that he will take rank with the most distinguished discoverers in pathology.

X-Ray Therapeutics.—The valuable paper contributed to this number by Prof. Freund, of Vienna, on Röntgen-ray therapeutics has an added value from the fact that he introduced this agent into therapeutics. He emphasizes the fact that this, like all other agents, must not be employed mechanically, and that its most valuable results can only be obtained by adapting the dose to the needs of the individual. Maximum and minimum doses cannot guide, the reaction of the individual must be determined, and the experience of the practitioner in its application has a distinct bearing upon its most efficient use.

He notes the fact that mechanical methods of measuring the dose are valuable aids in its employment, but insists that they are only relative, and of value only when identical forms of apparatus are employed. The difficulties in the way of accurate measurements and their comparison with the data of other investigators have been recently mentioned in papers in this **Journal.** If identical methods of producing the Röntgen energy were employed, they might be of value; as it is, they are valueless, except where similar apparatus is used.

He calls attention to the fact that the "Spintometer," heralded as new by the French, is based upon a principle suggested in this country years ago. The chromoradiometer is likewise a device described and employed some years ago by American writers and abandoned as inaccurate.

The important facts brought out are that, while mechanical methods of measurement are valuable in studying the dose employed by the individual investigator, they do not furnish data that are valuable in comparing the work of different individuals. This method demands study and skill on the part of the practitioner, and as much clinical experience for the production of good results as any other remedy. It cannot be employed according to mechanical measurements of dose and is dangerous when used by the inexperienced.

The Social Evil in Russia.—For a time it has been thought, and it is still believed by some, that police registration will at least effectually diminish the prevalence of venereal diseases. That the sanguine hopes in this direction have not been realized, is well known to any one who has followed the results of police regulation of prostitution in countries in which such control is practised. In an animated protest against police regulation Dr. Gorelejtchenko (*Praktitchesky Vratch*, Vol. 1, No. 41) points out that the system of police regulation in Russia brought about an increase of clandestine prostitution, the women plying their trade under the disguise of choir girls, hall singers, etc. He also alludes to the degrading position in which a registered prostitute is placed. Branded once for all with a yellow passport, she enters upon a downward course of moral degradation from which there is no retraction and which leads her eventually to the gutter. The rudeness of the police in dealing with these unfortunate women, the compulsion, notoriety and other attributes of police control, efface from the prostitute the last trace of womanhood and selfrespect. As a panacea the author recommends absolute abolition of police regulation and the industrial education of women, so that girls may not be driven to prostitution as a means of gaining a livelihood. The author is quite sanguine about the efficacy of his proposed measures, ignoring, or perhaps not knowing, the fact that in this country prostitution is neither controlled nor are women debarred from industrial pursuits, and yet, sad to say, conditions here are at least as bad as in Russia, France or Germany.

Leaving out the purely moral side of this important problem, we as physicians need concern ourselves chiefly with venereal diseases, which are both infectious and contagious, and the victims of which are only too often the innocent wives and children of the debauchees. We need only look upon venereal diseases as we do upon other grave infectious maladies, and from this standpoint consider gonorrhea or syphilis as belonging to the class of maladies over which the sanitary authorities have direct jurisdiction. In Minsk, Russia, prostitution has been placed under the control of sanitary authorities, with the most favorable results. Dr. Gratzianoff, the city sanitary physician, succeeded by his intelligent and humane treatment of the prostitutes in bringing about much better conditions than have hitherto prevailed. He has awakened in them a feeling of shame, and in many other ways brought them up to a tolerable standard of respectability.

However, the sanitary supervision of prostitution need not, and perhaps should not, be confined to mere inspection of prostitutes. Indeed, there is abundant statistical evidence which proves that inspection as carried on at present does not bring about the security from infection which the adherents of legalization of prostitution claim. The activities of the sanitary authorities should be directed largely toward improving the sanitary surroundings of the dens of vice, as well as spreading information concerning the dangerous nature of venereal diseases. Moreover, inasmuch as syphilis is by no means a purely venereal disease, extragenital infection being so extremely common, there is no reason why it should not be reported like any other dangerously contagious affection. Inspection of prostitutes, if at all instituted, should be purely voluntary, and so should be the hospital treatment which should be placed at the disposal of the sick woman, who would then not be compelled to ply her trade during the period of contagiousness in order to gain a livelihood. It is not at all to be hoped that these measures, or in fact any other, will exterminate venereal diseases, but it is certain that education and sanitary regulation will accomplish more than the policeman's club.

The Automobile and the Doctor.—A very sudden and remarkable revolution is the way in which power-driven vehicles are displacing the doctor's horse and buggy. Probably ten times as many such vehicles are used by physicians this year as were in use last year, and, from the difficulty which dealers have in supplying orders, it appears that the rush to buy has not abated. Now and then a physician gives up his automobile and returns to horses, but the number of times that this occurs is comparatively small. There is evidently, therefore, some good reason for the change. It is probably not wholly economy because, unless the physician has a place to store it and a man to attend to it, it does not appear that the automobile is much cheaper than a single horse. If it is necessary, however, for the physician to keep two horses, the automobile, on account of the superior endurance, is probably cheaper, and when the practice is even larger than this, it causes a notable reduction in expense. Complaints regarding charges for repairs are frequently heard. An automobile is, of course, a machine, in fact a rather delicate and complicated machine, and therefore requires a certain amount of expert care. In time this detail will, of course, be mastered, but at present, owing to carelessness or ignorance, accidents frequently occur, whether much more frequently than accidents or injuries to a horse and carriage it is difficult to state; probably less frequently, when it is considered how much more the automobile is called upon to do. Its advantages are unquestioned. It is more speedy than the average horse, even the slower types of machine; it is capable of sustained speed; it starts quickly and may be made to stop abruptly, and is always under better control than a horse. However, it is possible to drive a lame horse home, but the best one can do with a broken automobile is to have it towed home by another machine or by a horse, and the latter is undeniably humiliating.

A few years ago it seemed as if the electric automobile for the city and the steam automobile for the country were likely to be the prevailing types, but, as the petroleum engine has been perfected, the gasoline machine appears to be displacing the other two forms for both kinds of work. It is speedier than the electric; as a rule, cheaper to maintain; can be charged almost anywhere; and the engine is less complicated than the steam-engine. However, personal preference will in this, as in other things, continue to manifest itself.

It is a little curious that automobile manufacturers have paid so little attention to the needs of the physician. The light run-about with a buggy or a Stanhope top is adaptable for spring, summer and fall, but a vehicle that offers more protection seems needed for the winter months. Such vehicles at present are rarely found, excepting among some of the heavier electric types, and these are too expensive for the ordinary practitioner. One or two attempts have been made by the gasoline manufacturers, but either they have not been placed sufficiently aggressively upon the market, or else they have not fulfilled the purpose for which they were intended. For the present dealers will probably be content to manufacture one or two types, knowing that nearly all their machines will be sold before they are finished, but there is every reason to believe that in a short time, as a result of increasing production and a satiated consumption, it will be necessary to tempt buyers, and it would seem that the maker first in the field with a satisfactory winter automobile might reap some substantial advantage.

Byron's Last Illness.—It must always be a matter of some interest to medical readers to know why and how great men have died. The diseases of these celebrities acquire an added interest from having belonged to them. Lord Bryon is no exception to this rule; and, indeed, the peculiar hold he had upon the public was not relaxed by his somewhat sudden and unexplained death.

Lord Bryon died at Mesolonghi, in western Greece, whither he had gone on an adventurous and ill-starred excursion to help the Greeks fight for their liberties against the Turks. The whole story is well told in the recent edition of the poet's letters and works, published by John Murray in London, and most admirably edited by R. E. Prothero. The time was 1824, his age only 36, and Byron, with his friends, was located in a spot which is described as damp and marshy. In February he had been drinking to excess (being otherwise in his usual good health), when, at the end of a drinking bout, he was suddenly seized with a convulsion. He described the fit himself. He was speechless, *not* foaming at the mouth, and struggled so violently that it required several persons to hold him. He apparently lost consciousness, and one of the observers said he *did* froth at the mouth. His doctors clapped leeches on his temples. "I bled profusely," he wrote, "and, as they went too near the temporal artery, there was some difficulty in stopping the blood even with the Lunar Caustic. This was accomplished after several hours." In commenting on his own case he says he never had had such an attack before, nor had there been any such in his family, although his mother was subject to *hysterical* affections. The doctors, Bruno and Millingen, took plenty of time to make the diagnosis, for, writing ten days later, Byron said: "Whether it was epilepsy, catalepsy, cachexy or apoplexy, or what other *exy* or *epsy*, the doctors have not decided." In another letter to Tom Moore he wrote, "I had an attack of apoplexy or epilepsy—the physicians have not exactly decided which. My constitution, therefore, remains between two opinions, like Mahomet's sarcophagus between the magnets." At this distance it is no longer easy to decide, but we suspect the crisis was induced by alcoholism and excess of worry. It may have been *hysteroidal,* but this is doubtful for a first fit in a man aged 36 years. It is possible that we may have to add Byron to the list of great men—Cæsar, Mahomet and Napoleon—who are alleged to have had epilepsy.

About two months later, on April 9, Byron's fatal illness began abruptly with a chill. He had been out on horseback and had been caught in a heavy rain, and came back drenched. According to Count Gamba's pathetic narrative (which is meager enough), nothing much was thought of the poet's illness for nine days—until, in fact, he was almost within 24 hours of his death. During that period he seems not to have been very ill, although confined to the house. The symptoms were fever, headache and "rheumatic pains.". There were no successive chills and fever, as in any of the periodical seizures of malaria. The symptoms do not seem to have been accurately observed, and the treatment was almost *nil.* In fact, *bleeding* was the one resource, and Byron always resisted being bled, for he seems to have had a peculiar aversion to it. The day before his death he rapidly grew worse, and his friends became alarmed; he himself realized that he was in danger. Later that day he lapsed into unconsciousness, and remained thus until he died 24 hours later. The question now is, what did he die of?

It is not easy to answer that question. While living in Italy, some years before going to Greece, Byron had had several mild attacks of malaria. But the fatal illness certainly was not like malaria. There is absence of any statement of anything like a congestive chill—a thing that could hardly have been overlooked even by the inexact adventurers, medical men, and servants, who surrounded the dying man's bed. The onset of serious symptoms was, it is true, rather sudden, but not so sudden as a chill. Typhoid fever may be thought of, but typhoid fever does not usually kill on the tenth day, after a precedent very mild course and with symptoms of suddenly developing coma. Byron had undoubtedly been drinking heavily while in Greece (as he himself confesses), and we should like to know what was the state of his kidneys and arteries. His convulsive attack two months before, and his quickly developing coma after a week of mild fever, suggest at least a kidney lesion. But that was before the days of urine analysis; or of almost anything else, for that matter, in modern Greece.

A Good Appointment.—It is with admirable insight that Mayor Weaver of Philadelphia has met one of his public responsibilities in filling the new office of Director of Health and Charities. Dr. Edward Martin, who has been appointed to this important position, is well known in medical circles, both within and without this city. The real friends of a pure and efficient civic administration for Philadelphia can contemplate this appointment with approval. The new position is a most important one. The department over which Dr. Martin is called upon to preside has control of the administration of public charities of the city, such as the Philadelphia Hospital and the House of Correction. Combined with these duties is the administration of the health department. At the present time this position is a specially important one, because the city is about to make great changes in its hospital system. The Philadelphia Hospital at Blockley, which has outgrown its usefulness, is to be greatly changed, and new institutions for the insane and for the indigent of the city are about to be built on new sites. A new municipal hospital for contagious diseases will also be built. The new director will have to face large public responsibilities, but we believe he possesses both the personal and professional qualities which fit him for these new duties. Mayor Weaver has made a good start, and the medical profession of Philadelphia can feel assured that we are about to have a thorough reorganization of our public charities as well as an efficient administration of them. We not only congratulate the Mayor and Dr. Martin, but also—what is more important—the citizens of this town.

Current Comment.

A PROFESSION, NOT A TRADE.

The professional·man, like others, must live, and must earn a wage. But he has only one quality of service to sell—his best. No matter whether there be any return for that service or not, the service is his best. The true ideal of a profession is that want will be accepted rather than a fee from the performance of some act that is dishonorable, or *unprofessional.* The army takes high place in the list of professions. Ruskin, the great sage, reaches the true reason when he says of the soldier:—"He holds his life at the service of the State. Our estimate of him is on this ultimate fact—of which we are well assured—that, put him in a fortress breach, with all the pleasure of the world behind him and only death and his duty in front of him, he will keep his face to the front." Here, then, we have the real essence that must ever distinguish the professions from the trades—service first, wage second.

—*The Canada Lancet.*

HOUSE-TO-HOUSE DISTRIBUTION OF POISONS.

A bill recently introduced in the New York assembly provides a penalty for the distribution of free samples of any drug, medicine or chemical compound in such a manner that children may become possessed of them. This is timely legislation. The free-sample plan of advertising nostrums is very much in evidence just now in Maryland, and the distribution is effected in the cheapest and most dangerous manner by depositing them in the doorways. No fatalities have been charged in Maryland to this abuse, but it does not follow that none has occurred. The deaths which follow directly and promptly upon such wholesale scattering of poisons must be but an insignificant fraction of the total damage.

—*Maryland Medical Journal.*

Reviews.

The International Text-Book of Surgery. In two volumes. By American and British authors. Edited by J. Collins Warren, M. D., LL. D., F. R. C. S., (Hon.) Professor of Surgery in the Harvard Medical School; and A. Pearce Gould, M. S., F. R. C. S., of London, England. Second edition, thoroughly revised and enlarged. Volume I. General and Operative Surgery. 965 pages with 461 illustrations, and 9 full-pages colored lithographic plates. Volume II, Special and Regional Surgery. 1122 pages, with 499 illustrations and 8 full-page colored lithographic plates. Philadelphia and London. W. B. Saunders & Co., 1902.

This book is divided into 2 volumes. The first treats of the subject of surgery in general, in which each department is thoroughly classified, as bacteriology, symptomatology, pathology, etc. The second volume treats of special or regional surgery, and in it the different anatomical regions and the disease conditions to which they are liable are taken up and considered separately, as, diseases of the nose and throat, diseases of the stomach, gastro-intestinal canal. Thus we find that the contained knowledge is classified in a manner that makes the reading easy and interesting. The editors of this valuable work on surgery, keeping constantly in mind the needs of both student and physician, have presented a masterly exposition of the art and science of surgery. The work is complete and thoroughly up-to-date. They have given to medical literature an invaluable text-book, embodying a clear description of our present knowledge of surgical pathology, symptomatology and diagnosis, and such a detailed account of treatment as to form a reliable guide to the modern surgeon. In this, the second edition, the entire book has been completely revised, and a special effort has been made to bring the work down to the present-day teaching of this department of medicine. The editors have realized the importance of considering army, navy and tropical surgery, and have, therefore, contributed very valuable chapters on these subjects. It may be well to state that many of the reputable medical colleges of this country have within the last year established chairs of instruction in this line of medicine; hence, undoubtedly this book will be sought after by these particular institutions. The chapters on military and naval surgery have been very scrupulously revised and extensively rewritten in the light of the knowledge acquired during the recent wars. The articles on the effect upon the human body of the various kinds of bullets and the results of surgery in the field are based on the latest reports of the surgeons in this service. The chapter on diseases of the lymphatic system has been completely revised and brought to a high standard. The description of the surgery of the spleen is also of special interest. In speaking of corrections of deformities of the nose, the authors fail to mention some of the later procedures in this department of surgery, as, for instance, the subcutaneous injection of paraffin, but they claim that too frequently operations are performed which only exert a cosmetic influence and do not tend to the maintenance of function; a statement in which we heartily acquiesce.

In conclusion, we unhesitatingly recommend this work to the student and practitioner of surgery. It will prove a most valuable addition to a working library, and impart much knowledge to those who scan its pages. The book is a credit not only to the authors themselves, but to the medical profession at large. [P. B. B.]

Diseases of Metabolism and Nutrition. I.—Obesity. II.—Nephritis. III.—Colitis. By Prof. Dr. Carl von Noorden, Physician-in-Chief to the City Hospital, Frankfort-on-Main. Authorized American Edition. Edited by Boardman Reed, M. D. Philadelphia. The three volumes sent carriage paid on receipt of $2. E. B. Treat & Co., Publishers, New York.

We have read with interest these three monographs by Dr. Carl von Noorden which have been translated admirably by Dr. A. C. Croftan under the editorial direction of Dr. Boardman Reed. The first of these monographs discusses obesity and especially the indications for reduction-cures in this condition. The little book contains but fifty-nine pages of printed matter, yet so admirably is the subject summarized that the various forms of obesity are classified and the advisability of the treatment of each considered. Obese patients require careful physical examination and specialized treatment. No one therapeutic method can be applied to all. With some patients it must be our object merely to prevent the further accumulation of fat; with others a radical reduction-cure is indicated; in another very large class reduction-cures are absolutely contra-indicated. Von Noorden's treatise dwells with conciseness and yet necessary emphasis upon the especial indications. As a rule, it will be found that sanatorium treatment is by far the most successful, and the intermittent regimen lasting for five or six weeks with cessation for an equal period is preferred by this author. He does not give massage a place of importance in his method. Part II of this series dealing with nephritis presents to American readers the very radical differences in the dietetic treatment of Bright's disease which von Noorden recommends from that generally followed. This eminent author's experience with these patients and the careful studies that he has undertaken have led him to conclude that the ordinary rules of diet which are laid down for sufferers from chronic Bright's disease are by no means based upon a sound foundation. He believes, for instance, that much more harm than good will follow the persistence in an absolute milk diet in many of these cases, and that a carefully selected mixed diet, in which he allows red meats and even a moderate amount of alcohol, at times will be found to be far more beneficial. Our knowledge of this subject is, after all, still in a most unsatisfactory state. and von Noorden's position, while revolutionary, at least has the merit of being founded upon great clinical experience.

The third volume of this series deals with the author's conception of membranous catarrh of the intestines, a condition for which he prefers the name **colica mucosa** to **colitis mucosa**. In tracing the history of a typical case he has found that almost, without exception, the patients have suffered for some weeks or months from obstinate constipation before the onset of the typical attack. The pain of the attacks he regards as due not to an inflammatory process but to the mechanical or chemical irritation of the mucus, on the one hand, and the individual sensibility of the patient, on the other. He inclines rather to the view that the hypersecretion of the mucus is due to the existence of some morbid nervous-reflex process. The treatment of the disease is discussed at length. In opposition to many authorities he advises a coarse, laxative diet, rather than one that is bland and that leaves little residue. The argument setting forth his view as to the etiology of the disease and the method of treatment is logically and forcibly expressed. We rather regret that the proof-reading of these valuable brochures should not have been done more carefully. A number of misprints have escaped notice, and the misspelling of the author's name on the cover of the volume on nephritis is hardly to be excused. [T. L. C.]

News and Notes.

AMERICAN

PHILADELPHIA AND PENNSYLVANIA.

Medical Club, Philadelphia.—A reception will be given at the Hotel Bellevue, Friday evening, May 15, by the Medical Club of Philadelphia, in honor of Dr. G. H. Simmons, of Chicago, secretary of the American Medical Association; Dr. J. von Mikulicz-Radecki, of Breslau; Dr. C. A. Ewald, of Berlin; Dr. Hans Kehr, of Halberstadt, and Dr. Hermann Tillmanns, of Leipsic.

Woman's Hospital.—Dr. Mary W. Griscom, until this year associate professor of obstetrics at the Woman's Medical College, has been appointed chief of the obstetrical staff at the Woman's Hospital, with 2 associates, Dr. Elizabeth L. Peck, senior member of the staff of the West Philadelphia Hospital for Women, who is also on the staff of the Philadelphia Hospital, and Dr. Sarah H. Lockrey, whose appointment was announced in our issue of April 25, page 693.

Catholic Medical Scientists.—A lecture was given, April 28, before the American Catholic Historical Society by Dr. J. J. Walsh, of New York, upon great catholic medical scientists.

Finsen Rays Anesthetic.—A Germantown physician, it is said, has discovered by accident that the so-called Finsen rays have valuable anesthetic properties. For some time he is said to have been using Finsen rays in place of cocaine as the local anesthetic in minor surgical operations. His discovery occurred while cleansing a wound, having placed the wound in the violet light for the antiseptic and bactericidal effects of the rays. After 15 minutes' application of the violet rays he began to suture the wound, and found that the patient experienced no pain. Since that time he has performed several operations with this method of anesthesia.

West Philadelphia Hospital for Women.—The new maternity hospital and nurses' home, buildings including 4 adjoining houses on Ogden street, immediately back of the hospital, were opened with a reception, April 28. The two middle houses form the maternity hospital, while the houses on each side are devoted to dispensaries and rooms for nurses. On account of the improvements, which cost about $15,000, the hospital can now accommodate 60 patients.

Society Meetings Next Week.—The following societies will meet next week at the College of Physicians, Philadelphia, at 8.15 P. M.: Tuesday evening, May 12, Pediatric Society; Wednesday evening, May 13, Philadelphia County Medical Society, and Thursday evening, May 14, Pathological Society.

Rush Hospital for Consumption.—A pavilion has been opened on the roof of this institution, providing 10 more beds for patients in incipient stages of the disease. These patients will be out of doors continually. The country branch of the hospital, at Malvern, was opened last week. The building contains 18 patients and it is expected that tents will be erected upon the grounds to accommodate more patients.

NEW YORK.

Medical Society of the City of New York.—At the meeting held April 28, Dr. R. G. Freeman bestowed well-deserved commendation upon Nathan Straus for his part in reducing the infant mortality in the city through his depots for disposing to the poor and others pure and sterilized milk. Last year 1,200,000 bottles of milk, part of which was sterilized, were distributed from these depots.

Cornell's Water-Supply.—The filtration plant for the water-supply of Cornell University, at Ithaca, N. Y., was completed April 30, and water was turned into the main May 1. This is the filtration plant for which Mr. Carnegie offered to pay.

WESTERN STATES.

Sanatorium for Tuberculosis Patients in Ohio.—In a report submitted to the Governor by the Ohio Commission on Tuberculosis, an appropriation of $200,000 for the erection of a sanatorium for the treatment of tuberculosis patients was recommended. The report states that 6000 die annually of consumption in Ohio, where the disease is not hereditary, but is communicable and can be prevented and cured. There are said to be 15,000 persons afflicted with consumption now in Ohio. The commission asks that a sufficient appropriation be made thoroughly to test the matter.

Smallpox in Wisconsin.—A number of deaths have occurred at Manawa and Symico. Between January 1 and April 18, 450 cases, with 3 deaths, have been reported throughout Wisconsin.

SOUTHERN STATES.

Medical and Chirurgical Faculty of Maryland.—The 105th. annual meeting was held at Baltimore, April 28 to 30. The annual address was made by Dr. W. F. Howard, April 28. On April 29 papers were read by Drs. Robert Johnson, Charles O'Donovan, Robert Reuling, J. C. Hemmeter, Hiram Woods, C. F. Davidson, W. B. Wolf, T. R. Brown and Theodore Cook, Jr. At the executive session Dr. L. A. Griffith discussed the refusal of the District of Columbia to recognize the Maryland medical laws to the extent of permitting registered Maryland physicians to practise in the District, criticising the Maryland practice of giving such privileges to physicians of the District of Columbia, in the absence of reciprocal advantages. Dr. Griffith was then elected a member of the State Board of Medical Examiners of Maryland. Drs. E. M. Van Ness, W. W. Wiley, J. M. Scott and F. B. Smith considered his election an endorsement of his criticism, which was to some extent directed against the Board of Medical Examiners. Accordingly they tendered their resignations. On the 30th. Dr. William H. Welch spoke briefly on the resignations, saying that the gentlemen had acted under a misapprehension, as the faculty had not had the remotest idea of criticising the board. He offered the following resolution, which was unanimously carried by a rising vote: Resolved, That the Medical and Chirurgical Faculty of Maryland has received with regret the tender of the resignations of Drs. Van Ness, Scott, Wiley and Smith from the State Examining Board and desires hereby to express its appreciation of the integrity, the impartiality and the intelligent, arduous and faithful labors of the members of this board. The faculty would, therefore, be most reluctant to accept these resignations and earnestly urges these members, in whom hereby full confidence is expressed, to withdraw their resignations and to continue in the discharge of duties of the highest importance to the interests and welfare of the medical profession of this State. The subjects of tuberculosis and smallpox occupied the rest of the session. Dr. Henry Barton Jacobs read a paper on "Our Need of a Mountain Sanatorium for Indigent Consumptives," which he showed to be a most urgent one. He referred at length to the nucleus for such a hospital which has been formed by the conditional offer of $25,000 by a friend of the Eudowood Sanatorium, at Towson, and the collection of $4,000 additional by the Quarter Club. This club and the Hospital for Consumptives held a large concert May 1, at Music Hall, Baltimore, for the purpose of further swelling the fund. Dr. Jacobs advocated a public subscription for the purpose, and said that if $10 apiece would be gotten from each of the 500 churches in the city it would go far toward making the movement a success. Dr. Jacobs' paper was followed by a discusssion on methods for the prevention of the spread of tuberculosis in the city and State, led by Dr. W. S. Thayer and participated in by Dr. Jacobs, Dr. William H. Welch and Dr. J. S. Fulton. Dr Thayer advocated compulsory registration of all tuberculosis patients, as is now done in New York, and the enforcement of the existing antispitting laws. He also thought these laws should be extended to the farthest degree. He urged the appointment of lecturers by the faculty to go before the county medical societies and the rural school teachers and give comprehensive instruction on the nature and means of preventing tuberculosis. There should be, he said, referring to Dr. Jacobs' paper, two classes of sanatoria, one for advanced and incurable cases, and the other for the cure of such incipient cases as are amenable to treatment. Dr. Welch said it had been demonstrated at Breslau that loud talking and coughing cause the emission of tubercular bacilli, but that the fact remains that the greatest source of infection is from the dried sputum of those afflicted with the disease, and urged the adoption of the measures of registration and segregation already advocated. Dr. Jacobs said he believed in getting down to the practical part of the matter at once, and urged his fellow physicians to make it a professional duty to see that the antispitting law is enforced, especially in the street cars. Dr. Fulton advocated the placing of tuberculosis among notifiable diseases, which, he says, the boards of health have the power to do. He also thought that disinfection should be practised, especially after the death of a patient. He thought, however, that it would be very advisable to disinfect periodically all houses in which the disease exists. Two highly technical talks on the nature of smallpox and the means of identifying it were given by Dr. C. Hampson Jones and Dr. William Royal Stokes, who used lantern slides made from photographs of patients at all stages of the disease to illustrate their remarks. At the afternoon session Dr. J. Clement Clark, superintendent of the Springfield Hospital for the Insane, read a paper on the increase of insanity. Statistics, he said, show a large increase each year, and the cry in nearly all the States is for more room and the enlargement of hospitals. In the United States the number of insane in 1860 was 24,042; in 1870, 27,443; in 1880, 91,997; in 1890, 106,254. In 1860 the percentage of insane to the whole population was, native, 1 to 1,569; foreign born, 1 to 720. In 1890, native, 1 to 828; foreign born, 1 to 262. The figures for Maryland show a startling increase. They are taken from the United States census, except for the 1900 decade, which were prepared by the State Lunacy Commission. The Maryland figures are:

	Population.	Insane.	Ratio.
1860	687,049	405	1 to 1,696
1870	780,894	733	1 to 1,065
1880	934,943	1,857	1 to 503
1890	1,042,390	1,785	1 to 584
1900	1,188.044	2,527	1 to 470

"The increase of insanity," said Dr. Clark, is not due to any one cause, but to a variety of causes operating in different directions—The definition of insanity is so well understood of late years that greater numbers are included. From the nature of the treatment insane patients live longer than formerly; instead of being neglected in jails and almshouses they are more humanely treated, carefully housed, protected like children, every need attended to—in fact, everything is done to make them comfortable and contented, so that longevity is promoted and the death-rate diminished. The more intelligent views now held of insanity, as a physical disease rather than a family disgrace, and the increasing number of hospitals for the insane, with the growing confidence in them, have led people to be less backward in sending their relatives to be cared for in these institutions. The causes that produce insanity are more operative today than formerly. The chief factors in causing insanity are heredity and strain. With an increasing population and an utter disregard of the marriage and intermarriage of the mentally defective and those with taints of insanity, each generation increases the number of those of unstable brain, incapable of standing the various strains through which they will have to pass." Other papers were read by Drs. R. P. Smith, E. B. Claybrook, John Turner, W. F. Skillman, FrankMartin, H. H. Young, A. G. Barrett and L. K. Hirshberg.

American Laryngological Association.—The Twenty-ninth annual congress will be held at Washington, D. C., May 12 to 14, under the presidency of Dr. J. H. Bryan. Among those reading papers are: Drs. A. A. Bliss, D. B. Kyle, G. H. Makuen, A. W. MacCoy and W. J. Freeman, of Philadelphia, J. P. Clark, and J. W. Farlow, of Boston, C. C. Rice, H. L. Wagner, E. F. Ingals and C. W. Richardson, of Washington.

American Medico-Psychological Association.—The Fifty-ninth annual meeting of this association, formerly called the Association of Medical Superintendents of American Institutions for the Insane, will be held in Washington, D. C., May 12 to 15, in affiliation with the Congress of American Physicians and Surgeons. Papers will be read by Drs. D. P. Clark, Stephen Smith and Adolf Meyer, of New York; A. Hoch, E. Cowles and E. W. Mooers, of Waverly, Mass.; R. Dewey, of Wauwatosa, Wis.; W. R. Dunton, Jr., of Towson, Md.; H. A. Tomlinson, of St. Peter, Minn.; A. B. Richardson, of Washington, D. C., I. H. Neff, of Pontiac, Mich.; J. M. Buchanan, of Meridian, Miss.; W. H. Kidder, of Oswego, N. Y.; H. C. Baldwin, of Boston; R. B. Lamb, of Dannemora, N. Y.; F. W. Robertson, of Elmira, N. Y.; C. H. Hughes, of St. Louis, Mo.; E. P. Chagnon, of Montreal, and R. H. Chase, of Philadelphia. Dr. G. A. Blumer, of Providence, R. I., is president of the association.

West Virginia State Medical Association.—The Twenty-sixth annual meeting will be held at Charleston, May 26 to 28.

American Orthopedic Association.—The seventeenth annual meeting will be held at Washington, May 12 to 14, under the presidency of Dr. L. A. Weigel. Papers will be read by Drs. W. R. Townsend, Royal Whitman, V. P. Gibney, and H. L. Taylor, of New York; A. J. Steele, of St. Louis; C. C. Foster, of Cambridge; W. Blanchard, of Chicago; R. T. Taylor and Compton Riely, of Baltimore; W. B. Hopkins, G. G. Davis, H. A. Wilson, W. M. L. Coplin, J. T. Rugh and J. M. Spellissy, of Philadelphia; J. E. Goldthwait, A. Thorndike, E. H. Bradford, R. W. Lovett, C. F. Painter and W. G. Erving, of Boston; B. Bartow, of Buffalo; G. B. Packard, of Denver; F. E. Peckham, of Providence, and S. L. McCurdy, of Pittsburg.

A Soldier Leper.—Reports from Washington state that this disease, which attacked a soldier some time ago, is the first case of leprosy in the history of the United States Army. When the disease developed, the man could have been discharged for disability, but it was decided to keep him in the service in order to give the surgeons an opportunity to study the disease. A special house was built for him near Fort Screven, Ga., and he has been living there nearly three months. An army surgeon has been detailed to attend him and to study the disease with a view to ascertaining if it can be cured. No reports have been received from the surgeon.

Mumps Epidemic in Washington.—One thousand pupils in the Washington public schools are stated to be suffering from mumps. The epidemic is gaining great headway despite the vigorous action of the health authorities.

Maryland Medical College.—The Maryland Medical College graduated 59 men at its commencement on Tuesday last.

Meeting of the Association of American Physicians.—The eighteenth annual meeting of the Association of American Physicians will be held in connection with the sixth triennial congress of American Physicians and Surgeons in the new Willard Hotel, Washingon, on May 12, 13 and 14.

MISCELLANY.

Cholera in the Philippines.—Cholera is again threatening the Island of Luzon. The bad outbreak in the Camarines apparently is spreading northward. The Cagayan valley is infected, and it is feared the recrudescence will extend over all the islands. Past epidemics have generally lasted over three years. There have been 101 cases of bubonic plague, mostly among the natives and Chinese, in Manila since January, and the plague is apparently gaining ground.

Flea-Bites as a Cause of Infection in Leprosy.—Yuan de D. Carasaquilla, of the University of Columbia at Bogota, has conducted a number of experiments which he claims show conclusively that leprosy is communicated by the bites of fleas. Regarding the value of the Tuatua plant, which has been recently recommended to the Hawaiian Board of Health, he claims it is without therapeutic value.

Plague in India.—According to an officious statement of the British Government made April 30, the weekly plague mortality exceeds 30,000 persons. The infected area includes 9 British provinces and 51 native states.

Plague in Mexico.—Up to date some 300 persons have died of the plague in Mexico. These figures include all affected points. Mazatlan seems to be the focus of the epidemic.

French Canadians in the United States.—There are about 3,000,000 French Canadians in America, 1,404,974 in Canada and 1,228,000 in the United States. Massachusetts has 310,000 and the other New England States from 60,000 to 95,000 each. New York has 130,000; Michigan, 140,000; the Dakotas, 140,000; Illinois, 50,000; Wisconsin, 50,000; Minnesota, 60,000; New Jersey has but 3,000; and Pennsylvania but 4,000. The 1.400.000 credited to Canada are French-speaking. Those credited to the United States are of French-Canadian origin but are mostly English-speaking. The distribution of the latter will afford some surprise.

Poison in the Saliva of Smokers.—Schneider recently published a report of a series of experiments in which he made a careful investigation in the amount of sulphocyanide of potassium in the saliva. He found this poison present in 224 out of 225 persons examined. A remarkable fact which he noted, and to which he called special attention, was that while the sulphocyanide is ordinarily present in the saliva in only 0.003%, the quantity in the saliva of smokers was more than four times as great, 0.013%. This fact indicates that the system of smokers is saturated with poisons, at least one of which is eliminated through the saliva.—*American Journal of Physiology.*

The World's Death-Rate.—The death-rate of the globe is estimated at 68 a second, 97,920 a day, or 35,740,800 a year. The birth-rate is 70 a second, 100,800 a day, or 36,792,000 a year, reckoning the year to be 365 days in length.

Obituary.—Dr. Addison C. Hinkson, at San Francisco, Cal., April 21.—Dr. R. R. Breisch, at Ringtown, Pa., April 22.—Dr. J. R. Todd, at Gridley, Cal., April 21.—Dr. William Holbrook, at Palmer, Mass., April 27, aged 79 years.—Dr. Thomas S. Atkinson, at Lahaska, Pa., April 26, aged 44 years.—Dr. H. Lee Paige, at Dover, Del., April 30, aged 45 years.—Dr. James W. Taylor, at Leesburg, Va., April 28.—Dr. James Conland, at Brattleboro, Vt., May 2, aged 52 years.—Dr. James Aloysius Roche, at Brooklyn, N. Y., May 3, aged 44 years.—Dr. Henry Clinton Bunce, at Glastonbury, Conn., April 15, aged 78 years.—Dr. William Flood Smith, at Baltimore, Md., April 14, aged 38 years.—Dr. L. Hart Kitchel, at Alden, N. Y., April 20, aged 57 years.—Dr. Uriah M. Gibbs, at Hanceville, Ala., April 18, aged 33 years.—Dr. Denman R. Kinsell, at Columbus, Ohio, April 17, aged 75 years.—Dr. John W. De Vaughan, at Milltown, Ala., April 19.

FOREIGN.

GREAT BRITAIN.

Liverpool School of Tropical Medicine.—The fourth annual report (1902) of the Liverpool School of Tropical Medicine has lately been published. The most important change which it records as having taken place during the year is the foundation and endowment of the Sir Alfred Jones Chair of Tropical Medicine in Liverpool University College, and the appointment thereto of Major Ronald Ross, C. B., the winner of the Nobel prize. Four more expeditions were equipped and despatched for the study of diseases in tropical countries, namely to Freetown (Sierre Leone), to Ismailia (at the request of the president of the Suez Canal Company), to the Gambia and French Senegal, for the Study of trypanosomiasis, and to the Gold Coast. Further expeditions are in contemplation. Important features of the work of the School are a proposal, to be shortly carried into effect, to deliver elementary lectures on tropical diseases and sanitation to employés of firms in Liverpool and the district, and the issue of a flysheet giving simple sanitary instructions for the preservation of health in the tropics. The students at the school include representatives from several foreign countries. Four nurses were specially trained in the Royal Southern Hospital for work in the tropics.—*British Medical Journal.*

Smallpox in London.—During the week ending April 18, 21 cases of smallpox were reported in the city of London, an increase of 15 over the previous fortnight. There are at present 34 cases under treatment.

CONTINENTAL EUROPE.

The Loubet Dispensary for Tuberculosis.—M. Loubet, President of the French Republic, has given $2200 toward the erection of a dispensary for tuberculosis, which is to be erected in Paris on a site given by the Municipality. The dispensary will bear the name of the President.

Longevity in Paris.—According to the *Gazette Médicale de Paris* there are at the present time 5 men in Paris over 100 years of age: it is noteworthy that none of these Methuselahs is married. There are 531 nonagenarians, 85 of whom are within a few months of completing their century of life. Of octogenarians there are no fewer than 10,617.

University Notes.—**Basle:** Dr. E. Wieland has been recognized as privat-docent of children's diseases.—**Berlin:** The news that Dr. H. Thierfelder, professor of physiology and director of the Physiological Institute, was soon to move to Prague to become professor of medical chemistry and director of the medicochemical laboratory in the German University, as we announced in our issue of March 21, page 501, has proved untrue. He will remain in Berlin in his present position.—**Bonn:** For the first time in the history of this university 2 young ladies, both daughters of physicians, have passed the State medical examination for license to practise medicine. Both received honorable mention.—**Breslau:** Dr. Karl Ludloff, of Königsberg, has been appointed privat-docent of surgery.—**Copenhagen:** Dr. E. Faber has been appointed privat-docent of medicine.—**Dorpat:** Dr. S. Miknoff, of St. Petersburg, has been appointed professor extraordinary of midwifery and gynecology.—Dr. R. Weinburg has been appointed privat-docent of anatomy.—Dr. von Bonninghausen-Budberg has been appointed privat-docent of surgery and Dr. J. Meyer privat-docent of gynecology.—**Dresden:** Dr. Erdmann celebrated his fiftieth anniversary as a physician, April 1.—**Greifswald:** Dr. Sophus Ruge has been appointed privat-docent of ophthalmology.—**Jena:** Dr. B. S. Schultze, the well-known professor of gynecology, has been made honorary citizen of the city of Jena upon his retirement.—**Lausanne:** Dr. G. Rossier, privat-docent of midwifery, and Dr. M. Muret, privat-docent of gynecology, have been promoted to extraordinary professorships.—**Lund:** Dr. G. W. Tornqvist has been appointed privat-docent of surgery.—**Marburg:** Dr. W. von Lingelsheim, privat-docent of hygiene, has been made professor.—**Odessa:** Dr. Nicholas Popow, of Kazan, has been appointed professor of neurology and psychiatry.—**St. Petersburg:** Dr. Fedorow, of Moscow, has been appointed professor of surgery.

Fourteenth International Medical Congress.—At this convention, which was held in Madrid, April 23 to 30, it was decided that the fifteenth congress would be held at Lisbon, Portugal, in the spring of 1906.

Notes.—Infantile mortality due to adulterated milk is exceptionally high at Troyes, France, where 69% of the infants die from this cause.—Five hundred and eleven woman medical students are now studying in Switzerland.—The number of twins and triplets born in Berlin has steadily risen since 1825. Out of nearly 2,000,000 children born within that period twins were born 22,441 times, triplets 229 and quadruples 3 times. During the same period in London twins were born 14,000 times, triplets 75 times and quadruplets twice. The Paris figures are: Twins, 7500; triplets, 25; no quadruplets.—Prof. Morisani, of Naples University, who holds the position of physician to Queen Helena of Italy, is both in stature and proportions the most diminutive doctor in the world.—There is a noteworthy preponderance of females in Sweden.—The latest statistics show 148,669 more females than males.—At the village of Dozenkowka, Russia, a peasant woman has given birth to three boys and one girl. The woman has had already three sets of twins.—Actual measurements have shown that the size of a hair depends upon its color, and that such filaments of the human head vary from the 250th. to the 600th. part of an inch, blonde hair being finest and red coarsest. Dr. Zung, a German specialist, says that the average number of hairs on a blonde head is 140,000, on the red not more than 90,000.—The number of consumptives in Germany is estimated at over 225,000.—In France the doctor's claim on the estate of a deceased patient has precedence of all others.—Two French doctors have been looking into the question of bearded women, and have discovered that out of every 1,000 sane females 290 are bearded. Of these 230 have only a slight down, 40 have a very visible beard, and 10 are unmistakably adorned with this hirsute appendage. Out of 1,000 insane women examined, 491 had slight beards, while 56 had beards well grown.—The health authorities of Berlin have issued a warning against iced drinks in summer weather as being injurious to health. People are warned not to drink beverages that are cooler than 50° Fahrenheit.—As a precaution against infection small silver currency is now being disinfected by the municipal authorities at St. Petersburg.—Stuttering children are numerous in the schools of Germany, and it is thought the ailment is contagious. At present there are 80,000 school children in that country whose speech is thus affected.

Obituary.—The death is announced of Dr. Fandacio, professor of anatomy and pathological histology in the University of Naples.—Dr. Anton Bumm, professor of psychiatry, died in Munich, on April 13, aged 54 years.

The Latest Literature.

BRITISH MEDICAL JOURNAL.

April 18, 1903. (No. 2207.)

1. An Address on Gastric Hyperacidity (Hyperchlorhydria), its Nature, Diagnosis and Treatment. WM. RUSSELL.
2. An Address on the Operative Treatment of Enlarged Prostate. WILLIAM THOMSON.
3. A Clinical Lecture on a Fifth Series of Cases of Total Extirpation of the Prostate for Radical Cure of Enlargement of that Organ. P. J. FREYER.
4. On the Operative Treatment of Prostatic Obstruction. F. A. SOUTHAM.
5. Note upon a Possible Relationship Between Carcinoma and Nerve or Trophic Areas. G. L. CHEATLE.
6. On the Etiology of Sleeping Sickness. ANNIBAL BETTENCOURT, AYRES KOPKE, GOMES DE RESENDE and CORREIA MENDES.
7. Note of Some Further Experiments Regarding the Nature and Specific Treatment of Hay Fever. FELIX SEMON.

1.—In Russell's experience, **hydrochloric acid in excess** is a much more common cause of dyspepsia and ultimately of gastric dilation than is usually recognized. It is the common condition in cases of nervous indigestion. The unconscious comfort or the conscious uncomfort of digestion depend upon starch digestion, arrest of starch digestion or proteid digestion. There ought to be no more gastric juice poured out than can satisfy the needs of the proteid; if, after the proteid is satisfied, the gastric juice is continually secreted, the hydrochloric acid which is poured into the stomach is the disturbing factor which produces the symptoms. This **excess of hydrochloric acid causes** a considerable portion of the finely divided starch food and the fat of milk to be retained in the stomach. This retained starch causes further secretion of the gastric juice. The undigested starch is ultimately passed on, but only after it has produced much discomfort and in some instances caused vomiting. The oversecretion of the gastric juice is more of a chemical and diathetic error than a neurosis. The treatment of the condition includes the cure of constipation, the administration of alkalis before food, and the removal of the gastric residuum in the severest cases. Permanent cure can only be accomplished by the use of a dietary in which those proteids which are easy of digestion are reduced to a physiological minimum, in which starches that are used are as much changed as possible, and in which the amount of food does not exceed the physiological requirements. [J. M. S.]

2.—Thomson practises the Freyer operation for **enlarged prostate.** He has devised an effective method of controlling hemorrhage in these cases. A piece of smooth, red rubber, 1/6 inch thick, is cut in oval shape, 2 by 1½ inches. A silk ligature is passed through the rubber at a point midway in its smaller diameter, and 2/3 inch from the edge of the large diameter. The other end of the ligature is introduced 2/3 inch from the opposite edge, and the two portions are tied together in a knot close to the under surface of the rubber. The ends are then secured to a catheter which has been introduced through the urethra, and the instrument is withdrawn. By pulling on the ligatures, bleeding is stopped by pressure of the rubber on the site of the prostate. In order to remove the rubber, a silk ligature is passed through one side of the rubber; traction on this pulls the rubber out edgeways. [F. T. S.]

3.—Freyer reports 10 cases in which he has removed the prostate by his suprapubic method. He has thus far reported 31 cases. Of these, 27 were successful in every respect. One patient died of uremia, one from heat-stroke and two from mania. [F. T. S.]

4.—Southam reviews the history of the operative treatment of prostatic obstruction. He advises catheterization when there are no complications present. He has drained the bladder suprapubically in a number of cases with satisfactory results. In suitable cases he employs the Freyer operation. [F. T. S.]

5.—Cheatle says that there is a proportion of cases of **carcinoma** that show a marked **relationship** between the spread of the primary focus and the distribution **of nerves and trophic areas.** He finds some reason for believing that carcinoma may originate in a nerve area as a result of the nervous influence over that area. He considers rodent ulcer the commonest form of cancer. [J. M. S.]

6.—The principal lesion of **sleeping sickness** is a meningo-encephalomyelitis. Bettencourt, Kopke, de Resende and Mendes believe that the diplostreptococcus, demonstrated by them in 1901, and the organism described by Castellani are identical, and that the observations of the later investigator completely confirm their studies. [J. M. S.]

7.—Semon has made further studies with the **pollen toxin** isolated by Dunbar, and he believes that these studies confirm his previously expressed opinion that there is a class of persons who, though not actually suffering from **hay fever,** are more susceptible to the toxin in question than the majority experimented upon. [J. M. S.]

LANCET.

April 18, 1903.

1. The Lumleian Lectures on Infective Endocarditis Mainly in its Clinical Aspects. (Lecture II.) T. R. GLYNN.
2. An Analysis of 220 Cases of Sudanese Leprosy. T. J. TONKIN.
3. Nerve Suture and Nerve Regeneration. PAUL B. HENRIKSEN.
4. Three Cases of Ligature of the Common Carotid Artery. W. J. COLLINS.
5. Narcotile, Methyl-Ethylene Bichloride; a New Anesthetic. TOM EASTHAM.
6. The Treatment of Epilepsy by Psychical Methods. H. CAMPBELL THOMPSON.
7. A New Method of Treating Suppurating Catarrh of the Middle Ear. ALBERT A. GRAY.
8. A Case of Trional Poisoning; Remarks. F. P. WRIGHTWICK.
9. Two Cases of Tubal Gestation With Operation; Recovery. RUSSELL COOMBE.

1.—Glynn, in his second lecture **on infective endocarditis mainly in its clinical aspects,** calls attention to the fact that in the great majority of his cases the mode of entrance of the pathogenic organisms was not ascertained. There were no evidences of the infection having originated in the abdominal viscera, and he, therefore, concludes that the micro-organisms in these cases of obscure infection entered by the respiratory or oral cavity. He thinks it probable that micro-organisms more often enter the circulation by way of the lungs than by way of the intestines. The author cites a number of instances of malignant endocarditis, giving short histories of the cases. He refers to the frequency of infarctions in the lungs, spleen and kidneys according to the data taken from the Royal Infirmary post mortem reports, which show that embolism is 3 times as frequent in infective as in simple cases. Any attempt to classify the varieties of endocarditis on an anatomical basis, as into ulcerative and verrucose forms, is not justifiable, as the 2 forms of lesion very frequently co-exist, and the same may be said of the bacteriological classification, as the severity and character of the symptoms depend on the virulence rather than on the species of the infecting micro-organisms. The classification must be based upon clinical grounds. He prefers to classify his cases according to the severity and character of the symptoms—namely, as acute and subacute chronic forms. The temperature in his cases, far from conforming to any definite type, often followed an irregular and anomalous course, and in very few instances were rigors a symptom. [F. J. K.]

2.—Tonkin presents **an analysis of 220 cases of Sudanese leprosy.** In 86.7% of the cases patches of the disease were present, while in 11.3% the disease was characterized by tubercles, showing that the macular variety of the disease is greatly in excess. Males are more liable to be attacked than females. The period most frequently marked by inception of the disease is from the sixth year onward to the twenty-fifth year. The author holds the view that there are instances of recovery from leprosy, and that it is rare to hear of the actual morbid process covering a period of more than from 15 to 20 years. He has seen a number of instances of alleged leprosy in which the individuals in question have suffered from a severe grade of the disorder, but nevertheless outlived all signs of it and entered into the enjoyment of what appeared to be thoroughly good health. Referring to hereditary transmission of the disease, he points out that only in an exceedingly small minority, a fraction over 10%, was it possible to determine direct hereditary transmission as responsible for the appearance of the disease. He holds that persons exposed to direct contact with leprosy are more liable to contract the disease than those farther removed. He thinks that the badly balanced and inefficient diet and the communistic way in which unwashed clothes are handed about have a direct influence on the spread of leprosy. [F. J. K.]

3.—Henricksen discusses at length **nerve suture and nerve regeneration**, reporting a number of interesting experiments in detail. Among other conclusions it is stated that a nerve when divided will lose its motor conductivity only after the lapse of some time. Regeneration begins immediately after the division of the nerve and takes place hand in hand with degeneration, so that, after a short time (seven days), long threads are found that by and by are developed into active nerve fibers. After the thirtieth day in the rabbit there is found an advanced development of the myelin sheath in the newly formed fibers of the peripheral part. At the same time may be observed motor power and later an increase in muscle weight. After the lapse of some time there is found electrical reaction. The further from the periphery a nerve is hurt, the longer it will take before motor power may be affected, and the slower will be the recovery. This cannot be taken, however, as evidence that the nerve is growing from the central end. Experiments on animals show that a divided nerve unites equally rapidly whether it is sutured or not; thus suture is not in all cases necessary, but the reason why it ought not to be omitted is that circumstances sometimes arise which prevent the union and function of the nerve, for instance, infection leading to the formation of dense scar tissue. If union of the nerve has not occurred or if it is incomplete, examination of sensation gives means of determining when interference is required. The time that may elapse before operation is done with the risk of slow and possibly incomplete recovery is scarcely more than about a month. The nerve fibers grow out with most activity in the first few weeks, and after union occurs it will be rapidly succeeded by recovery of sensation. If sensation does not return or if it is incomplete or is proceeding slowly at the time when scar tissue has been formed, it must be taken as an indication that serious obstacles to the union of the nerve are present and that complete restitution cannot be expected without operation. Sensation, therefore, is of the greatest importance from a diagnostic and prognostic point of view. Both in primary and secondary nerve suture it is not of great importance what sort of suture material is used or how the suture is introduced, the essential thing being that the operation should be done aseptically. In secondary suture it is of the greatest importance that all scar tissue and the outer portion of the nerve ends be removed. [J. H. G.]

4.—Collins reports **3 cases of ligature of the common carotid artery.** The first was for intracranial aneurysm in a man, 54 years of age. The operation in this case was followed by great relief of symptoms. In the second case the ligation was done for a sloughing and hemorrhagic ulceration of the right tonsillar region, which resulted in great amelioration of symptoms. In the third case the ligation was done because of a recurrent carcinoma of the tongue, tonsil and floor of the mouth. The pain was decreased and general health improved by the operation, but there was no marked change in the growth. [J. H. G.]

5.—Eastman describes a **new general anesthetic** called **narcotile** which is a methyl-ethylene bichloride. It is administered with a Lobjois inhaler. Twenty cases are reported in which the anesthesia has been satisfactorily employed. [J. H. G.]

6.—Thompson contributes an article **on the treatment of epilepsy by psychical methods.** He thinks the psychical treatment is a valuable adjunct in the management of epilepsy and may lead to further advantages in the future, but he does not hold that it should in any sense take the place of the bromide treatment. The successful management of the disease depends upon the careful combination of many factors. [F. J. K.]

7.—Gray reports excellent results in a number of cases of **suppurating catarrh of the middle ear from treatment with a saturated solution of iodoform in aniline.** Certain limitations apply to the treatment, however. The first is the limitation in regard to the dosage, aniline being toxic. Gray has discovered that anything under 4 minims may be absorbed without producing any symptoms of poisoning in an adult, and that, if more than this amount is used, cyanosis may occur. More than 4 or 5 minims, however, are never required in ear work. Another objection is the peculiar effect upon the skin produced in some patients, an erythematous blush appearing accompanied with slight swelling and itchiness. Gray sums up his article as follows: (1) The solution should be measured before use; (2) the drying out should be done with the same care as is required in the present methods of treatment; (3) granulations should be removed, though this is not quite so imperative as it is in other methods of treatment; (4) the applications should be made by the surgeon himself; (5) the use of the solution is particularly indicated in those cases which do not do well when treated in the usual ways—that is, in foul-smelling and presumably tuberculous cases. [J. H. G.]

8.—Wrightwick and Rolleston report **a case of acute trional poisoning** which occurred in a married woman, 29 years of age, who took 125 grains of the drug without a fatal issue. The authors point out that there appears to be a general resemblance between the symptoms due to the cumulative effect of trional taken for a considerable lengh of time and those due to acute poisoning. [F. J. K.]

MEDICAL RECORD.

May 2, 1903.

1. Cranial Form in Man, Together with Some Remarks on the Attitude of the Profession toward Anthropology. ARTHUR THOMSON.
2. Reciprocity in Pathology. S. B. LAACHE.
3. The Antituberculous Campaign in Latin America. EMILE R. CONI.
4. The Expansion of a Specialty.: HOWARD A. KELLY.

These addresses were delivered before the **International Medical Congress** in Madrid, Spain, April 23-30, 1903, and will be subsequently noticed in our report of the proceedings of this Congress.

MEDICAL NEWS.

May 2, 1903. (Vol. 82, No. 18.)

1. Indications for Extirpation of the Gall-bladder. MAURICE H. RICHARDSON.
2. Some Practical Points in the Anatomy of the Gall-bladder Region GEORGE EMERSON BREWER.
3. The Diagnosis of Gall-stones. J. H. MURPHY.
4. The Mortality of Appendicitis. A. J. OCHSNER.
5. Prompt Operation in the Beginning of the Attack Will Save Nearly All Cases of Appendicitis. A. C. BERNAYS.

1.—Richardson gives certain facts in regard to extirpation of the gall-bladder: (1) Certain lesions in themselves demand removal of the gall-bladder whenever possible. Such are new growths and gangrene. (2) Certain other lesions of the gall-bladder are better treated by cholecystectomy. These are contracted and inflamed gall-bladders, with thickened walls. All gall-bladders which do no permit easy and efficient drainage should be extirpated, for in such gall-bladders the risk of drainage is quite as great as the risk of extirpation. (3) Drainage is preferable in the dilated and infected gall-bladder, which, however, is neither gangrenous nor to any great extent changed. (4) As a rule, drainage rather than extirpation is demanded in acute cholecystitis with severe constitutional symptoms, when the gall-bladder is dilated or, at least, not contracted, and when it is not gangrenous. (5) In chronic cholecystitis with dilation and thickening of the gall-bladder, especially when a stone is impacted in the cystic duct, extirpation is the preferable operation unless the stone can be dislodged backward into the gall-bladder, in which case drainage is, if not preferable, quite as advantageous as extirpation. (6) In simple gall-stones, without visible evidence of infection or chronic changes incompatible with complete restoration of functions, simple drainage of the gall-bladder is indicated. (7) In chronic pancreatitis, whether associated with gall-stones or not, drainage through the gall-bladder is indicated. [T. M. T.]

2.—Brewer mentions the important points in the anatomy of the gall-bladder region: (1) A knowledge of the positions of the nerve trunks of the abdominal wall. (2) A knowledge of the normal position, size and shape and relations of the gall-bladder and ducts, their bloodsupply and the normal positions of certain constant lymphnodes. (3) The most frequent variations from the normal in these structures both congenital and acquired. (4) Variations in the arrangement of the bloodsupply of the liver and gall-bladder. (5) The relations of the duodenal orifice of the common bile-duct. (6) The anatomy of the intrahepatic peritoneal basin. [T. M. T.]

3.—Murphy says the characteristics of gall-bladder enlargements are: (1) That they are continuous with the upper surface of the liver; (2) that they project sharply from the margin of the liver; (3) that the margin of the liver can be treated to a gradually diminishing edge attached to the upper surface of a globular mass. In the relation of jaundice to pain the author states that jaundice due to gall-stones is always preceded by colic; that jaundice due to malignant disease, or catarrh of the ducts accompanied with infection, is never preceded by colic. There are two striking, contrasting conditions under which pressing gall-stones do not produce colic: (1) When they are very small, too small to produce obstructions or spasm of the ducts; (2) when they are very large, so large that the wall is paralyzed by the overdistention and infiltration by the extremely slow advance of the stone. [T. M. T.]

4.—Ochsner's observations on mortality in appendicitis are: (1) The mortality in appendicitis results from the extension of infection from the appendix to the peritoneum or from metastatic infection from the same source; (2) this extension can be prevented by removing the appendix while the infectious material is still confined to the organ; (3) the distribution or extension of the infection is accomplished by the peristaltic action of the small intestines; (4) it is also accomplished by operation after the infectious material has extended beyond the appendix and before it has become circumscribed; (5) peristalsis of the small intestine can be inhibited by prohibiting the use of every form of nourishment and cathartics by mouth and by employing gastric lavage in order to remove any substance of food or mucus from the stomach; (6) the patient can be safely nourished during the necessary period of time by means of nutrient enemata; (7) in case neither food nor cathartics are given from the beginning of the attack of acute appendicitis and gastric lavage is employed, the mortality is reduced to an extremely low percentage; (8) in patients who have received some form of food and cathartics during the early portion of the attack and who are consequently suffering from a beginning diffuse peritonitis when they come under treatment, the mortality will still be less than 4% if peristalsis is inhibited by the use of gastric lavage and the absolute prohibition of all forms of nourishment and cathartics by mouth. [T. M. T.]

5.—Bernays states in his article that the absence of a tumor is a more pressing indication for immediate surgical interference than its presence. Some facts in his article are: (1) The mortality of the internal operation is very low; (2) the results of the very early operation will probably be as low as those of the internal operations; (3) operations done during the first day or two are easier and more complete than later. [T. M. T.]

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

April 30, 1903. (Vol. CXLVII.)

1. Albumosuria. CHAUNCEY REA BURR.
2. A Case of Juvenile Aortic Stenosis, With Subsequent Insufficiency. Sudden Death; Autopsy. ALBERT N. BLODGETT.
3. Mountain Sanatoria for Tuberculosis. WALTER LINDLEY.

1.—Burr gives the following methods for the detection of albumoses: (1) Take a small portion of urine in a test-tube and warm gently. A precipitate appears which is redissolved on boiling and reappears on cooling. (2) Acidulate the urine with acetic acid and add a few drops of a saturated solution of sodium chloride. A precipitate forms which disappears on heating and reappears on cooling. (3) Add a few drops of nitric acid to the urine in a test-tube. If the acid is not in excess, a precipitate is formed which disappears on boiling and reappears on cooling. (4) Add acetic acid, avoiding an excess, and then add a few drops of a solution of potassium ferrocyanide (1-10). A precipitate is formed which disappears on boiling and reappears on cooling. (5) Completely saturate the urine at boiling point with neutral ammonium sulphate; filter and wash the precipitate with saturated solution of ammonium sulphate. Dissolve the precipitate in water or dilute sodium chloride solution and apply the biuret test. If albumoses are present, a rose color results. [T. M. T.]

3.—Lindley says the points that an ideal mountain resort should cover are: (1) An altitude of about 5,000 feet; (2) the greatest amount of sunshine; (3) the greatest possible number of days when outdoor exercise can be pleasantly taken; (4) purity of atmosphere; (5) purity of water-supply; (6) pine forests for their balsamic effect on the atmosphere; (7) beauty of scenery and inviting short tours. [T. M. T.]

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

April 25, 1903. (Concluded.)

1. Some Remarks on the Present Status of Medical Education in the United States. VICTOR C. VAUGHAN.
2. Requirements for Admission to Medical Colleges. E. A. de SCHWEINITZ.
3. Requirements for Admission to Medical Schools. JAMES RUSSELL PARSONS, JR.
8. The Use of a Mydriatic After the Age of Forty-five. HORACE M. STARKEY.
9. Carcinoma Epibulbæ Planum. B. MATYS.
10. Laboratory Inspection of Vaccine. ADOLPH GEHRMANN.

1.—Vaughan presents some remarks on the present status of medical education in the United States. In this address he reviews the progress in medical education and at some length discusses the present status. He holds the view that the American Medical Association as a body is moving slowly in the advancement of medical education. [F. J. K.]

2.—De Schweinitz discusses the requirements for admission to medical colleges. After dwelling upon requirements for admission he points out that it is not the object of a medical school to graduate specialists, but that we should give to each student a good, general, solid groundwork and afford him an opportunity to determine in his own mind the particular line to which he is best adapted. [F. J. K.]

3.—Parsons points out the requirements for admission to medical schools. He reviews at some length the present requirements for admission to medical schools and suggests that we should not be too specific in prescribing entrance requirements. Regarding advanced standing he thinks that we should take a broader view of the matter and that a three years' professional course, based on a four years' college course, is preferable to a four-years' medical course based on high-school work only, and that the responsibility for the necessary rearrangement of work must rest with the medical schools. [F. J. K.]

8.—Starkey discusses the use of a mydriatic after the age of 45. One hundred prominent ophthalmologists were asked the following questions: (1) What is your practice in regard to the use of mydriatics or cycloplegics in refraction work on patients beyond 45 years? (2) If they are used frequently, what advantages and what disadvantages or dangers, if any, do you find in such use? (3) If they are used infrequently or not at all, is their omission due to disbelief in their utility or to fear of bad effect? (4) Is the belief in these advantages and disadvantages theoretical or the result of your own experience? (5) Can you cite cases in your own practice in which glaucoma has seemed to be caused or aggravated by the use of these drugs? Ninety replies were received. Twenty-two ophthalmologists never used cycloplegics or mydriatics for refraction work on patients beyond the age of 45; 32 rarely employed them, and 36 used them frequently. Seventeen used them in the majority of cases at first examination; 34 have seen glaucoma caused or aggravated by their use, and 11 have seen cases in the practice of others. Twenty-five state that they have no fear of producing increased tension, and 41 have not seen cases of glaucoma follow their use. The article includes a table of the answers received. [F. J. K.]

9.—Matys reports **a case of carcinoma epibulbare planum** which occurred in a man, 78 years of age. The article is illustrated. [F. J. K.]

10.—Gehrmann contributes an article **on laboratory inspection of vaccine.** He states that the Chicago Department of Public Health has inspected and tested the vaccine received since 1894. Deliveries are made in lots of 5,000 to 10,000 vaccinations; for each lot the following conditions must be fulfilled: The lot must be from one operation; that is, it must bear the same laboratory number throughout. The dates on the packages must not precede nor exceed the time limit of efficiency, 60-day emulsion with 40 to 50 days for the period of use. The physical conditions must show a uniform emulsion. Cultures made must show at least a relatively small number of saprophytic bacteria. The injection of the mixed contents of 10 to 12 tubes into a guinea-pig must be negative. The clinical test must give not less than 90% of typical results in primary vaccinations. [F. J. K.]

May 2, 1903.

1. An Examination into the Claims of the Red Light Treatment of Smallpox. JAY F. SCHAMBERG.
2. Three Essential Points in the Operation for Cicatricial Ectropium. F. C. HOTZ.
3. The Objections to Prescribing Medicines of Unknown Composition. A. A. ESHNER.
4. A New Method of Shortening the Round Ligaments Intraperitoneally for Retroversion. HENRY T. BYFORD.
5. The Meaning and Significance of Leukocytosis. ROBERT N. WILLSON.
6. Is the Consumptive Chest Flat? WOODS HUTCHINSON.
7. Bloodpressure Determinations in General Practice, Introducing a Practical Instrument for Routine Use. HENRY WIREMAN COOK.
8. Further Observations on Increased Bloodcounts Due to High Altitude. JOHN WEINZIRL and C. EDWARD MAGNUSSON.
9. A Case of Brain Abscess Due to Latent Typhoid Infection; Death from Cardiac Complication. G. W. McCASKEY and M. F. PORTER.
10. Shock Produced by General Anesthesia with Relation to Disturbances of the Blood and Gastro-intestinal Tract. FENTON B. TURCK.
11. Antitoxin and the Pharmacopeia. A Plea for the Adoption of a Test which, in the Author's Experience, Presents the Least Difficulties. WILLIAM S. HUBBERT.
12. Some Experiments with the X-Rays as a Therapeutic Agent. Report of the Cure of a Case of Alveolar Melanotic Sarcoma. EDWIN WALKER.
13. Morphine and Cocaine Intoxications. GEORGE P. DALE.
14. A Note on the Value of Auscultatory-Resonance and Auscultatory-Percussion as Aids in Diagnosis. CARL C. WARDEN.

1.—Schamberg has made a study of the red light treatment of smallpox. He particularly lays stress upon Dr. Finsen's views who claims that the use of the red light is a most valuable adjunct in the treatment of smallpox, preventing, as a rule, the stage of suppuration, so that the patient gets well with no scars at all or with only slight scarring. His personal experience with the red light has been most discouraging. He subjected 2 young men, one 16 years of age, the other 20, to this treatment. In both instances the disease was severe, going into the pustular stage; one patient died, and the other recovered after a protracted illness, but with most disfiguring scars. [F. J. K.]

2.—Hotz, after referring to the difficulty of obtaining satisfactory results in cases of **cicatricial ectropium,** states that the difficulty may be overcome by the proper division and fixation of the skin flaps, the selection of the most suitable material for covering the lids, and the shortening of the overstretched lid border. These operations are unsuccessful because of the subsequent cicatricial contraction which is so apt to reproduce the ectropium. The skin flaps should be carefully fixed to the tarsal edges, so that the contraction of tissues beyond them cannot draw them away. The thin cicatricial skin usually to be found in other parts of the face or body in these cases makes the best graft and is much to be preferred to the thick skin of either the forehead or cheek. In cases of ectropium of the lower lid the elongated border of the lid should be shortened and the lid should be drawn up by 2 sutures passed through it and attached by adhesive plaster to the forehead. [J. H. G.]

3.—Eshner presents his views of prescribing medicines of unknown or concealed composition; he states that it is unscientific, unprofessional, unfair if not prejudicial to the sick, unprogressive and unstimulating and, most of all, unnecessary. [F. J. K.]

4.—Byford describes a new **method of shortening the round ligaments intraperitoneally** for retroversion. It consists in folding the ligaments anteriorly according to Dudley, and in stitching the loop to the abdominal parietes about opposite or behind and a trifle above the internal inguinal ring. There are thus practically 2 round ligaments on either side, one going from the uterus partly through the first catgut ligatures to the attachment behind the external inguinal ring, and the other from the uterus to the ligature and from there to the internal inguinal ring. [W. A N. D.]

5.—Willson contributes an article entitled **the meaning and significance of leukocytosis.** He draws the following conclusions: (1) The term leukocytosis must include every increase in the absolute number of the leukocytes of the blood examined, as well as every increase in the percentage count of the various leukocytic forms. (2) A leukocytosis, of whatever nature, must always be regarded as a clinical sign of importance, but never of such weight as to influence against equally convincing physical signs. (3) A high percentage of the polymorphonuclear forms in the absence of an absolute leukocytosis indicates the presense either of pus or of some grave inflammatory process, together with a low vitality of the patient. (4) Specific factors may rarely exert such an unusual influence as to interfere with the customary reaction of the polymorphonuclear forms. This conditon is, probably, seldom encountered. (5) Single counts of leukocytes, or single estimations of the leukocytic percentages, are often misleading; while a persistent series of observations will seldom fail to aid in the diagnosis and treatment of the condition. (6) A gradual, but steady, rise in the total count of leukocytes above the customary number usually indicates the presence of an active and augmenting inflammatory influence. When this increase reaches large proportions, it may be looked upon as an indication of the presence of an active leukocytic process (serous or purulent effusion, localized pus collection, pneumonic exudate, etc.), provided the clinical picture also bears out the suggestion. [F. J. K.]

6.—Hutchinson makes **an inquiry into the shape of the consumptive's chest** and draws the following conclusions: (1) The typical tuberculous chest is round instead of flat, and has an average index of about 80, nearly 10 degrees above the normal. (2) This type of chest precedes the disease. (3) It is an abnormal persistence of the fetal, infantile and child type of chest. (4) Any chest more than 18 years of age, which shows an index of 80 or higher, should be regarded as abnormal and as rendering its possessors more than usually liable to tuberculosis. (5) The occurrence of such a chest in any patient over 18 years of age, suspected of tuberculosis, raises a strong probability of the disease. (6) The chests of growing boys and girls should be systematically measured at stated intervals, and, whenever the index is found distinctly higher than that of the normal for their age, active measures should be taken to remedy the defect. (7) All those sports and exercises which involve wide-swinging use and play of the arm, chest, shoulder group of muscles, such as tree climbing, swinging from ladders, from rings, from bars, ball throwing, spear hurling, tennis, swimming, will tend to correct this defect and flatten the chest down to its proper index. These, in fact, are the influences which have made the human chest-shape and all that is needed to perfect it in the individual is a healthy reversion to the aboreal habits of our prehuman, and the war sports of our savage, ancestors. [F. J. K.]

7.—Cook presents an article **on bloodpressure determinations in general practice,** and describes an accurate method of determining bloodpressure with a hope that it may render such determinations more practical and easier than is possible by any of the forms of apparatus now obtainable. An illustration of this instrument is included in the article. The apparatus consists of 3 essential parts connected by rubber tubing; a manometer, an arm-piece and a bulb with valve attachments. These form a close air system throughout which pressure is everywhere transmitted equally. He promises to report at some later date bloodpressure observations in various states. He points out that at the present time some observers give figures of mean pressure, others of maximum and others of minimum pressure, and that a single absolute standard for bloodpressure nomenclature must be adopted to avoid this difficulty. He favors maximum bloodpressure by the Riva-Rocci principle as a standard. [F. J. K.]

8.—Weinzirl and Magnusson present **further observations on increased bloodcounts due to high altitude.** They have made a number of bloodcounts and have also studied the subject from an experimental viewpoint. They find that increase in the number of red corpuscles due to increase in altitudes is temporary, and that, after a lapse of several weeks, the bloodcounts again become normal. They maintain that the temporary increase is due very largely to the change in the temperature factor and not to the diminished barometric pressure, as is generally held. [F. J. K.]

9.—A case of **brain abscess** is reported by McCaskey and Porter. The abscess was due to latent typhoid infection and was situated in the motor area. The abscess was drained, and the patient did well until the eighth day, when he suddenly complained of feeling very ill, became pallid and had labored respiration and tumultuous heart action. There was no change in the paralysis which followed the operation, nor was there any other evidence of further cerebral involvement. Death ensued, and it is thought that it was due to an acute cardiac lesion very possibly related to the septic process of the brain, probably a septic endocarditis with cardiac atony from toxemia. [J. H. G.]

10.—After discussing **shock** produced by **general anesthesia** with relation to disturbances of the **blood and gastrointestinal tract,** Turck presents the following summary: (1) The complex clinical picture of the after-affects of chloroform or ether anesthesia is made more clear by experimental research, from which we may deduce the following facts: (1) The circulatory disturbance is a direct result of the chloroform or ether acting on the vasomotor centers. (2) The prolonged effect of chlorofrm and ether on the splanchnic circulation results in congestion associated with fall in temperature. Temperature may fall without fall in bloodpressure. (3) The direct effect of the toxins of chloroform and ether acting on cells, with disturbance of metabolism, may produce toxic products. (4) The resulting elaboration of toxins produces symptoms of "autointoxication," associated with the formation of hemolytic and agglutinating bodies, and precipitins. (5) Indirect toxic effects result from retention of toxic products through disturbances of elimination. (6) There is lessened resistance of the bloodserum to normal excreted toxins. (7) There is lessened resistance of the bloodserum to bacterial toxins. (8) There is diminished resistance to the development of saprophytic and pathogenic micro-organisms. (9) This may be partly explained by the changes observed in the serums, such as diminished antiferment properties, hemolysins, agglutinins, precipitins, etc. (10) That reflex effects result, such as reflex irritation set up by the excretion of the anesthetic into the stomach and intestines. (11) As the result of atony there is the formation of toxins in the stomach and intestines through bacterial growths. (12) Atony of the stomach and intestines results in the accumulation of gases and interference with the circulation. (13) There is increased toxicity of the stomach contents in the presence of chloroform and ether. [J. H. G.]

11.—Hubbert discusses **antitoxin and the pharmacopeia,** and makes a plea for the adoption of a test which, in the author's experience, presents the least difficulties. He is in favor of the adoption of Ehrlich's standard unit, but in the practical working out of the scheme he urges the adoption of a standard toxin based on the standard unit, which standard shall be maintained in some laboratory, preferably a government laboratory, and that this standard toxin shall be supplied to all laboratories producing antitoxins, or to any pharmacist desiring it. He holds the view that a more uniform product could be obtained by the adoption of this simple method. [F. J. K.]

12.—Walker reports **a case of alveolar sarcoma** occurring in a man, 31 years of age. The tumor was situated on the right cheek just in front of the ear; it was about 1½ inches in diameter. The tumor was excised, but recurrence followed. The patient was then subjected to the X-rays with the result that a cure followed. The author also presents the results of some experiments with the X-rays on pyogenic germs. From the therapeutic standpoint, he thinks, the X-rays should be given a trial in all cases of malignant disease not amenable to other methods of treatment. [F. J. K.]

13.—Dale discusses **morphine and cocaine intoxications.** He presents facts showing how easily cocaine and opium may be procured, and makes a plea for some united effort of the medical profession to control the indiscriminate sale of these drugs that are so antagonistic to the physical welfare of the community. [F. J. K.]

14.—Warden writes **on the value of auscultatory-resonance and auscultatory-percussion** as aids in the diagnosis of disease of the lungs, heart, liver, stomach and various abdominal disorders. [F. J. K.]

AMERICAN MEDICINE.

May 2, 1903.

1. The Treatment of the Acute Diarrheas of Infancy. JOHN LOVETT MORSE.
2. Some Points Pertaining to the Therapeutic Management of the Uremic State. HEINRICH STERN.
3. A Clinical and Statistical Review of 122 Cases of Albuminuria and 48 Cases of Eclampsia Occurring in the Maternity of the Hospital of the University of Pennsylvania. JOHN COOKE HIRST.
4. Syphilitic Toxemic Hemiplegia. CHARLES W. BURR.
5. An Interesting Complication in the Diagnosis of Gallstone. GUY L. HUNNER.
6. Peritonitis in Typhoid Fever Without Perforation, with a Report of One Case Caused by the Bacillus Typhosus, and Another Simulating Acute Appendicitis. J. L. YATES.

2.—Stern discusses the **therapeutic management of the uremic state.** **Sweating** of the patient is indicated under certain restrictions in every instance of acute uremia, and is especially useful when resorted to early. If sweating is kept up by active measures, enteroclysis with a weak sodium chloride solution, or hypodermoclysis with a hypotonic solution of sodium chloride should be performed at certain intervals. **Venesection** is a measure of transitory value mainly, the most beneficial results are obtained in those cases following acute nephritic conditions, that is in those instances in which the disease is sthenic and in which the blood has not yet attained that degree of admixture and impoverishment which it exhibits during the chronic renal affections. Furthermore, uremic manifestations on the basis of chronic parenchymatous nephritis yield more readily to venesection than those which are due to contracted kidney. Subcutaneous or intravenous introduction of a weak solution of sodium chloride dilutes the blood, produces diuresis and compensates for the amount of blood lost by venesection. The effects are more or less transitory but may continue long enough to bridge over a critical phase of the uremic attack. The minimum amount of the solution to be used should never be less than 125 cc. if injected intravenously, and 250 cc. when administered by hypodermoclysis. Smaller quantities, if at all, produce very limited and rapidly passing effects only. The maximum quantity of decinormal sodium chloride solution which may be administered in the uremic state at one time should not exceed 750 cc. if employed subcutaneously, and should not be more than one-third of this if introduced by infusion. The procedure, however, may be repeated 2, 3 and more times during the 24 hours, especially when it directly precedes phlebotomy or if a considerable amount of blood has been abstracted. As serum conductivity is enhanced by elevation of its temperature, more good will be accomplished if the saline solution when entering the organism exhibits a temperature above normal blood heat. If utilized by hypodermoclysis it should possess a temperature of from 40° to 41° C. at the moment it enters; injected by infusion it may safely be introduced into the vein at a temperature of from 45° to 48° C. Discussing the administration of opium Stern says: While, morphine in small doses is innocuous in uremia of acute renal disease and chronic parenchymatous nephritis, and may possibly be a factor in effecting subsidence of convulsive symptoms, it is not indicated in uremia of chronic interstitial nephritis which presents an entirely different clinical picture, but, being comagenous itself, may aggravate the existing comatose condition and hasten a fatal issue. [T. L. C.]

3.—Hirst presents a **clinical and statistical review of 122 cases of albuminuria and 48 cases of eclampsia** which occurred in the maternity of the Hospital of the University of Pennsylvania. The amount of urine secreted during the attacks was uniformly very small. Two of the women had complete anuria for 24 and 60 hours respectively, another is recorded as having passed 6 drams in 4 days, the largest amount noted was 6 ounces in the 24 hours. **Albumin was invariably present both before and during the attacks. This** is a most important clinical fact. The loose statement has been repeatedly made in text-books and articles on the subject that quite a large proportion of eclamptic patients, some 16%, show no albumin before the onset of convulsions, though it is always present after the attack begins. This is one of the chief arguments of the men who attach such importance to the quantitative estimation of urea, and would have some weight were it true. It is not borne out by clinical evidence. Hirst has knowledge of one such patient suffering from eclampsia who showed no albumin before the occurrence of the convulsions, and her urea percentage was almost 2%. In all cases in this report albumin was present in measurable quantity before the occurrence of convulsions. One woman was passing, the day before her convulsions appeared, 41 ounces of urine which contained a measurable trace of albumin, with a nearly normal percentage of urea; after the first convulsion her urine turned solid on boiling. The presence of albumin in the urine is therefore by far the most reliable indication of renal insufficiency we possess; **the excretion of urea is so variable as to furnish practically no guide to the patient's condition.** [T. L. C.]

4.—Burr reports a case of **syphilitic toxemic hemiplegia.** A young woman, while recovering from a debauch, was seized with headache, became queer and dazed, and on the next day fell unconscious and convulsed, the convulsive movements lasting many hours, the unconsciousness several days. While unsconscious, a slowly oncoming hemiplegia, preceded by dilation of the left pupil, developed; later there were changes in the reflexes, and left-sided ptosis, and consciousness slowly returned; still later the hemiplegia rapidly and completely passed away, the ptosis disappeared, and, finally, two weeks after the onset, she was, barring slight pupillary disturbances, well. Diagnosis was arrived at by exclusion, and recovery followed vigorous antisyphilitic treatment. [T. L. C.]

6.—Yates discusses **peritonitis in typhoid fever without perforation,** with the report of one case caused by the bacillus typhosus and another simulating acute appendicitis. His conclusions are as follows: (1) Nonperforative peritonitis usually results from an extension of inflammation through the bases of deep intestinal ulcers, but may also arise from the migration of bacteria through an intestinal wall which is relatively but slightly abnormal. (2) Meteorism thus predisposes to infection of the peritoneal cavity and, by decreasing the normal peritoneal absorption, furnishes a secondary cause for peritonitis. (3) An hematogenous origin of peritonitis is possible in typhoid fever. (4) Nonperforative peritonitis is commonly caused by the typhoid bacillus, and the resulting inflammation is usually diffuse and often severe. (5) The inception of such a peritonitis is clinically indistinguishable from the so-called signs of perforation, and the symptoms in both are due to peritoneal inflammation. The prognosis is probably equally grave in the 2 forms. (6) There should be appropriate surgical intervention immediately the peritonitis can be recognized. Enterostomy is indicated when there is meteorism with the peritonitis or when it affects the prognosis and is intractable to ordinary therapeutics. (7) Thrombi, and among them those composed of agglutinated red bloodcorpuscles, may lead to hemorrhages into the wall of the intestine, and the resulting changes favor the transmigration of bacteria into the peritoneal cavity. (8) Infarction of the spleen may have a similar thrombotic causation, but simple splenic infarction is probably not a cause of peritonitis. (9) The specific action upon human blood of an agglutinin generated by the typhoid bacillus can be demonstrated *in vitro*. [T. L. C.]

BERLINER KLINISCHE WOCHENSCHRIFT.

March 23, 1903. (40 Jahrgang, No. 12.)

1. The Osmotic Pressure of Human Bile. H. STRAUSS.
2. The Clinical Significance of Calorimetric Investigations. ARTHUR SCHLESSMANN.
3. Therapeutic Results from Paraffin Injections in Surgery. H. ECKSTEIN.
4. Mette's Pepsin Estimation and the Necessity for Modifying it. F. NIRENSTEIN and A. SCHIFF.
5. Remarks upon the Preceding Article. C. A. EWALD.

1.—Strauss reports a number of investigations upon **the osmotic pressure of human bile,** which gave results very much like those obtained from human blood, the freezing point being between —0.54° and —0.58°. Strauss concludes that the bile has the same osmotic pressure as human blood. [M. O.]

2.—Schlessmann who believes that **calorimetric investigations** are of great clinical value, especially in the physiology of assimilation, explains that the technique is not complicated but easy, and that deductions of great physiological significance can be drawn from calorimetric estimation of the feces and urine. The calorimetric relations of the feces to the food ingested, in infants especially, shows whether the digestive apparatus is functionating properly or not. [M. O.]

3.—Will be abstracted when concluded.

4.—After describing the technique of **Mette's method for estimating the quantity of pepsin present in stomach contents,** Nirenstein and Schiff report experiments showing that substances are present in the gastric juice which prevent digestion in spite of the pepsin present. This may also be due to dilution. These substances prevent digestion in cancer, chronic gastric catarrh, hyperacidity and achylia gastrica. They conclude from this that the Mette method should be modified, as it is useless in its original form But when diluted 16 times Mette's test becomes of clinical use. [M. O.]

5.—**Ewald corrects Nirenstein and Schiff, stating that the Mett method,** not Mette's method, **is of practical value** in estimating the quantity of pepsin in the gastric juice, and does not need any modifications. [M. O.]

WIENER KLINISCHE WOCHENSCHRIFT.

March 19, 1903. (XVI. Jahrgang, No. 12.)

1. The Similarity of Human Bovine Tubercle Bacilli and the Immunization of Cattle to Tuberculosis. E. von BEHRING.
2. The Acid Intestinal Dyspepsia of Infants. JAN RACZYNSKI.
3. A Peculiar Form of Lymphatic Tuberculosis. JULIUS STEINHAUS.
4. Statistics Upon Amyloid Degeneration, with Special Reference to Tuberculosis. RUDOLF BLUM.
5. Remarks upon Heredity in Syphilis. KORNEL PREISICH.

1.—Behring's first experiments showed that the **bacilli of tuberculosis of fowls and those of bovine tuberculosis** were of the same species. They then showed that **bovine and human tubercle bacilli also belonged to the same** species. But newborn infants, like young calves, develop intestinal tuberculosis because they have less resistance and are more exposed, from drinking milk. His **experiments on the immunization of calves by the inoculation of a serum prepared from human tubercle bacilli** gave successful results, causing immunity in animals. [M. O.]

2.—After reviewing the literature on **the acid intestinal dyspepsia of nursing infants,** Raczynski reports 7 cases, with analyses of the mother's milk in each case. From detailed observation of 4 other cases he concludes that diseases occur among nursing infants in which the feces contain amounts of fatty acids, causing diarrhea, insomnia, etc. The formation of these acids is not due to the chemical composition of the food. The intestinal dyspepsia is due to the acids the presence of which depends on bacterial vegetation. This increased acidity of the contents of the intestines causes difficult assimilation of fat. The cause of the condition is probably overfeeding. The treatment consists in the administration of calomel, liquor calcis, calcium phosphate, or simple cows' milk, given from time to time. [M. O.]

3.—Steinhaus reports the case of a boy of 14, with a cough for months. The cervical and axillary lymphglands were enlarging, and there was increasing dulness over almost the entire chest. Edema of the lower half of the body followed, and the prominence of the sternum suggested mediastinal tumor, with lymphgland metastases. Death occurred in 2 months. The autopsy showed **a very large mediastinal tumor** which included the thymus gland, with metastases in the liver spleen and lymphglands. Steinhaus believes, from the miscroscopical characteristics of the lesions, that this was **a peculiar form of lymphatic tuberculosis.** Full histological details are given. [M. O.]

4.—Out of 279 cases of **amyloid degeneration** examined, Blum found it **in association with tuberculosis** in 221 cases, 79%. Out of 3,716 autopsies performed on tubercular subjects, only 221 (6%) showed amyloid degeneration. Of these 152 had phthisis; 116 intestinal tuberculosis (103 with phthisis). In 37 cases phthisis existed alone with amyloid degeneration. Out of 283 cases of tuberculosis affecting the bones, 59 only had amyloid degeneration. The spleen, kidneys and liver were most affected. [M. O.]

5.—Preisich agrees with Matenauer's recently published opinions upon **the heredity of syphilis.** He believes that syphilis is one of those infectious diseases which may produce permanent immunity without causing disease symptoms. This is shown by heredity. [M. O.]

ZEITSCHRIFT FUER HEILKUNDE.

January, 1903. (Volume 24, No. 1.)

1. A Very Young Human Embryo. ALFRED FISCHEL.
2. The Changes in the Spinal Cord After Loss of the Extremities. Q. MATHYAS.
3. A Rare Case of Collateral Circulation with Congenital Obliteration of the Aorta. HANS HABERER.
4. Lymphangioma of the Liver. RUDOLF MARESCH.
5. Gumma of the Female Urethra. GEORG LOEWENBACH.

1.—Fischel describes **a fetus** procured from an abortion **at the third month.** Very full histological details are given, with a discussion of the development of the different organs from the embryological standpoint. Especial attention is paid to the lens of the eye. [M. O.]

2.—Mathyas reports **the pathological findings** in 2 patients who died some years **after amputation of the extremities.** Changes were found in the lumbar segments of the cord after amputation of the lower extremity; in the cervical cord after amputation of the upper extremity. Ascending degeneration was noted in the column of Goll, with marked atrophy. There was also degeneration of the column of Burdach in the second case. Histological details are given. [M. O.]

3.—Haberer reports a rare case of **the establishment of collateral circulation with congenital obliteration of the aorta,** found in a woman of 47, the mother of 7 children. She had transverse myelitis for 3 months before death. The autopsy showed congenital obliteration of the aorta between the origin of the left subclavian artery and the ductus Botalli, aortic insufficiency and stenosis, intermeningeal hemorrhage and chronic spinal meningitis, bilateral pneumonia and sepsis. The internal mammary, superior epigastric and anterior spinal arteries and their branches were greatly enlarged, as they furnished the collateral circulation. The dilatation of the anterior spinal artery caused pressure on the cord and softening. [M. O.]

4.—Maresch reports a case of **lymphangioma of the liver** in a child of 5, diagnosed a right-sided ovarian cyst. Examination, at operation, disclosed a pedicle leading to the right lobe of the liver. There was great hemorrhage during operation. The child rapidly recovered. An histological description of the tumor is given, with a review of the literature. [M. O.]

5.—Will be abstracted when concluded.

JOURNAL DES PRATICIENS.

March 14, 1903. (17me. Année, No. 11.)

1. Loss of Flesh with Hyperchlorhydria. G. LINOSSIER.
2. Sodium Chloride and Calcium Chloride Internally in Scrofula. LIEGEOSIS.
3. An Abnormal Form of Cervical Adenitis. LE DENTU.
4. Pneumonia in Children. MERY.
5. Appendicitis Following Parturition. DARQUIER.

1. Many **patients with hyperchlorhydria** show a **tendency to lose flesh** in spite of abundant good food, because assimilation is incomplete, and disassimilation is exaggerated. There is a great excess of elimination over the food ingested, which explains the progressive thinning noted. Assimilation must be improved by alkalis, bismuth, etc., and disassimilation reduced by warm water, rest after meals, warm applications, etc. [M. O.]

2.—**Sodium chloride** is used **internally** to stimulate salivary and digestive secretions. It is best given in **scrofula**, with calcium phosphate and carbonate. **Calcium chloride** acts in much the same way. Both remedies should be given over long periods of time. [M. O.]

3.—Le Dentu reports a case of **subclavicular swelling**, on the right side, just above the sternocleidomastoid muscle, about the size of an orange. This was supposed to be a cancerous goiter, especially as the voice was affected. Examination showed **laryngeal cancer**. Then Le Dentu diagnosed the swelling as **cervical adenitis, secondary to this tumor**, and not cancer of the thyroid gland. Operation was performed, tracheotomy with removal of the enlarged gland, confirming the diagnosis. The prognosis was unfavorable. [M. O.]

4.—Méry showed a case of **croupous pneumonia in a child of 5**, and discussed the treatment. He uses moist applications, sedatives and nasal antiseptics. The prognosis is good. [M. O.]

5.—Darquier reports a case of **appendicitis** in a woman of 36, **occurring the night after delivery**. The treatment consisted in the administration of opium and ice, with rest. The abscess opened into the vagina, and recovery followed. [M. O.]

March 21, 1903. (17me. Année, No. 12.)

1. False Conjunctivitis. A. TERSON.
2. Antityphoid Serum. C. FIESSINGER.
3. Accidents Due to Occupation. MAUCLAIRE.
4. Plastic Linitis. CHAUFFARD.

1.—**Simple hyperemia of the conjunctiva is frequently mistaken for conjunctivitis**, the treatment of the latter decidedly aggravating the former condition. Therefore, caustic local applications should not be employed until the diagnosis is certain. In these cases constitutional treatment, diet, hygiene, bathing, massage, etc., are of value. Acute edema of the bulbar conjunctiva occurs rarely; but conjunctival hyperemia is common in insane patients. [M. O.]

2.—Fiessinger reviews the cases of **typhoid fever treated with the Chantemesse antityphoid serum**, 300 cases altogether, in hospitals, with excellent results. Perforation occurred but 5 times among 230 patients. Two of the 5 recovered after operation. His mortality was only 9%. The serum injection should be given early, as soon as the disease is suspected. Baths and other symptomatic treatment are continued also. [M. O.]

3.—Mauclaire discusses the **French law making it necessary for a physician seeing accident cases to give a certificate within 48 hours after the accident, telling the probable results of the accident**. This is an exceedingly difficult problem. Various conditions following accidents due to occupation are described. Traumatism seems to be a possible cause of almost any condition. [M. O.]

4.—Chauffard reports the case-history of a woman of 38, with pains in the epigastrium, vomiting and the loss of 50 pounds. A tumor was found just above the umbilicus, but was evidently not pyloric. There were some signs suspicious of cancer. Operation showed plastic linitis, and much of the stomach wall was removed. This probably is carcinomatous in nature. The treatment is always surgical. [M. O.]

Special Article.

MEDICAL EDUCATION IN THE UNITED STATES.

PRESIDENT'S ADDRESS, DELIVERED AT THE FIFTY-FOURTH ANNUAL SESSION OF THE AMERICAN MEDICAL ASSOCIATION, AT NEW ORLEANS, MAY 5-8, 1903.

By FRANK BILLINGS, M. S., M. D.,
of Chicago.

One of the chief objects of the organization of the American Medical Association was the elevation of the standard of medical education in the United States. In the president's address, the Father of the Association, Dr. N. S. Davis, stated that "the purpose of the organization was the improvement of our system of medical education and the direct advancement of medical science and practice."[1] That medical education in that day was defective, as recognized by the founders of the Association, is shown by the report of the Committee on Medical Education in the year 1850. The committee said, in part, as follows: "Medical education is defective because there are too many medical schools; the teachers are too few. There are too many students. The quantity of medicine taught is too limited; the quality too superficial, and the mode of bestowal of the honors of medicine too profuse and too unrestricted."

For many years the Association showed its interest in and attempted to influence the elevation of the standard of medical education through a committee on medical education. The Transactions of the Association of the earlier years show many reports of this committee, which display much thought and effort on the part of the Association to improve the status of medical education at that period of time, James R. Wood, as chairman of the committee, in the year 1858, recommended that the various medical colleges of America be requested to send delegates to a convention of medical colleges, to consider the matter of medical education. This movement finally resulted in the formation of the Association of American Medical Colleges, which thereafter represented, to a degree at least, the American Medical Association in its efforts to improve medical education. Later, the Southern Medical College Association was formed. Together these associations represent about 80 per cent. of the regular medical schools of the country, and these colleges have, in a general way at least, fulfilled the minimum requirements prescribed by the rules of the association in regard to the preliminary education of students, the length of the college course, and the character of the curriculum.

About twenty-five years ago the Illinois State Board of Health, through the splendid efforts of Dr. J. H. Rauch, its secretary, made a report of the number and character of the medical schools of the country. This board adopted a minimum of requirements of medical schools as a necessary step toward the recognition of their diplomas by the State Board of Health of Illinois. This minimum requirement of the State Board of Health was gradually increased from time to time, with the result that many of the medical schools were obliged to raise the standard of medical education to enable their graduates to obtain licenses to practise in Illinois. Other states followed Illinois in requirements for better methods of medical education, with the result that the standard of education in the country was very much improved.

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[1] Transactions A. M. A., Vol. XVI, 1865.

Medical Schools of the Country.

In the earlier days of our country, the need of physicians was met by the organization of medical schools which were, as a rule, proprietary in character. These schools attempted the education of physicians on the then existing conditions of medicine by teaching in a didatic way the principles and theories of medicine and surgery. The branches usually taught at that time consisted of anatomy, physiology, chemistry, materia medica, obstetrics, the practice of medicine and of surgery. But little opportunity was offered in the great majority of the schools for extensive, practical teaching in anatomy or chemistry, and but a moderate amount of clinical work in the so-called practical chairs. The course of medicine in the college consisted of two annual sessions of four or five months. The course was not graded. The student attended all the lectures and clinics taught during his first year, and the second year was a repetition of the first. This class of schools was rapidly increased in the course of time. The chief reason therefor was the fact that it was recognized that a connection with a medical school was profitable, directly and indirectly. The prestige which the teacher enjoyed among the graduates and the laity brought him a remunerative consultation and private practice. In most of the states it was easy to incorporate and obtain a charter for a medical college. It cost comparatively little to conduct and maintain the institution. Lecture rooms were obtained at trifling cost. The dissecting room was not worthy of the name of a laboratory, and the chief expense in maintaining it was the cost of dissecting material, which was usually deficient in quantity and poor in quality. Medical schools were organized all over the country, without reference to the needs of the people. Medical education was prostituted. To obtain a sufficient number of students many institutions showed a most degraded disregard of the moral and mental qualifications of the matriculates. The income of the school was wholly derived from the tuition of students, and no applicant was turned away who had the cash with which to pay his way. To add to the facility of obtaining a medical college course, there were organized in some cities evening schools, the hours of college attendance occurring from 7 to 9 or 10 o'clock at night. These sundown institutions enabled the clerk, the street-car conductor, the janitor and others employed during the day to obtain a medical degree.

In spite of the general tendency to increase the facility by which a medical degree could be obtained, there was a force at work to improve the methods of medical education. A few older medical colleges and an occasional new one set the standard high in relation to the existing status of medicine. There were earnest, forceful, medical men in some of the schools who fought for a higher standard for matriculation and graduation.

The medical college associations exerted a splendid moral influence for good, and the state boards in all the more advanced states have, by mandatory legislation, compelled the colleges to raise the requirements in reference to the preliminary education, the length of the annual session, the time of medical college study, the character of the curriculum, etc. As a result, the status of medical college education has been very much improved in the last twenty, and chiefly in the last ten years. But, improved as it is, there are evils which menace us, the chief of which still are too many medical schools, too many students, and inadequate facilities for the proper teaching of medicine.

The improvement in medical college requirements has increased the cost of the maintenance of the medical college to a degree that it is no longer a profitable financial venture. There can be no dividends. Indeed, the proprietors of the private institution must often make up a deficiency in the annual budget. In spite of this fact, medical colleges have continued to increase steadily.

In 1867 there were sixty-five medical schools in the United States. In 1882 this number had increased to 89, and 1901-2 to 156. The enrolment of students and the number of graduates have also increased, in spite of the fact that the requirements for matriculation and graduation have been increased. In 1882 there were[2] 14,934 matriculates, and this number was increased in 1901 to 26,417, and in 1902 to 27,501, an increase of about 100 per cent. in twenty years.

The number of graduates in 1882 was 4,115; in 1901, 5,444; in 1902, 5,002, an increase of about 25 per cent. in twenty years. If, in 1850, there were too many medical schools and too many students, what can we say of the condition to-day?

It has been estimated that there is an average of one physician to 600 of the population of the United States at the present time. The natural increase in the population of the country, and the deaths in the ranks of the profession, make room each year for about 3,000 physicians, based on the proportion of one physician to 600 of the population. With 5,000 or more graduates each year, a surplus of 2,000 physicians is thrown on the profession, overcrowding it, and steadily reducing the opportunities of those already in the profession to acquire a livelihood. The evil of an overcrowded profession is a sufficient cause of complaint, but the cause thereof is the important point for us to consider and, if possible, remove. To correct the evil, the ease and facility with which a medical degree may be secured in this country must be diminished. As before stated, there are now 156 medical schools in this country. Of these, 30 are sectarian, and 126 are so-called regular schools. Fifty-eight are medical departments of universities, of which 24 are state institutions. The relation of the medical school to the university in most instances is a nominal one only. In but few of them is the control of the faculty, or the finances of the medical department, vested in the university proper. In a very few of them the sciences fundamental to medicine are taught in the university. In the majority of these schools these departments are duplicated in the medical department, and are taught by members of the medical faculty. In most instances, too, the teachers of the fundamental branches are physicians who devote but a part of their time to teaching. They teach without salary, or for a nominal one only. Their remuneration is obtained by private practice, to which they must devote their best energies, to the detriment of their value as teachers. The clinical department of these schools is, in most instances, wholly inadequate. The majority of such schools depend on the general hospitals situated near them for the privilege of the use of clinical material. Necessarily, these clinical advantages have great limitations, inasmuch as they cannot be fully controlled for the purpose of proper bedside teaching, or for scientific investigation. Some of the medical schools which are connected with state universities are situated in small cities in which it is impossible to command an adequate amount or variety of clinical material. The connection with a university, which many of the schools enjoy, is, therefore, almost valueless in a pedagogic sense. The majority do not differ materially from the private or proprietary schools in their value as teaching institutions. Ninety-eight of the medical schools in the country are private corporations, organized, maintained and, as a rule, owned by the faculty. If, in earlier years, these institutions were sources of direct financial profit to the owners, they have ceased to be so now—at least most of them. The evolution of medicine has made it necessary to extend the laboratory method of teaching. As these schools attempt to teach the whole curriculum, the erection, equipment and maintenance of the necessary laboratories have so increased the cost of conducting the schools that they are usually no longer self-supporting. The temptation is in such schools to conduct them on a plane which shall just comply with the minimum requirements of the various state bodies, which regulate medical practice in the several states. They are maintained ostensibly to teach medicine, but in reality for the prestige which a professorship affords the teacher in his private and consultation practice. Proprietary schools depend on general hospitals and dispensaries for clinical material. What was said of the status of clinical teaching of the medical departments of the universities is true also of the proprietary college. These schools cannot hope to improve their present standards. The majority attempt to maintain laboratories and other expensive means of teaching which a modern medical education demands. But in how many are the laboratories worthy of the name? What kind and variety of instruments and apparatus do they afford? Are their teachers of the sciences of the fundamentals of medicine capable? They cannot hope for better conditions, because the time when a student's tuition will pay the school for his instruction, if he is properly taught, will never return. Medical education of the future must be based on the status of medical science. That basis is recognized now, but is attempted in the great majority of our medical institutions in a very superficial way.

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[2] The Journal A. M. A., vol. XXXIX, No. 10, p. 574.

Scientific Medicine.

The great and important discoveries of Pasteur and the practical methods devised by Koch in bacteriology marked a new era in medicine. Before the facts made clear by these discoveries, the hypotheses and theories of other days have disappeared. Our knowledge of man and the lower animals and of the diseases and evils which afflict them has been revolutionized within the last twenty years. The advance in medical knowledge has been greater in that period than in all preceding time. Medicine now embraces many more subjects, chiefly fundamental ones, than were known twenty years ago. Formerly a very superficial knowledge of a few isolated facts in general chemistry and human physiology and a memorized knowledge of human anatomy and of materia medica enabled the student to learn the practice of the art of medicine and surgery. Now, the problems which confront the clinician and investigator in medicine and surgery compel him to have a good and working knowledge of general, physical and physiological chemistry, of general biology, bacteriology, pathology, physiology, embryology, pharmacology, histology and anatomy. The physician who has not a practical knowledge of these fundamental subjects cannot clearly understand the methods of others engaged in scientific investigation, nor can he rationally utilize the discoveries of others in his work. Medicine to-day is applied science. If we utilize the knowledge of to-day in an attempt to cure and prevent disease, it must also be an experimental science. No one can practically apply or rationally experiment with what he does not know. The fundamental studies of medicine must, therefore, be acquired by all who desire to apply them successfully as sciences. The successful experimental application of these sciences has given us within ten years a knowledge of the method by which the invading bacteria affect the host, and has likewise developed a principle of wide application as a preventive and cure of certain diseases by the use of antitoxic serums. It has confirmed the principle of preventive inoculation, accidentally discovered by Jenner, and has enabled us to apply the principle in other diseases than smallpox. It has enabled us to know the methods of transmission of certain infectious diseases, and to know how to stamp out scourges like yellow fever, the plague and malaria.

Through the evolution of Listerism it has enabled the surgeon to invade every region of the animal body, and to save scores of lives formerly doomed to death. The freedom with which the surgeon may now operate has not only saved lives, but, indirectly, the knowledge of disease processes so studied during life has taught us many new facts in symptomatology, and has cleared away many fallacies concerning pathological processes. It has given us many new methods of clinical study, and furnished data from the blood, the spinal fluid, the exudates, the sputa, the sweat, the feces and urine, which enable us to recognize disease much more readily than before.

Much as has been accomplished by experimental medicine in a comparatively brief period of time, there are vast fields to which the method has not been applied. With most of us, our present methods of clinical observation enable us to do little more than name the disease. In the vast majority of the infectious diseases we are helpless to apply a specific cure. Drugs, with the exception of quinine in malaria and mercury in syphilis, are valueless as cures. The prevention and cure of most of the infectious diseases is a problem which scientific medicine must solve. What is true of the infectious diseases is also true of the affliction of mankind due to chemical influences within the body. We know but little of diabetes, of the primary blood diseases, or of the various degenerative processes of age and disease. We hopefully look to chemistry to reveal to us the cause of these and other conditions. Experimental medicine must be the means of removing the ignorance which still embraces so many of the maladies which afflict mankind. Not every student, nor every physician, can become an experimenter in applied medicine. Nevertheless, every physician must be so educated that he may intelligently apply the knowledge furnished him by experimental medicine in the cure of such diseases as can be cured. He will no longer juggle with the life of his patient by an attempt to cure with drugs or otherwise, when no help is possible.

Methods of Medical Education.

The phenomenal evolution of medicine has multiplied the subjects of medical study. The character of these sciences requires that they shall be taught by the laboratory method. The laboratory method, too, has been adopted as the chief method of instruction in anatomy, pharmacology and chemistry, formerly almost wholly taught in medical schools by didactic lectures. The laboratory method, while necessary to the proper and practical instruction of the student, involves an expense which is appalling when compared with the methods of teaching formerly practised in all schools, and still adhered to in many medical schools. The method is expensive, inasmuch as it involves more extensive buildings, much expensive apparatus and an increase of the teaching force. The instruction must be individual or to small groups of laboratory workers, and this involves also an extension of the time of instruction. A physician engaged in private practice cannot possess and retain the general and technical knowledge necessary to enable him to teach one of the fundamental sciences properly, nor can he devote an adequate amount of time to it. The teachers of these fundamentals must be investigators in the province of their respective sciences. They must give their whole time to the instruction of students and to original investigation. The thoroughness and accuracy of the training of the special senses, and in experimenting, which a student will receive from such teachers in properly equipped laboratories, will make him keen in intellect and sound in judgment. His desire for knowledge will be stimulated by the atmosphere of his surroundings, and will awaken in him a consciousness that through him and his work the knowledge of the world will be increased and humanity benefited thereby. But teachers of this character must be paid salaries quite as large as the remuneration of professors in the departments of arts, literature and science. The salaries of such professors and of the corps of assistants which the laboratory method implies make the cost of the university or college far beyond the income which could be derived from the tuition of students. I believe it has been estimated that the laboratory method of instruction, now followed by all first-class institutions of learning, costs annually from $400 to $500 per student. But, great as the cost seems, it must be conceded that the present status of medicine demands the thorough instruction of students in these fundamental studies. It matters not whether his future may be that of a teacher or a practitioner of medicine. In either event, he must apply his knowledge of the fundamental sciences to his work, and the result will depend on the thoroughness of his education.

Applied Medicine and Surgery.

To enable the student to utilize the knowledge of a thorough training in anatomy, physiology, chemistry, pharmacology, physiological and physical chemistry, embryology, neurology and pathology, he should be afforded facilities of equal rank in clinical medicine and surgery. To supply the student with proper clinical facilities involves several important features. Special hospitals, which would be absolutely under the control of the medical school, would be necessary. The hospital should be constructed with a definite idea of teaching students and of making researches into the nature, causes and treatment of disease, as well as to care for a definite number of patients. Hospitals for general medicine, surgery and obstetrics would be essential. Such hospitals, with laboratories and equipped with instruments, apparatus and library, would cost for their buliding and maintenance a very large sum of money. With such hospitals it would be necessary to choose the professors of medicine, of surgery and of obstetrics, with competent assistants, of the same type as the teacher of the fundamental sciences. They should give their whole time to the work of teaching and to original research in the hospital. They should be men who have proved their scientific fitness for the important positions, by the contributions they have made to medical knowledge. They should rank with and receive the pay given to professors of important departments in arts, philosophy and science. When so paid, they would be free to expend all their energy in teaching, and in experimental medicine —a career which would enable one to be of the greatest possible service to mankind. No life's work could be fuller of a greater self-satisfaction, and surely none would be more honorable. From these teachers and investigators the student would obtain instruction of the same systematic methods of accurate observation and investigation which were employed in the fundamental branches. He would receive thorough, conscientious drill in the fundamental methods of examination of patients, and his knowledge of the fundamental sciences would be constantly applied in this work. The trained clinical teachers would direct the student in thorough, careful observation in the wards and at the operating table, would collect data to be submitted to experimental tests, and would conscientiously carry out the experiments in the laboratories of the hospital.

The brilliant discoveries which have made our knowledge of the cause and means of transmission of many of the infectious diseases have been chiefly due to the introduction of the experimental method of investigation. Teachers and investigators of the type mentioned will have the opportunity to make equally important discoveries in the broad field of the unknown in medicine. They will train students in the methods of research work and constantly increase the number of investigators in the domain of medicine. And there is need for such men. We may give the great practitioners who have taught clinical medicine their due meed of credit for their excellent, painstaking, unselfish efforts as teachers. They have added to the sum total of our clinical data; have utilized the knowledge of the pathologist and the physiologist in diagnosis, and have tested and judged the worth of therapeutic aids in the treatment of disease. But as teachers they have not made students investigators or experimenters. Not one of the recent great discoveries in medicine has been made by such a man. He has used as clinical material hundreds of cases of pneumonia, rheumatic fever, tuberculosis and chronic diseases by the score; his experience has taught him to recognize these diseases, even when the clinical manifestations are obscure, but he is no more successful than when he began to practise, in saving the life of the patient with pneumonia, in preventing endocarditis in rheumatism, in curing tuberculosis, or in checking the advance of a chronic hepatitis. It is time, therefore, that the clinical teacher should have the knowledge necessary to carry on experimental investigation, with hospital facilities for the work, that the profession may become purged of the shame of helplessness in curing so many of the common diseases of mankind.

The patients who will be received in these hospitals will be fortunate. They will receive the most painstaking examination and study, and the experiments made on animals in the laboratory will benefit the patients directly, inasmuch as more rational therapeutic measures will be applied in cases so investigated. In addition to the clinical teachers, who will devote all their time to teaching and research work in the special hospitals, there will be quite as much work for the clinical teacher, who is in private practice, in the general hospitals. Under his direction the student may himself investigate a hospital or ambulatory case, and undertake the care of the patient. His rich and varied experience in hospital and private practice will enable him to round out the student's college education. He will impart to the student a better idea of medicine as a whole. He will co-ordinate and arrange the isolated facts of clinical and laboratory investigation, and give them their true and relative value. He will teach the student the art of medicine; he will teach him that human sympathy and encouragement of the sick and dying are a part of his duty as a physician.

It would be most practical to make the clinical work of the third year a clinical drill and experimental course, given in the special hospitals, and assign the students of the fourth year to the general hospitals and to the clinical teachers who are in private practice. All the general hospitals and dispensaries controlled by the medical schools could be utilized in the fourth year for this purpose, and afford the student an abundance of clinical material and the benefit of the experience of many clinical teachers. Many of the assistants in the special hospitals, of the third year course, would doubtless engage ultimately in private practice, and would, because of their scientific attainments, make excellent clinical teachers in the fourth year. A medical school conducted on the high plane advocated must necessarily be under the control of a university. Such a medical school would cost an enormous amount of money, and this can be commanded only by the trustees of a university of the highest order. That the money for the purpose of establishing and maintaining university medical schools with research hospitals and university clinical courses will be forthcoming cannot be doubted. The world is awake to the great discoveries recently made in medicine. The wealthy men of this country have had their interest aroused as never before in reference to the possibilities and benefits which medical investigation will give to mankind. They now recognize that they and all posterity will be benefited by every new fact discovered in medicine, and that physicians thoroughly and scientifically trained are necessary to conserve the health of the people.

Three years ago Prof. W. W. Keen, in his address as President, deplored the fact that medical schools received relatively little aid in the form of endowments as compared with universities and colleges of philosophy, art and theology. Since that time several millions of dollars have been given for medical education and scientific research. The signs of the times point to a brighter future of medicine in America.

Education Preliminary to Medical Study.

The subject of the educational requirements for matriculation in medical schools has been discussed at many meetings of this Association in its earlier years, and later by the college associations, by the American Academy of Medicine and by the various state boards of health.

The requirements were at first lamentably low, and the efforts of the Committee on Education of the American Medical Association and of the college associations had but little effect, because they possessed no legal power to control the schools.

The influence of the various boards of health of several states, notably Illinois, was more marked, inasmuch as these state boards possessed a mandatory power. The colleges were forced to adopt the minimum educational requirements of the state boards of health if their diplomas were to be recognized by the respective state boards.

These moral and legal influences to improve the preliminary requirements were almost nullified by the practice of a majority of the medical schools in admitting students whose educational status was examined into and judged by a committee of the college faculty.

This practice is still followed by a majority of the medical schools, and results in the admission of many students who are unable to fulfil the prescribed requirements. As a subterfuge, students are often matriculated conditioned in one or even several subjects. Then the student and the faculty committee forget all about the subject, and the student completes his course, goes into practice, and dies with the conditions still undischarged.

The present requirements of the college associations and of the various state medical examining boards and state boards of health amount, on the average, to a high-school education. The curricula and length of course of the high-school of the different states, and even in the same state, differ very substantially. However, if the medical schools now in existence would honestly require as a minimum education the diploma of a high-school, without regard to the rank, it would be a marked advance over the present requirements as practised by most schools.

We must admit, too, that there are medical schools of such a low educational grade that they have no right to demand of their matriculates as much even as a common school education. This fact that low-grade medical colleges exist is one of the most satisfactory explanations of the difficulty encountered in elevating the standard of preliminary requirements.

To get at the root of the matter, the medical college must be brought up to the proper educational standard, and then, and then only, can be made a proper preliminary educational requirement.

University Medical College.

The present status of medical science requires and demands a university medical college course. By university medical college is meant a medical school which is directly connected with, and a part of, a university; the university fixing the requirements and controlling the admission of students to the medical department. The method of teaching both the fundamental and the clinical branches is on the principles outlined above. Properly to prepare for such a course, the student should have, as a minimum preparation, at least two years of study in a good college or university. The requirements to enter a good college or university would insure a sufficient knowledge of the ordinary school branches and also Latin and Greek. During the two years' course in college his time would be well spent in the study of English, French, German, mathematics, history, philosophy, physics, chemistry, general and organic, and qualitative analysis, comparative anatomy and general biology. The amount of time to be devoted to each of these subjects would be the same as that of students of general science, as arranged in all college curricula, with the exception of a much more thorough course in chemistry, biology, physics and comparative anatomy.

So prepared the medical matriculate would be able to grasp all the intricacies of the subjects of the fundamental branches of medicine. With the addition of the full medical college course, as outlined above, his education would be equal in culture to that of the graduate in arts and philosophy. At the same time, it would be practical and especially fit him for his work as scientific investigator or practitioner, or for both.

With the medical profession so educated, a physician would be, in truth, a member of a learned profession. From an educational point of view he would rank as an equal with the scholar in philosophy, law and theology. As a man he would be recognized as the greatest benefactor of mankind.

With the establishment of university medical schools the first two years of work in the medical school will consist of courses in pure science. Then, doubtless, all universities will adopt the plan which two or three universities have already put in practice. That is, that the student who completes the two first years of the science course of a university, or at a college of good standing, may enter the sophomore year of the university and take the first two years' work in medicine, as the sophomore and senior years of the bachelor's course, when he would receive the degree of S. B. The student who completes the three years of the arts or philosophy course at a university, during which he should take a large amount of work in physics, chemistry and biology, could then enter the medical college and after two years receive the degree of A. B. or Ph. B. After two years spent in the clinical school he would receive the degree of M. D.

This telescoping of the literary and medical courses affords the advantage of an economy of time, while it does not in any way lessen the value of the result to the student. In the one case the student secures the degrees of S. B. and M. D. after about six years of study, and in the other the degrees of A. B. or Ph. B., and the degree of M. D. at the end of seven years' study.

The Outlook of Medical Education in the United States.

Medical education must advance to its proper level if it complies with the present status of the medical sciences and the demands which continued evolution in medicine promises.

What does this imply? It means that the private—the proprietary medical school which is conducted for commercial reasons—must go. Acknowledge, as we must, the great value which the best of these schools have been to the profession and to the country, all such schools have lived past the time when they can be of value. The continuation of these institutions henceforth will be harmful. They cannot command the money to build, equip and maintain the laboratories and hospitals which a proper and adequate medical education demands. In the past their graduates have furnished the many great and influential medical and surgical clinicians of this country. In former days a graduate poorly prepared has been able, by indefatigable labor and postgraduate work, to place himself in the front rank as a clinical physician and surgeon.

To-day medical science demands primary instruction to fit a man as an investigator and scientific physician. If not properly educated he cannot grasp the great problems which medicine presents to-day as he did the more simple facts which comprised the art of medicine and surgery a few years ago. In the future medicine must be taught in the large universities of the country and in the state universities which are situated in or near large cities, where an abundance of clinical material may be commanded.

The state university and the college which desires to teach medicine, and is so situated that it cannot command clinical material, should confine itself to teaching the sciences fundamental to medicine. These should be taught as pure sciences, and should be included in the course for the degree of S. B. A college or state university ambitious to teach the medical sciences can do so without great cost. To attempt to teach applied medicine without proper and adequate hospitals, and with an insufficient number of patients, would be irrational, nor can they command the necessary funds with which to do it. From such colleges and state universities the students could go to the larger institutions which are able to furnish the proper facilities for teaching applied medicine and surgery.

The general hospitals of many of the cities, now used by proprietary schools, could be utilized as clinical schools for both undergraduate and postgraduate teaching, conducted by the clinical teachers in the existing proprietary schools. Indeed, these hospitals could be utilized as university extension clinical courses. Necessarily they would have to be under the control and direction of a university medical school.

How many schools may be necessary to educate the number of doctors of medicine required annually in the United States? The question one cannot answer, but it is safe to say that 2500 graduates annually will fully supply the demand. This would imply about 10,000 to 12,000 matriculates. A minimum number of twenty-five and a maximum number of thirty-five medical schools offer sufficient facilities to educate 10,000 students. The various state universities and the colleges which offer adequate science courses would educate a great number of students in the fundamental branches, or in the first two years of the medical course.

Medical Reciprocity Between the States of the Union.

The low requirements of some medical colleges, and the want of uniformity in the requirements for a license to practise in the different states, have resulted in a condition which entails much hardship on a physician who desires to remove from one and to engage in practice in another state. The rules of most state boards of medical examination and of health are so stringent that a physician or surgeon of years of experience and of acknowledged skill and education, and the specialist, who may be renowned in his field of work, are obliged, like the recent graduate, to take an examination in all of the branches of medicine and surgery in order to secure a license to practise in the state of his adoption.

To correct this evil it has been suggested by a member of the American Medical Association, and concurred in by others, that a national board of medical examiners be organized; that the board hold examinations at different seasons of the year in the various large cities, and that the diploma so obtained shall be recognized as a license to practise in any one or all of the states and territories. The measure suggested seems to be practical and feasible.

In addition to this plan, it remains to be said that the degree granted by the future university medical school will be undoubtedly recognized as an evidence of fitness to practise in any state in the Union. When we shall have a less number of schools and annual graduates, the various states may safely and rationally become more liberal and discriminating in the conduct of their office.

The Influence of the American Medical Asosciation.

The American Medical Association should maintain its interest in the elevation of the standard of medical education, one of the chief reasons of its organization. Its influence in former years was principally moral. This was of considerable value, for the reason chiefly of the high ideals of the founders and first members of the Association, who advocated and fought for a higher standard of medical education. In the future its influence should be many fold that of the past, for, with the reorganization of the profession, the better methods of conducting its affairs, the increased and probably very large membership, and its great medical journal, should wield a great influence for good.

As the direct agent by which the American Medical Association may exert its influence in the elevation and control of medical education, the Committee on Medical Colleges and Medical Education should be made permanent and should be given adequate power and sufficient annual appropriation to make its work effective.

This Association should, therefore, stand for, and should use its whole power to improve, medical education in this country. It is said that we never exceed our ideals in practice, and that if we lower our ideals our conduct sinks to the lower level.

The American Medical Association should take as its ideal and standard of medical education the university medical college, with all the name implies in regard to the fundamental medical sciences, and to the clinical branches. It should use its influence to drive out of existence those proprietary medical schools which are conducted solely as money-making institutions. These measures cannot be accomplished at once; but medical science demands it, the profession demands it, the people demand it, and look to the American Medical Association as the chief influence which shall accomplish this end.

RUSSKY VRATCH.

January 25, 1903. (Vol. 11, No. 4.)

1. On the Teaching of Anatomy. V. N. TONKOFF.
2. The Psychological Conditions of Development of Hypnosis. PH. E. RIBAKOFF.
3. On Thermotaxis of the White Bloodcorpuscles. M. E. MENDELSON.
4. Further Observations on the Soluble Silver. A. I. DVORETZKY.
5. The Medical Report of the St. Petersburg City Maternity Hospitals for 1901. E. L. PUSCHKINA.

2.—Will be abstracted when concluded.

3.—Mendelson conceived the idea that, in addition to chemotaxis, there are, perhaps, other forces which attract the leukocytes. Observations along that line led him to the conclusion that **heat has a certain power of attracting these cells**, and experiments seem to have verified this view. He promises a detailed account of the experiments and the methods employed. In this preliminary report he advances the following conclusions: (1) The white bloodcells possess thermotactic properties, owing to which they are attracted, within certain limits, to higher temperatures. Consequently, they are endowed with positive thermotaxis. (2) Positive thermotaxis becomes manifested in the leukocytes, although to a very slight extent, already at a temperature of 20-25° C.; it becomes more apparent at 25° and reaches the highest degree at 36°-39°, the optimum being between 39° and 39.5° C. (3) No thermotaxis was observed at temperatures above 40° C. Sometimes a slight attraction was observed toward lower temperatures, but the movement of the leukocytes was so slight that there is no reason to believe that a negative thermotaxis exists. The author attaches great importance to this observation, believing that both chemo- and thermotaxis operate in the attraction of the leukocytes to inflamed areas. Which of these 2 forces is primary and predominant will be determined by further experiments.

4.—Will be abstracted when concluded.

5.—Will be abstracted when concluded.

Original Articles.

REPORT OF A CASE OF SUTURING THE OMENTUM TO THE ABDOMINAL WALL (TALMA) FOR THE RELIEF OF ASCITES DUE TO CIRRHOSIS OF THE LIVER, TWENTY-ONE MONTHS AFTER OPERATION.*

By THOMAS R. NEILSON, M. D.,
of Philadelphia.

Surgeon to the Episcopal Hospital and to St. Christopher's Hospital for Children; Clinical Assistant Professor of Genito-Urinary Diseases in the University of Pennsylvania.

The case I desire to put on record in this communication came under my care as a private patient at the Episcopal Hospital, in June, 1901, having been transferred to me for operation by my friend, and then colleague, Dr. D. D. Stewart. I candidly admit that, both because I was not especially favorably impressed with the results, as they appealed to me at that time, of the Talma operation for the relief of ascites due to cirrhosis of the liver, and because of the rather rapid course of the case, I entertained grave doubts as to the prospect of any benefit to the patient from operation, and was reluctant in consenting to do it.

I desire to express my obligation to Dr. F. W. Sinkler, who was my resident at the time of operation, for his care in observing and noting the condition of the patient while he was in the hospital and for some time after his discharge.

The patient, Mr. G., a large-framed man, fifty-one years of age, was admitted to the hospital, under Dr. Stewart's care, on May 25, 1901. For some ten years he had been in the habit of taking freely of alcoholic drinks. There was nothing else in his history in any way connected with the development of cirrhosis of the liver. Until April 1, 1901, he had had good health, but at that time he was taken ill, suffering from weakness of the back and legs, inability to stand and severe lumbar pains, and he was obliged to take to his bed. Marked jaundice appeared, and ascites gradually developed, accompanied with edema of the feet, legs and scrotum. There were hematemesis and epistaxis on several occasions. The urine contained bile. The patient was under the care of two physicians before coming to the hospital, and was twice tapped, first on April 29, four weeks after the beginning of his illness, when 1¼ bucketfuls of fluid were removed, and again on May 23, the amount then obtained not being stated. Paracentesis was done a third time at the hospital, June 6, when 2¾ gallons of clear, straw-colored fluid were removed. No improvement followed this, and, the fluid rapidly reaccumulating, Dr. Stewart transferred the patient to me for operation on June 16. For two days before that the patient was delirious, restless and greatly excited, requiring the administration of morphine to quiet him. When he came under my care, the patient was in this condition: There had been some loss of flesh; the skin was slightly jaundiced and muddy; conjunctivæ tinged somewhat yellow. **Thorax:** Heart, apex-beat in the fifth interspace, 1½ inches outside of midclavicular line; aortic and mitral systolic murmurs. **Lungs,** normal. **Abdomen,** tense and greatly distended, superficial veins prominent. Slight infection of skin around wounds made by trocar, probably caused by patient scratching them. The liver, as outlined by percussion, apparently extended from the upper border of the fifth rib to about an inch and a half below the costal margin. Palpation was, of course, not possible under the circumstances. The spleen was slightly enlarged and pushed upward, dulness extending from the sixth to the ninth ribs. The scrotum, in which on the left side there was a hernia, was edematous. There was no edema of the legs at this time. Urine: clear, pale yellow in color; sp. gr. 1012; alkaline; no albumin, no casts. In view of the infection of the trocar wounds found, and of the risk of peritoneal contamination in case, at the time of operation, I might find it expedient to evacuate the fluid by tapping in the lower part of the abdomen, I decided not to operate, if the patient remained fairly comfortable, until the infection was overcome and the skin soundly healed.

Operation on June 22, 1901, under ether anesthesia. A three-inch incision was made through the right rectus muscle from a point little above the level of the umbilicus. After opening the peritoneum, a large amount of ascitic fluid was forced out of the wound, the patient being turned on his side to aid in its escape, and when it ceased flowing a considerable quantity more was removed by mopping up by means of gauze sponges inserted into the abdominal cavity. When no more fluid could be removed in this way, I explored the liver and found it markedly cirrhotic, hard and its surface rough—"hobnailed." Its anterior border reached considerably below the costal margin, and the finger could easily be passed between the convex surface of the organ and the diaphragm. The spleen was found to be decidedly enlarged. With a gauze sponge the surfaces of the liver and spleen and parietal peritoneum opposed to them were thoroughly rubbed, as was the peritoneum for some distance on either side of the wound. The omentum, which contained numerous much-enlarged veins, was then brought under the wound and by means of silk sutures was stitched to the peritoneum at a distance of 2½ to 3 inches from each side of the wound and also close to the margins of the latter, care being taken to avoid wounding with the needle any of the omental veins. The peritoneum was closed by a continuous suture of catgut. Interrupted sutures of silkworm gut were introduced through the rectus and its anterior sheath, and between them the sheath was approximated by fine silk sutures. Two or three silk sutures brought the skin into accurate approximation between the silkworm gut sutures. The dressing was secured in place by adhesive straps firmly applied and a Scultetus flannel bandage tightly secured. Drainage was not employed, in conformity with the belief that it is a source of risk, always to be avoided when possible. The progress of the case after operation was entirely satisfactory. There was complete freedom from abdominal symptoms, and at no time since, up to the present day, has there been the slightest evidence of return of ascites. On several days during the first three weeks the temperature rose somewhat above the normal with, however, no symptoms of abdominal disturbance. A small stitch abscess at the lower part of the wound was discovered and opened on the thirteenth day. The pulse was good throughout, ranging from 80 to 104. The action of the kidneys was carefully watched, and during the first fortnight the urine was examined at intervals, the reports showing that, beyond a slight trace of albumin on one or two occasions, there was nothing abnormal of note. As to medicinal treatment, the patient was given, at different times, tincture of digitalis in small doses, infusion of juniper for a few days, a mixture of sodium phosphate, sodium sulphate and sodium bicarbonate (which he had been ordered under Dr. Stewart's care), and lastly Basham's mixture and strychnine, together with a mild laxative pill. On the thirtieth day after the operation the patient, who was then feeling well, having a clear skin and clear conjunctivæ, and good appetite and digestion, was allowed to sit up in a chair for the first time. Two days later he took a short walk in the hospital grounds, and on the second day after that, (July 26), thirty-four days after operation, he was discharged, his general condition being noted as "excellent."

Dr. F. W. Sinkler kept in touch with the patient for some time after his discharge, and at intervals made notes of his condition. The latter show an uninterrupted return of health, with steady gain in strength and weight and no ascites.

On October 29, 1901, the notes state that there had been a gain of twenty-three pounds in weight; the general condition was excellent; appetite good; patient slept well; bowels moved regularly without laxatives, upon which the patient had been obliged to depend for some years previously. Examination of the liver showed that its anterior margin was an inch and a half below the costal border in the right nipple line, three and a half below the ensiform cartilage, and that it did not extend beyond the costal border in the left nipple line. On March 24, 1903, the patient reported to me and stated that he was enjoying perfect health. He looks to be perfectly well, his skin is in good condition and clear, he is well nourished, his tongue is clean, digestion good, and his bowels move regularly. He weighs 185 lbs. There is not the slightest evidence of ascites found. The anterior border of the right lobe of the liver extends about two inches below the costal margin. An examination of the urine made on March 31, 1903, by Dr. A. A. Ghriskey, shows it, with the exception of a faint trace of albumin found in both morning and evening specimens, to be free from anything abnormal.

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*Read before the College of Physicians of Philadelphia, April 1, 1903.

I have delayed reporting this case in order to permit the lapse of sufficient time since the operation, to be able to judge of the permanency of its results. It gives me much pleasure to be able to show the patient now, in good condition and feeling perfectly well, in the twenty-second month after operation. The improvement is apparently permanent, and the object sought by surgical intervention—the relief of ascites—has been accomplished.

The operation, first proposed by Talma, of Utrecht, has for its aim the establishment of anastomoses between the vessels of the omentum and those of the abdominal wall by fixation of the omentum to the peritoneum, thereby affording relief to the obstructed portal circulation in cirrhosis of the liver, in addition to that insufficiently given by the anatomical anastomoses between the portal and systemic circulations.

It is not my purpose to enter, in connection with this report, into a consideration of the pathology of the ascites of hepatic cirrhosis, nor to review at length the literature, now quite abundant, of the operation of Talma.

Upward of two years ago, in January, 1901, our late Fellow, Dr. Frederick A. Packard, and Dr. Robert G. Le Conte read before the College of Physicians a very comprehensive and well-considered paper on "The Surgical Treatment of Ascites Due to Cirrhosis of the Liver, with Report of Two Cases." The results in their cases (*Amer. Journ. Medical Sciences*, March, 1901) were unfortunate, one patient dying in four days of uremia, and the other in sixty-one days of toxemia due to the atrophic condition of the liver. Twenty-two cases collected from the literature up to date of this paper were analyzed.

Since that time, foreign literature, as well as that of this country, has received many additional contributions of reports of cases, and a number of papers analyzing the results to the time they were written.

An excellent paper by Greenough, on "The Surgical Treatment of Cirrhosis of the Liver, with a Summary of Cases," appeared in the *American Journal of the Medical Sciences*, for December, 1902. From this we get the latest statistics of the Talma operation. The writer collected 122 cases, but very properly deducts from this total those, 17 in number, in which the operation was done for ascites due to conditions other than cirrhosis. For the remaining 105 cases he gives the following results: "31 (29.5%) died within thirty days of the operation: 44 reported improved or slightly improved after the operation (42%), and 29 (27.6%) showed no improvement. One case could not be traced." "Thus," he says, "60 cases (57.1%) obtained no benefit from the operation." Of the cases included in this summary, nine were living and improved two years after operation.

The case now reported is to be included, therefore, among those showing continued benefit a considerable time after the operation.

A CASE OF CIRRHOSIS OF THE LIVER WITH ASCITES.

OPERATION EIGHT WEEKS AFTER FIRST OCCURRENCE OF ASCITES. SUBSIDENCE OF ASCITES SIX MONTHS AFTER THE OPERATION, AND NONRECURRENCE IN TWO YEARS.

By W. W. KEEN, M. D.,
of Philadelphia.
Professor of Surgery, Jefferson Medical College.
and H. M. FISHER, M. D.,
of Philadelphia.

This patient, Antonio E., an Italian fruit dealer, aet. 32, sent for me December 31, 1900. Patient's health appears to have been always good until September, 1900, when he had an attack of severe pain in the epigastric region, lasting for several hours and accompanied with profuse diarrhea. Following the subsidence of the pain, slight swelling of the abdomen was noticed, but this disappeared in a few days. Toward the end of December, 1900, a similar attack of epigastric pain occurred. Patient told me that for several years he had been in the habit of consuming wine in large amounts, and, in the six months that he had been in this country, he had been in the habit of drinking raw spirits in the morning. He had for several months suffered various digestive disturbances, also from nausea and occasional vomiting and irregular action of the bowels.

Two nights previous to my first visit to him he had suffered from an unusually severe attack of vomiting and the following day had vomited blood in considerable amount, which was chiefly dark and clotted. Later in the day and during the night he had numerous tarry stools. After this the hematemesis had ceased. He was pale, and there were some fine moist râles over the base of his right lung. Considerable splenic enlargement. Heart sounds were perfectly clear, and his urine was not albuminous. Ordered bismuth subgallate, 5 grains, every 3 hours, peptonized milk and beef-juice.

January 1, 1901. No more hematemesis. The fine moist râles were still audible over the base of his right lung. No movement of the bowels since previous day—ordered artificial Carlsbad salts.

January 4. Distinct ascites noted this day for the first time, also much meteorism. Liver markedly contracted and the splenic enlargement was more marked than before. Urine normal. Two or three days later I was obliged to tap him on account of the rapidly increasing ascites and drew off about two gallons of clear serum. The fluid, however, rapidly reaccumulated, and, as I saw little prospect of relieving him by the administration of drugs, I called Dr. Keen's attention to the case as an acute and uncomplicated one of hepatic cirrhosis, and one in which a reasonable hope of relief from operation might be entertained.

Bacteriological examination of the ascitic fluid by Professor Coplin at the hospital at the time of the operation gave a mixed culture of staphylococcus pyogenes albus and bacillus coli communis.

Surgical Report by Dr. Keen.—On February 24, 1901, at the request of Dr. Fisher, the patient was admitted to the Jefferson Medical College Hospital. On admission there was great ascites, he was extremely weak, his appetite was fair, tongue clean, bowels regular, heart and lungs normal. His usual weight is 152 pounds; present weight 164½ pounds. His urine was turbid, specific gravity 1.028, acid reaction, no albumin or sugar, urea 2.4%. By the microscope there were found amorphous urates, a few leukocytes, but neither crystals, pus, blood nor casts.

Operation—February 27, 1901. An incision in the middle line, half way between the umbilicus and the ensiform, gave exit to perhaps two gallons of fluid. I introduced my hand into the abdominal cavity and determined, first, that the spleen was greatly enlarged; secondly, the liver was greatly shrunken, to at least one-half of its natural size; the omentum was shrunken, but there was no evidence of malignant disease. I then introduced a large gauze sponge and with it scrubbed the upper surface of the liver and the upper surface of the diaphragm, then I treated the spleen and its corresponding parietal peritoneum in a similar manner, then the anterior surface of the omentum and the corresponding belly wall. I next passed celluloid thread sutures, two on each side of the opening, through the omentum and the internal surface of the abdominal wall, drawing up the omentum tight against the belly wall by these four sutures. The operative incision was then closed by silkwormgut sutures, four of which caught the omentum on its way between the lips of the wound as additional security.

On the day after the operation his temperature rose to 102°, but reached the normal by gradual descent at the end of five days. He had to be tapped again on March 8, when one and one-half gallons of fluid were removed. From March 10 to 18 his abdominal girth increased from 38 to 41 inches: on March 22 three gallons of fluid were removed and on April 1 three gallons more. As he was very anxious to go home for Easter, I allowed him to leave the hospital on April 4, with a normal temperature and with only a moderately distended abdomen. After leaving the hospital patient consulted several different physicians, and I lost sight of him for several months. It appears that the ascites was for several months very little influenced by the operation, and frequent tappings were necessary. It was only in August, 1901, or about five months after the operation, that the collateral circulation appears to have been established, and since then there has been no recurrence of the ascites.

At present, except for pains over the splenic region, the patient seems pretty comfortable. He has gained decidedly both in weight and color, and had changed so much in appearance that I did not recognize him when I saw him after he had come out of Dr. Keen's clinic when he last exhibited him to his class at the Jefferson Hospital, in January or February of the present year. He however, still complains much of discomfort after eating and consequently eats very little. The spleen now reaches almost to the crest of the ilium and from its size and weight gives him a good deal of discomfort. It was suggested that this might be a case of Banti's disease, splenomegaly with hepatic cirrhosis, but the patient, I think, does not present the other symptoms described as characteristic of the disease, the anemia, the irregular chills and emaciation. Above all, his condition seems, on the whole, to be better than it was even before the occurrence of the ascites.

NOVELTIES IN THE PHYSICAL TREATMENT OF SKIN DISEASES.

By L. FREUND, M. D.,
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Translated by Maurice Ostheimer, M. D., of Philadelphia.

That physicians are now beginning to pay more attention to physical therapy is of especial advantage to dermatology, since physical treatment has won its greatest triumphs in that branch of medicine. Diseases like lupus, epithelioma, favus and sycosis, which were formerly considered incurable or curable only with great difficulty, plunging those afflicted into indescribable misery and making social life impossible, have been healed by new radiotherapeutic methods in an incredibly short time, without pain and without causing patients the discomfort of bandages, dressings or long sojourn in bed, necessitated by some of the earlier methods of treatment. The dermatologists have also taken precedence in the other branches of physical therapy; I need only recall the wonderful results of the water-bed, the Ehrmann cataphoresis, electrolysis, the therapeutic employment of high and low temperatures, etc.

I mention this to show that the dermatologists are especially anxious to increase our knowledge of therapeutics, and that dermatology may look back with pride upon the excellent results achieved. It should fill us with even greater satisfaction to know that our colleagues, specialists in the treatment of skin diseases, have not remained stationary, but have constantly forged ahead; seeking to found, explain and spread, by scientific investigation and experiment, what was once accepted empirically.

Here belong the efforts to make the regular dosage of suitable physical methods possible, i. e. to make the treatment more or less intense, as one chooses. This is an important requisite, especially in X-ray treatment. Recently Dr. Barthélemy, of Paris, with great consequence, announced that French physicians need not go to Vienna to learn how to give the X-ray treatment, since Paris had placed this method upon a new scientific basis, thanks to two instruments recently invented in France, the radiochromometer and the spintometer. The former consists of a transparent scale of layers of aluminum, increasing in thickness, resembling the photometer scale used in photography. The transparence of the single steps of the scale are compared with a thin silver plate, permitting conclusions upon the penetrability of the rays.

The spintometer, arranged parallel to the Röntgen tube, measures the length of the sparks. Since the electrical resistance of the tube depends on the vacuum, and the penetrability of the X-rays corresponds to the vacuum, we have a relative means of measuring the quality of the X-rays by measuring the electrical resistance, as Dr. Charles Lester Leonard, of Philadelphia, showed years ago. The length of a parallel spark, or the equivalent spark in air, furnishes a relative means of measuring this resistance. With "hard" tubes the equivalent spark is long; with "soft" tubes, on the contrary, it is short. From the accounts of these instruments we have, according to Barthélemy, Oudin and others, data which anyone can use as reliable and exact for careful work.

I have made some experiments which show that the assertions of these Frenchmen are not entirely correct. A tube, which had a Volt-Ohm inductor or coil giving a spark 25 cm. long, and a vacuum that corresponded to an equivalent spark of 7 cm. on this instrument, was placed in the secondary circuit of a Dessauer apparatus; here, with a spark length of 8½ cm., at which distance on the first instrument no sparks passed, on the Dessauer apparatus, on the contrary, a whole bundle of sparks was noted. This occurred because the increase of the spark length from 7 to 8½ cm. increased the resistance for the secondary circuit on the Volt-Ohm instrument more than that of the vacuum tube, so that the discharges passed through the latter. In the second apparatus, which produced more electrical energy than the first instrument, the strength of the secondary discharges, even at the distance of 8½ cm., was great enough to overcome not only the resistance of the vacuum tube, but of the spark measure besides. From this it is plain that the conception of an equivalent spark for characterizing the grade of "hardness" of a tube has but a relative value, i. e. only when the corresponding data always refer to one and the same inductor. Such data are of no value for any other inductor and must be changed to agree with apparatus of different construction, which proceeding offers insurmountable difficulties. The radiochromometer fails to consider exactly all the physical conditions, because its effect depends not only on the thickness, but also on the density (atomic weight) of the material to be penetrated, on account of the penetrability of the rays.

The Holzknecht chromoradiometer is constructed upon another principle. The quantity of X-rays absorbed by a fluorescent salt which produces reflections of a certain tint is ascertained by comparison with a standard color scale. Of course, the colors of the different steps of the scale do not differ greatly one from the other, and the instrument, therefore, needs fundamental improvement. It is still possible that the rays coming from the vacuum tube may be ascertained more exactly in this way.

The question now arises whether a rational Röntgen treatment rests only upon the accurate estimation of the intensity and quality of the rays. The circumstances here greatly resemble those of digitalis medication. Not the man who knows the maximum doses of digitalis, that for adults and that for children, and prescribes accordingly, but he who, from the behavior of the pulse, bloodpressure, the urine, etc., knows when to continue and when to stop the drug is the better physician. Though one could draw more conclusions as to its effect from the total amount of the drug taken, and could, therefore, order the whole dose at once, still, in most cases, in order to be able to bring its therapeutic effect into relation with the mode of reaction of the patient, one should give it in small doses.

The conditions in Röntgen therapy are similar. The effect is the same with strong and weak treatment, *i. e.* with "soft" or "hard" tubes, with great or small distances from the tube, with long or short exposure, naturally, with a corresponding dosage, since, for causing this effect, stronger rays would have to be used less frequently than weaker rays. On account of this stronger influence the more powerful rays must be interrupted at a time when no effect is yet noticeable on the region exposed. Empirically, tables could be made showing the doses of the stronger rays according to the individuality of the patients and the locality treated. It is to be feared, however, that, with the great variations in the nature of human beings and in the different portions of their bodies, such tables would be very complicated and might still furnish an exact prognosis only with difficulty. Six years' experience has taught me, from observation of the reactions of patients, considering the symptoms which appear soon after exposure to weaker rays, that the treatment is absolutely without danger, and good results follow without exact mathematical estimation of the quantity of the rays needed for obtaining an effect, if the approximate value of the intensity of the fluorescence of the tubes is understood. Not only do I not undervalue an apparatus which, like the Holzknecht instrument, perhaps makes the exact estimation of the intensity of the rays possible, but, on the contrary, I welcome it with joy, since, by determining the intensity of the rays employed in each exposure, it makes our proceedings more exact and undoubtedly raises their scientific plane. Yet, it should not be the means of again establishing the position of the "prophecy" treatment which has already been overcome. I believe that we should individualize, not tabulate; paying attention to reaction as well as to action.

In describing the method of treatment, I should like to relate how Professor Ehrmann and I treated an epithelioma of the hard palate in a man, aged 62 years. A firm lead tube, 2½ cm. in diameter, was placed in his mouth, the free end turned obliquely, like a Fergusson mirror, the other, external, end being hidden by a lead plate which covered his face. The X-ray tube was placed directly in front of the opening of the tube in the lead plate. After 15 exposures the tumor began to flatten and granulation was observed about its edges. At present its circumference is just one half what it was at the beginning of the treatment. The scar is flat and but slightly depressed. At the same time a number of swollen nearby lymphglands have also greatly decreased in size.

The excellent results of Röntgen therapy in lupus vulgaris, as well as in epithelioma, show that the influence of the rays is noted to a certain depth in the skin. Beyond this depth the effect of the rays is less marked. In this respect the X-rays resemble ultraviolet rays, which only exert an influence on the uppermost layers of the skin. For an effect upon the deeper tissues rays of large wave length are necessary. Just as in music the deeper tones with large wave length are conducted over longer distances, even through walls, than the higher tones, so, too, transverse ether vibrations of larger wave length are carried through certain media more easily than those of shorter wave length. Therefore, we should examine the rays of larger wave length, the blue and red rays, to determine whether they possess any influence upon living tissues and what that influence is.

As is well known, Finsen concluded that the amelioration achieved in treating lupus vulgaris with rays of light through his apparatus depended especially on the microbicidal effect of the light-rays. This resulted from the fact that colonies of bacteria in plate cultures were destroyed in a short time under these rays. But the conditions are different in phototherapeutic procedures. The bacilli are localized deep in the tissues, and the ultraviolet rays must first pass through a relatively thick, absorbing layer before they can reach the bacteria. Under certain circumstances this might be the case, but the intensity of the ultraviolet rays must then be very great and the time of exposure very long, and one can well believe that the superficial layers, which have been pierced by these rays, would be severely injured. It is much easier to believe that the other elements of concentrated light, of large wave length, which exert no such markedly injurious influence on the tissues and more easily reach the deeper layers, have a curative effect.

To discover whether this influence was due to the bactericidal effects of rays of large wave length, I undertook the following investigations in the Anatomopathological Institute of Professor Weichselbaum. As the source of light I used the large electric arc-light of the projection apparatus in the lecture room for experimental pathology, with the kind permission of Professor Paltauf. A uniform current of 60 to 75 ampères was used, the light being concentrated in an apparatus very like that of Finsen in construction. The ear of a black rabbit was stretched over the focus of the radiating cone of light, with a plate culture of staphylococcus pyogenes aureus behind it, the plate so arranged that the radiating cone of light, passing through the ear, affected about as much of the culture as the thumb nail would cover. After an hour's exposure the culture was placed in the incubator. The next day no variations in growth were noted, the plate being uniformly covered by colonies of bacteria. A similar experiment with the ear of a white rabbit, in which there could be no pigment to prevent the penetration of the rays, also gave an absolutely negative result. So, in a third experiment, in which the ear of the rabbit was kept moistened with adrenalin, to create anemia, the result was also negative. This experiment showed that, though the anemic effect of adrenalin was marked only when first applied, this influence rapidly diminished and the animal displayed symptoms of intoxication. In all 3 experiments inflammation of the exposed ear developed in 24 hours.

When one considers that ultraviolet rays are wholly absorbed by passing through the ear, the fact that the lenses of the apparatus were of glass seems of less significance. We may conclude, perhaps, that, with the use of a still stronger source of light, longer exposure and quartz lenses, the rays passing through the skin might exert a bactericidal influence: but they would also have an injurious effect upon the tissues through which they pass and would, therefore, be of no therapeutic value. A series of experiments undertaken during the past two summers has shown me that the rays of sunlight of large wave length (heat-rays) possess no bactericidal innuence. The rays of sunlight were filtered through a *lavette,* the bottom of which consisted of plates of rocksalt, filled with a very dark solution of iodine in carbon sulphide, so that the heat rays only, undiminished in power, were able to reach the plate cultures. In spite of 6 hours' exposure, on the hottest summer days on which the radiation thermometer (actinometer Arago-Davy) ranged from 31° to 54° C., not the slightest delay in the development of the bacteria was caused by the rays of light.

On the other hand, further investigations have shown that the heat-rays (of large wave length) exert a favorable influence in some skin affections. Thus, intense red light and heat-rays, continued a long time, have a distinctly beneficial effect upon acne vulgaris, leg ulcer, etc. I believe that the effect is similar to that of hot compresses, the influence of which is well illustrated in a book by Schäffer, of Breslau; that the heat stimulates the cells of the connective tissue to proliferation and so to the formation of cicatrices. At any rate, the rays of heat are more suitable for this purpose than thermometric heat, since the rays penetrate into deeper layers than moist heat applied locally. The apparatus which I use for the treatment with heat-rays is described in my recent book "*Grundriss der gesammten Radiotherapie,*" Urban und Schwarzenberg, Vienna and Berlin, 1903.

THE IMPORTANCE OF REPAIR OF SMALL CERVICAL LACERATIONS.

By JAMES HAWLEY BURTENSHAW, M. D.,
of New York.
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The opinion appears to be widespread that a laceration of the cervix, unless of comparatively great extent, should be left alone; that nature will attend to its repair or, if it does not, that no particular harm will result as regards the health of the woman. It is conceded that in all primiparæ a certain degree of laceration is physiological, whereby the external os uteri is transformed from its virginal size and shape to a more or less transverse slit. According to one authority, "it is only when these tears are excessive, that is, when they extend upward to the vaginal vault and above it, that they gain pathological importance."

That such a generalization is incorrect may easily be shown. No doubt whatever exists that nature takes care of these lacerations in many instances, by complete repair or by covering the surfaces of the rent with healthy membrane, especially if the laceration is unilateral and of small extent; but it is equally true that few women pass through a normal first labor without sustaining a cervical tear of more than physiological proportions, and it by no means follows that natural repair will ensue. Every gynecologist of experience in his daily practice sees cases of uterine subinvolution associated with chronic endometritis or chronic endocervicitis; and in very many such cases pronounced nervous symptoms are present, which undoubtedly are reflex in origin, and which may be traced only to the presence of an accompanying cervical laceration. This laceration may be of such small extent as to almost defy detection under ordinary examination, yet its influence for evil may be as great along certain lines as that of a lesion far more pronounced.

That subinvolution of the various pelvic structures which have to do with child-bearing is the most frequent cause of invalidism on the part of those who come under the gynecologist's care, is universally admitted. Uterine subinvolution is invariably due to any cause which, subsequent to labor, interferes with the firm contraction of the organ, or which interferes with the physiological modification of its bloodsupply. Now it is an incontrovertible fact that, wherever or whenever inflammation or irritation occurs in the animal body, an extra amount of blood is drawn to the part affected. A wound of the cervical tissue, unless almost immediately closed by natural processes, undergoes granulation, with resultant deposition of more or less scar tissue, and this, even in the case of very small tears, acts as an irritant, which will cause congestion of the parts or increase that already present. Aside from the retention of secundines, therefore, no more prolific cause of uterine subinvolution and its morbid accompaniments exists than such lacerations.

Then again, every gynecologist is fully aware of the amelioration or disappearance of reflex nervous symptoms which so frequently follows an operation on a torn cervix. Long ago Emmet pointed out that this reflex irritation is probably due to the pinching of nerve filaments in the scar tissue in the angle of the laceration, and that anemic, nervous and neuralgic conditions are peculiarly liable to be directly associated with a cicatricial cervix.

An additional reason, and a most important one, for the repair of a torn cervix lies in the fact that, beyond question, malignant degeneration is much more liable to occur in such a cervix than in one that is normal. As is well known, a nulliparous cervix is almost never the seat of cancer.

There can be no difference of opinion as to the necessity of repair of a laceration, whether unilateral or bilateral, of such degree that eversion of the lips of the cervix results from its presence. Emmet has called attention to the pathology of this condition, and the details of his operation for its cure are known wherever gynecean surgery is practised. but, as I have said, the importance of repair of minor tears appears to have been overlooked. I have been particularly impressed by this fact many times during the past year. During seven months I operated upon seventeen patients suffering from such slight cervical lacerations that by bivalve-specular examination the tears were hardly discernible. In each instance but two, almost immediate relief of symptoms followed. An epitome of a few of these cases follows:

CASE 2.—Mrs. M. C., aged 31 years, married; two children, two miscarriages. Last child born December 20, 1900. Nervous headache; pain in back and in left groin; leukorrhea. Menstruation irregular, profuse, some pain; flows six days. Physical examination: Uterus enlarged and retroverted; some endometritis; cervix enlarged, soft; very small laceration left side. Operation March 18, 1902. Curettage; repair of tear. Result: Relief of all symptoms, especially of headaches and body pains.

CASE 7.—Mrs. G., aged 24 years, married 2½ years; one child, born February 14, 1901. Had been treated ineffectually for neuralgia of left side of face and headaches. Bearing-down pains. Extremely nervous. Pronounced pain at menstrual periods. Flows five to seven days. Copious leukorrheal discharge. Physical examination: Subinvoluted uterus measuring 4 inches; cervix enlarged, soft, congested; bilateral tear of small extent; vaginal floor relaxed; beginning prolapse. Operation May 12, 1902. Curettage; repair of cervix; colpoperineorrhaphy. Result: Complete subsidence of neuralgic pains; nervousness less; general health better than in two years.

CASE 12.—Mrs. E. C., aged 27 years, widow; one child, born in 1898. Frequent hysterical attacks having no connection with menstrual periods; nervous indigestion; obstinate constipation. Menstruation irregular; flows five to seven days copiously; considerable pain; leukorrhea. Physical examination: Bowel loaded with feces; tenderness over left iliac region; uterus somewhat enlarged; ovaries sensitive; endometritis; stellate laceration of the cervix of slight extent; some erosion. Treatment: Daily injections into bowel of hot soapsuds, followed by irrigation of entire colon with saline solution. Hot water vaginal douches morning and evening. After two weeks, pronounced improvement, except with regard to nervousness. Operation on cervix, preceded by curettage, June 1, 1902. Circular amputation. Patient continued hot water vaginal douches once daily during greater part of summer. Result: Reported herself in November as entirely cured.

CASE 14.—Mrs. P. W., aged 40 years, married 17 years; four children, four miscarriages. Insomnia, headaches, pain in eyeballs, great nervousness, loss of appetite. Has worn glasses many years; eyes refracted two months ago. Bowels regular. Menstruation regular, profuse; flows six days. Leukorrhea pronounced. History of repair of cervix and perineum four months after birth of first child. Physical examination: Uterus enlarged, normally placed; ovaries congested; small laceration of left side of cervix, apparently due to incomplete closure at time of operation; no eversion; no erosion. Operation September 14, 1902. Curettage, removal of scar tissue and repair of cervix. Result: Nervous condition greatly improved; insomnia lessened; headaches and pain in eyeballs completely disappeared; general health much improved.

CASE 17.—Mrs. C. G. F., aged 23 years, married three years; one child, born March 30, 1902. Very nervous and irritable. Nursed child up to middle of August. Complains greatly of headache, toothache and itching of skin, especially on chest and back. Menstruation regular, profuse and rather painful. Leukorrhea pronounced. Physical examination: Subinvoluted uterus; cervix enlarged and congested; ovaries sensitive. Very small tear on right side of cervix; some induration at edges. Operation September 25, 1902. Curettage and repair of laceration. Result: Complete cessation of all symptoms.

A study of these few cases might lead to the inference that many of the symptoms complained of might have been due to other causes than the slight cervical tear present in each case. In the light of a considerable experience I am unwilling to admit this, although the good effects resulting from a thorough curettage, and from cleansing of the bowel in those subject to obstinate constipation are too well known to require discussion. Goodell gave expression to what has proved to be an axiom: "A comparatively slight operation on the cervix, in cases of subinvolution, provided the condition is of comparatively recent origin, will so modify the nutrition of the entire organ that it will go on to complete involution." And it is in such conditions as these that an apparently insignificant tear is not only the cause of the trouble, but is the prime factor in its continuation.

The detection of a small cervical tear is not always easy, especially when the ordinary method of examination is practised. In the dorsal position, and by the use of a bivalve speculum, the anterior and posterior vaginal walls close to the cervix are widely separated, often resulting in more or less temporary obliteration of the tear, and it is only when the patient is placed in the Sims position, and by means of a duckbill speculum, that the true contour of the cervix may be made out.

Thomas and Munde (Diseases of Women), in 1891, expressed themselves as follows with regard to the pathology of cervical lacerations: "The significance of a cervical rent as a cause of uterine disease lies, not in the existence of the rent itself, but solely in the symptoms which it produces and in the direct influence which can be traced to it as the prime factor in the production or maintenance of some pathological condition or functional derangement of the pelvic organs or elsewhere in the body." And, furthermore: "What special condition of, or change in, the cervix produces such pathological results, the gynecologist must seek to determine in each individual case. If careful examination fails to trace any relation between the cervical lesion and the objective signs, common sense will lead us to seek elsewhere than in the cervix for the primary cause. Thus a deep laceration may occasionally produce no local or general symptoms whatever, and, on the other hand, a comparatively shallow cicatrized fissure may be the source of an ovarian, sciatic or supra-orbital neuralgia."

The knowledge of gynecology has advanced with giant strides since the above was written, but much that was true then in connection with cervical lacerations is true to-day. My contention is, not that every tear of the cervix requires a surgical operation for its cure, but that due significance is not attached to the smaller lacerations, which, in many instances, are the unrecognized causes, not only of local morbid conditions, but of general systemic ones as well.

TOXIC AMBLYOPIA, FROM WOOD ALCOHOL.

By J. W. SHERER M. D., (Univ. of Pa.),

of Kansas City, Mo.

On September 27, 1898, I was consulted by J. H., aet. 32 years, a Swede farmer then living in Ellsworth County, Kansas, who complained of dim sight.

Previous History: Prior to July, 1897, he had always enjoyed good health with the exception of a few minor ailments. A few days before July 4, 1897, he went to town and purchased an indefinite quantity of cheap alcohol. On the fourth this was mixed with an indefinite quantity of water and other materials, and the mixture used for purposes of conviviality in celebrating the national holiday. Four persons, who shared the courtesies of hospitality, all drank more or less deeply.

The perpetrator, J. H., informed me that the next day he was very sick with nausea, vomiting, vertigo, headache, sweats and partial paralysis and stiffness of the lower limbs, which lasted three days. About 24 hours after potations began, his vision began to fail, and in another 24 hours his vision was about as it has remained ever since. The other symptoms disappeared except that the limbs are somewhat stiff.

Present condition: R. E. Vis—1-60 by eccentric fixation 10 degrees above the normal fixation center. L. E.—quantitative perception of light only.

Objective examination: Externally both eyes appeared normal. Both pupils were about 5 mm. wide and reacted to light, but not to accommodation. With the ophthalmoscope the media were found clear in both eyes. The nerves looked greenish white in both eyes, with some atrophic cupping more pronounced in the left in which it was about 2 D. In the right eye the disk showed greater atrophy in the infero-external or macular segment. Both fundi were unmistakably redder than normal, and both presented considerable mottling. In the left eye there was a deposit of pigment at the lower edge of the disk, and in both the scleral ring was abnormally distinct. The refractive error in this patient was slight. The visual field of the right eye was somewhat contracted, and there was a central scotoma, the distinguishing characteristic of all toxic amblyopias. In the left eye the visual field was also somewhat contracted, but the blindness was absolute only at the center of vision. All over the remainder of the field light could be recognized and located correctly. The central scotoma was absolute in both eyes.

The second of the boon companions did not drink very deeply and recovered in a few days. He said that he first became dizzy, then nauseated; that he vomited and had a bad headache. Then his eye-sight became very dim. The dimness of vision lasted a few days and then began to improve. He thought that in three weeks it was as good as ever. Upon testing, however, I found the keenness of vision reduced. R. E. V.—6-9, L. E. V.—6-12. The ophthalmoscopical findings are of no interest, as no pathological anomalies were revealed.

The third sharer of the joys and sorrows of celebration became very ill, with retching, delirium and unconsciousness. He died in 48 hours.

The fourth person became totally blind in two or three days, did not recover and was not seen by me.

The fifth patient was seen at the request of Dr. Parker, of Kansas City, in midsummer, 1901. The patient, a woman, 30 years of age, had three days before been suffering severe pain from menstruation and, having no other medicine at hand, took a small medicine glass full of burning alcohol. Instead of relieving her it made her worse, causing dizziness, nausea, vomiting and, if possible, aggravating her headache. Twenty-four hours later her vision began to fail, and on the third day, when I saw her the vision was reduced to the perception of large moving objects in the peripheral field. The center of vision was occupied by an absolute scotoma in both eyes. The visual field was somewhat contracted, but the vision seemed equally good in all parts of the remaining field. The pupils were rather wide, about 5 mm., and, although they reacted rather sluggishly to light, no reaction to accommodation was obtainable. The left eye was attacked slightly more severely than the right. The media were clear in both eyes. The retinal vessels showed no alteration in caliber. The capillarity of the disks was a little increased. This patient was immediately removed to her home in Kansas, and the further progress of the case remains unknown to me.

Toxic amblyopia, or poison blindness, is characterized by central scotoma. In all of the 25 cases of toxic amblyopia due to wood alcohol that have been hitherto reported, the scotomata have been absolute and generally permanent, although sometimes, as in one of the cases reported above, there may be some improvement.

The symptomatology of toxic amblyopia, as now established, appertains to the chronic variety, or that occurring in persons habitually exposed to the action of the poison. In such persons the symptoms come on gradually and are at first capable of being entirely relieved. The condition in such cases is called retrobulbar neuritis and a typical central color scotoma forms. It occupies the core-space, and its shape and progress are diagnostic. The color scotoma affects but one color, red, at first, but one by one all become involved until the central scotoma becomes absolute. The accompanying gradual failure of the power of vision is beautifully shown in the detailed account of three cases due to *tobacco-alcohol*, published by Wm. Zentmayer about a year ago.

In the cases from wood alcohol the attack seems to burst with explosive violence corresponding to the greater virulence of the poison. I believe that the processes may be properly classified together as acute and chronic. In the toxic amblyopia of wood alcohol there is a color blindness, central scotoma and but very moderate contraction of the field, the same as in the chronic. Moreover, if we compare the size of the dose of wood alcohol to the duration of exposure to the chronic poisoning and make allowance for the varying factor of resistance, we shall find results which correspond to an astonishing degree. Thus, one of the patients reported recovered from the diminutive dose taken. This will correspond to such of the numerous cases of toxic amblyopia in persons who get treatment early and have a good resistance. From this stage to that of total blindness or death from either cause, there are all gradations.

Ophthalmoscopically, too, there is a correspondence. Early there is no visible change in the fundus. In the chronic variety the diagnosis is made from the history, the failing vision and the central scotoma, there being no fundal signs. Later, atrophy of the disk, more especially in the segment downward and outward from the center, is indicated by whiteness. This is followed by shrinking of the vessels. The same is true of the acute forms. To illustrate I would cite the case of Wood and Wurdemann. The patient inhaled the poison in July, 1899, and was seen by Wood in November of that year, and by Wurdemann in October, 1900. It was found that atrophy of the optic nerve had occurred between the times when he was seen by these two gentlemen. Anomalous cases with hyperemia of the nerve-head and hemorrhages have been reported for the chronic varieties only. Demicheri has shown that color defects may occasionally occur in the periphery in chronic cases. These are usually sector shaped and relative.

In this connection I wish to speak of multiple neuritis, or the alcoholic neuritis, of general medicine. This has been found to have a variety of toxic causes, and I am prone to associate the peripheral optic neuritis and the peripheral multiple neuritis in somewhat the same category. In this connection I wish to point to the paralysis of the lower limbs in one of the cases reported above. It is to be greatly regretted that no study of the case was practical at the time.

The pupil has been said by Wurdemann to be "more or less immobile." It will be observed that in two of my patients the pupils were large and responded weakly to light, and that no reaction to accommodation could be obtained. Whether this was because of the blindness, the subject being unable to fix and focus the object, or to a break in the reflex arc, I do not know. T. Lauder-Brunton, speaking of toxic amblyopia, says: The condition of the pupillary reflex is just the converse of the Argyll-Robertson phenomenon." In other words, the pupil reacts to light and not to accommodation.

Despite the large amount of study which has been done upon the pathology of these conditions, this is not yet definitely settled. The subject has been examined from every possible viewpoint by such able observers as deSchweinitz, Sachs, Landry, Holden, Nuel, Parsons, Fisher, Treitel, Baer, Schoen, Birch-Hirschfeld, Massius, Druault, Samelsohn, Vossius and Uhthoff. Not to tire you with a detailed account of the studies, suffice it to say that the most advanced thought at present is in favor of a retinal origin and a neuritic sequel. The work of Birch-Hirschfeld confirms that of Holden. Holden gave wood alcohol to dogs and rabbits and, although there were no ophthalmoscopical changes, distinct degenerative changes were demonstrable in the ganglion cells and macular layers of the retina. This was attributed to diminished bloodsupply due to a vasoconstrictor effect on the bloodvessels. The trophic centers of the optic nerve fibers thus removed, the degeneration of the fibers must inevitably follow. No evidence of inflammation could be demonstrated in the nerve fibers. Parsons, Langley and Fisher carry their analysis farther and consider the papillomacular bundle to be especially involved on account of its scantier bloodsupply, and add to the vasoconstriction of the arterioles the paralytic action of the poison upon the synapses of the cone fibers, or of the inner granule layer, or both. On account of this and other corroborative testimony I believe that it may now be regarded as pretty well-established by histological proof that the earliest lesion in toxic amblyopia is to be found in the ganglion cells of the retina, and that consecutively the nerve fibers break down. This agrees with the clinical observation better than the old theory of primary neuritis; for we know that vision may fluctuate with the condition of the cells. In chronic toxic amblyopia vision may be markedly improved by amyl nitrite, rest, good hygiene, etc., to decline just as markedly under reversed conditions. This points decisively to a nuclear, not to a neuritic, source of the trouble.

It has been proved by at least 20 autopsies that the papillomacular bundle of fibers undergoes degeneration to a greater degree than the remainder of the nerve in most cases. It is estimated that 7% of all ocular diseases are amblyopia of toxic origin. Of a total of 138 cases from all sources collected by deSchweinitz, I find upon analyzing them that 40% were due to alcohol; 16% to tobacco, and 32% were due to the combined action of tobacco and alcohol. Thus 94% are due to the wilful abuse of alcohol, or tobacco, or both. The remaining 6% are distributed among a long list of substances, such as carbon bisulphide, iodoform, iodine, potassium iodide, potassium chlorate, dinitro and trinitro-benzol, benzine, hydrocanic acid, potassium hydrocyanide, coal-tar products, anilines, arsenic, mercury, lead, phosphorus and several mineral acids.

When the exhaustive book of deSchweinitz on the toxic amplyopias appeared in 1896, there had been but one case reported due to wood alcohol, that of Mengin.

Wood alcohol, CH_3OH, is sold under a variety of names, such as methyl alcohol, burning alcohol, Columbian spirits and naphtha. The French call it Esprit de Bois, the Germans Holzgeist.

It is ordinarly made by the destructive distillation of wood, but can be made from marsh gas, CH_4 by a reaction whereby one atom of H is replaced by one molecule of hydroxyl, OH. It is a colorless liquid with an ethereal odor and a sharp burning taste. If pure it is said to burn like ethyl alcohol, but with a paler, less luminous flame and with less heat. However, the few specimens which I have tested burned with a tinge of yellow in the end of the blaze, somewhat suggestive of sodium in the flame of the Bunsen burner. It is miscible with the ordinary menstrua in all proportions, and is a powerful solvent of resins, sulphur, phosphorus, etc. For detecting it, the color test of potassium permanganate proposed by Young is delicate and reliable. The toxicity has not been determined, but I find that 5 ounces have caused death in one adult male and blindness in another. Also three ounces have caused blindness in an adult male. The amount taken by the woman reported above was about one ounce.

Of the 25 cases hitherto reported, 23 resulted from ingestion, and two from inhalation of the poison. The latter were as grave as the former, and the symptoms of dizziness, nausea and frontal headache, followed by great reduction of sight and central scotoma, were the same. The subjects were workmen who were varnishing the interior of a vat with shellac dissolved in wood alcohol. The exposure lasted from four to six days respectively before the poison caused its victims to succumb.

In addition to its many industrial uses this drug is, I am informed, sometimes employed in making medicinal tinctures. This, of course, is criminal and should be detected and punished. I have personal knowledge of one case in which the patient, a child, was slightly poisoned by a remedy dispensed in a menstruum containing wood alcohol. The attending physician promptly discovered the crime and averted the disaster.

I can scarcely bring myself to speak of treatment of a disease in which the services of the oculist are so signally limited to diagnosis and prognosis. I know of no therapy that has yet been proposed for the amblyopia from wood alcohol. Reasoning deductively from the treatment which has been proposed for toxic amblyopia in general, I would suggest strychnine, potassium iodide, mercury bichloride and nitroglycerine.

Supplemental Addendum on Pathology.

Some months after writing the foregoing paper the researches in the pathology of toxic amblyopia of Marlowe, of Syracuse, N. Y., were published.

His work is extensive, thorough and exhaustive. In quinine amblyopia his findings were absolutely confirmatory of those of Ward Holden. Synchronously with the onset of the amblyopia there were chromolysis of the retinal nerve-cells, (dissolution of the chromatin), edematous dilatation of the pericellular spaces and vacuolation and degeneration of the ganglion cells. Several weeks after the destruction of the cells the nerve fibers begin to degenerate. These changes are associated with a profound anemia of the retina due to the quinine intoxication.

In the study of the retrobulbar neuritis from alcohol, tobacco, felix mas and other poisons, a series of twenty experiments was performed in which felicic neuritis was produced and the pathology carefully studied. It was found that in severe cases absolutely all of the nerve fibers had melted away and had entirely disappeared by the end of the third day.

The axis cylinder dissolves and is absorbed, and the neurogliar alveolus which contained it afterward becomes distended in some places, and filled with a homogeneous substance, which yields the reaction of hyaline material. There is leukocytic emigration at this stage, but a little later, when necrobiotic change of the neuroglia occurs, small cells and epithelioid cells appear in great numbers.

In this early stage the small spaces around the nerve and included within the neurogliar sheath are obliterated by the swelling of the nerve fiber. There is papillitis from swelling of the nerve fibers, without any trace of dropsy of the intravaginal spaces of the nerve sheaths. After the destruction of the nerve fibers secondary changes in the neuroglia appear in the form of softening, with the appearance of small cells and epithelioid cells, or by necrobiosis. Around the areas of neurogliar softening there is a proliferation of neurogliar fibrillar fasciculi, which hypertrophy and progress to new formation and permanent condensation. These fibrillæ are all longitudinal and become firmly pressed together. They are especially noticeable in tabetic atrophy and constitute a true fibrillar gliosis. It must be admitted that in felicic neuritis the primary effect is exerted upon the nerve fibers, but it is likely that the nerve cells are simultaneously attacked. The condition is one of acute parenchymatous neuritis. A perfect analogy is found between the retrobulbar neuritis of alcohol and tobacco, and felicic neuritis, both depending upon the same anatomical lesion, viz., acute parenchymatous neuritis.

The possibility of the lesion being primarily an interstitial neuritis is absolutely rejected, and evidently upon sound ground anatomically.

There is an immediate overgrowth of the interstitial connective tissue, but it is always secondary to the destruction of the nerve fibers. Marlowe considers it certain that quite diverse forms of optic neuritis are certainly of a parenchymatous nature, the nerve fiber and the nerve cell being primarily attacked. These optic neuritides are tabetic, retrobulbar, optic neuritis,—infectious, microbic, optic neuritis—simple white atrophy and some forms of papillitis.

A NOTE ON TRAUMATIC SYRINGOMYELIA, WITH REPORT OF A CASE PRESENTING SENSORY DISTURBANCES AFFECTING ONE LIMB, AND TROPHIC CHANGES OF THE SUBCUTANEOUS TISSUE OF THE ENTIRE LIMB.*

By ALFRED GORDON, M. D.,
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Mrs. Y. B., aged 40 years, came to the Jefferson Hospital with the following history: About ten years ago, while walking over a bridge, she slipped and fell on her back. She was helped to get up and led to a nearby house where she rested for a short while. There was no loss of consciousness. Immediately after the accident she felt a severe pain around her waist, which lasted not more than a half-hour. After the pain subsided she went home, apparently well. During the following two weeks she did not experience the slightest disturbance, and only at the end of that time she began to complain of numbness and sensation of pins and needles, burning and aching in both hands. These paresthetic disturbances would disappear while she was at work, and reappear as soon as she rested; they interfered even with her sleep. A course of electrical treatment improved the condition of her right hand, which gradually got well, but had no effect upon the left hand. During the following five or six years the pain of the left hand disappeared, but the numbness and tingling sensations remained. She also noticed that from the onset of the disease many times she found her left hand covered with blisters following burns, but at no time did she feel the burning; also when she would strike her hand accidentally she would never feel pain. Three years ago, after a day of hard, manual labor, she noticed a red swelling on the palm of the left hand. The swelling increased considerably within two days. Finally an abscess of considerable size formed. No pain was felt at any time. An incision was made without a general or local anesthetic. The incision and the subsequent curetting with cauterization of the ulcerated surface did not cause the slightest pain to the patient. A secondary profuse hemorrhage occurred at the end of two weeks, which required an enlargement of the first incision. Again there was no pain. The healing process was unusually long, *i. e.*, about five months. About ten months ago she fell down two flights of stairs and sustained a great number of bruised and ecchymotic areas over the legs and arms which were all painful, except those of the left arm. Shortly afterward she noticed that the left arm was heavier than it used to be. Thinking that electricity was the proper treatment for it she came to the Neurological Department of the Jefferson Hospital. We found then a subluxation of the shoulder. The subluxation passed, therefore, unnoticed and did not cause pain after the fall. All possible manipulations of the arm proved to be absolutely painless. Patient affirmed that within the year since the last accident her right hand began to feel numb in the morning, but the numbness disappeared as soon as she worked. However, when she sewed she had trouble in threading the needle or doing fine work, but there was no loss of sensation of any form in this hand. She also said that the inability to feel extreme heat was no more limited to the hand, but it covered the whole left upper limb. She distinctly said that previously to the accident, which happened ten years ago, she never felt any of the present sensations in her left hand, and always suffered pain when she happened to touch a hot object. She is a mother of three children and had one miscarriage. She was always healthy, except that she would occasionally have attacks of frequent micturition, a disturbance from which she is suffering now. On examination we found that the motor power in both lower and right upper extremities was normal. The left upper extremity was somewhat weaker than the right. The tendon reflexes in the three nonaffected limbs were normal, while they were very much diminished and absent in some muscles of the left arm. No ataxia. No Romberg symptom. When we compared both upper extremities with regard to size and appearance we found this peculiarity: The whole limb was decidedly larger

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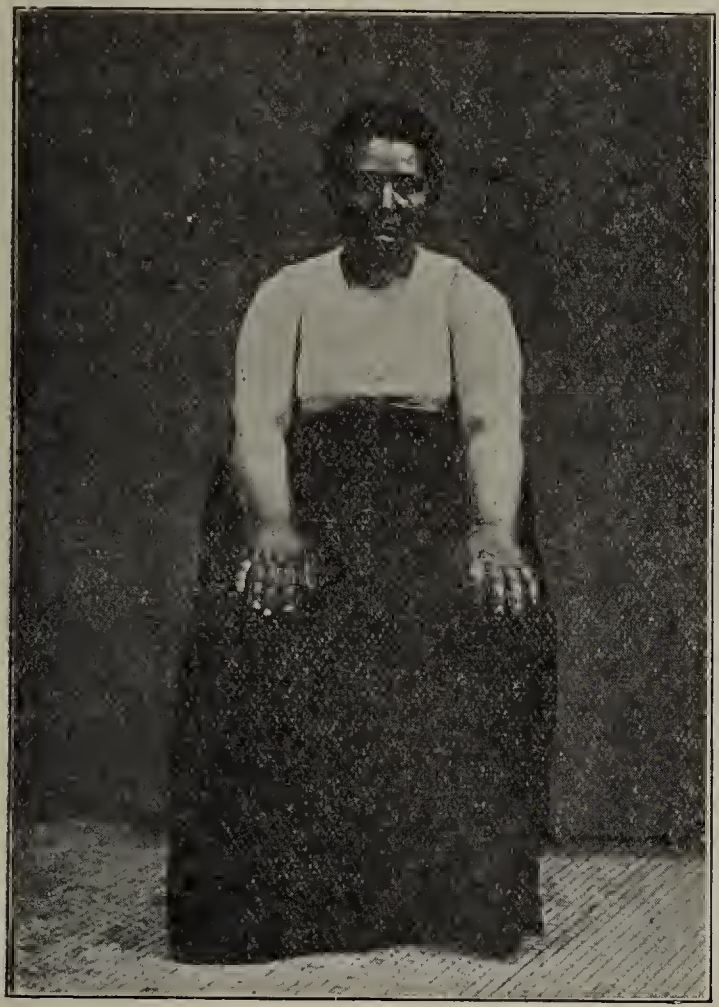
* Paper read and patient exhibited before the Philadelphia Neurological Society, November 25, 1902.



than the right (see photograph). Each individual finger was larger than the corresponding fingers of the right hand. The measurement gave the following result: At the lower insertion of the deltoid the circumference of the right arm measured 31½ cm., the left 33 cm. Immediately above the elbow 27 cm. for the right, 29 cm. for the left arm. At a distance of 12 cm. below the olecranon the right forearm on the right side measured 23 cm., on the left 24½ cm.; immediately above the wrist 16½ cm. for the right, 17½ cm. for the left. The circumference of the hands showed 17½ cm. for the right and 19 cm. for the left. A line drawn on the dorsal surface of the heads of the metacarpal bones showed 8 cm. for the right and 9½ cm. for the left hand. The skin of the fingers was hard and appeared to be distended and glossy. On the hand the skin was soft and thickened, but not edematous or distended. On the forearm the skin was rather distended and to some extent hard. On the arm the skin seemed to be infiltrated; it had the appearance of a myxedematous skin, but not the consistency. As the epidermic layer did not appear to be altered, the impression was that the subcutaneous tissue was altered and hypertrophied. As to the muscles of the affected limb, their size could not be determined, but their power was diminished. The reflexes could hardly be obtained, and the electrical reactions showed a distinct diminution of response to faradic and galvanic currents, but no reactions of degeneration. The muscles of the hand showed some changes: The thenar and the first interosseous space were flatter on the right hand. The temperature of the skin was equal on both sides. The sensations presented the following changes: Temperature sense (heat and cold) was totally lost over the whole left arm on all its aspects, on the left side of the thorax, from the neck down to a straight line drawn from the axilla to the sternum: it covered strictly a mathematical half of the thorax. The same was observed on the neck; from the middle of the chin down on a straight line to the sternum, it covered the whole left side of the neck around to the occiput and ended on the middle line of the spine. The anesthesia of the face was peculiar in this respect that it occupied only the border of the forehead limiting the scalp; then on the area covering the inferior maxilla, but not beyond it; it also covered the ear. The loss of pain sense was identical with the thermo-anesthesia, except on the ulnar side of the forearm and arm which was only hypalgesic. The touch sense was preserved in its normal condition. (See illustrations).

The patient was also examined with regard to hysteria, but no hysterical stigmata were noted. The visual fields were normal. The pupils were unequal, the right larger than the left. Both reacted to light. To sum up, we are

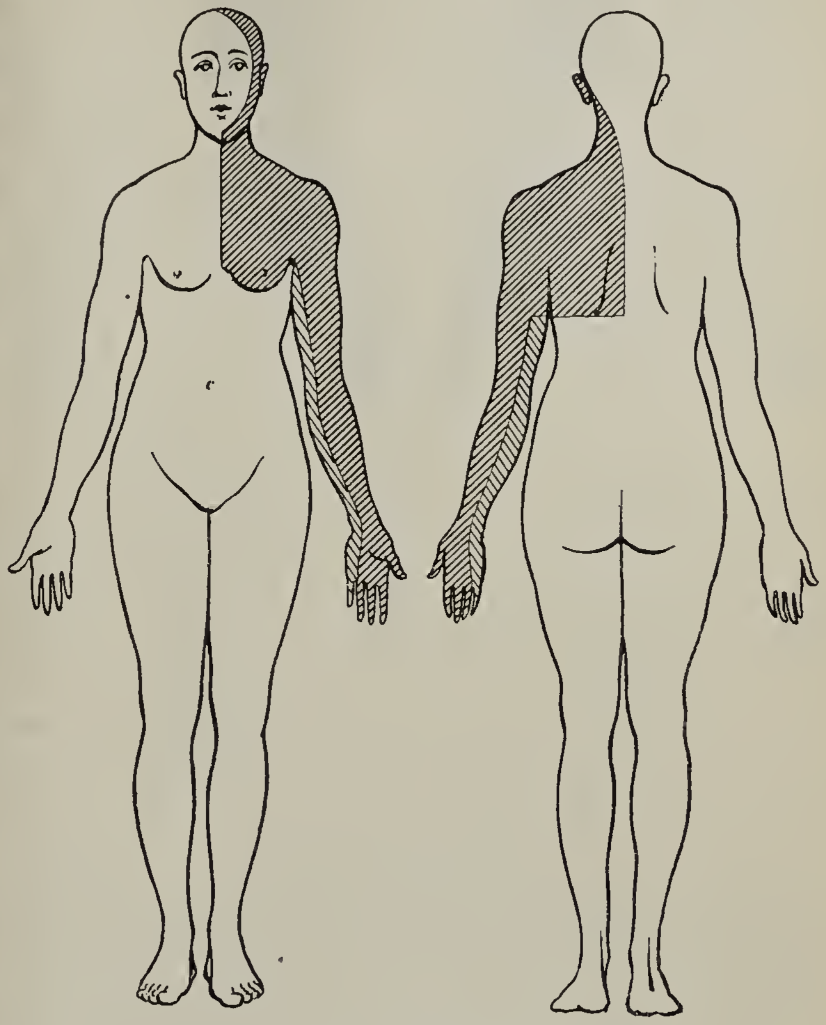


Fig. 1. Pain. Hypalgesia. Analgesia.

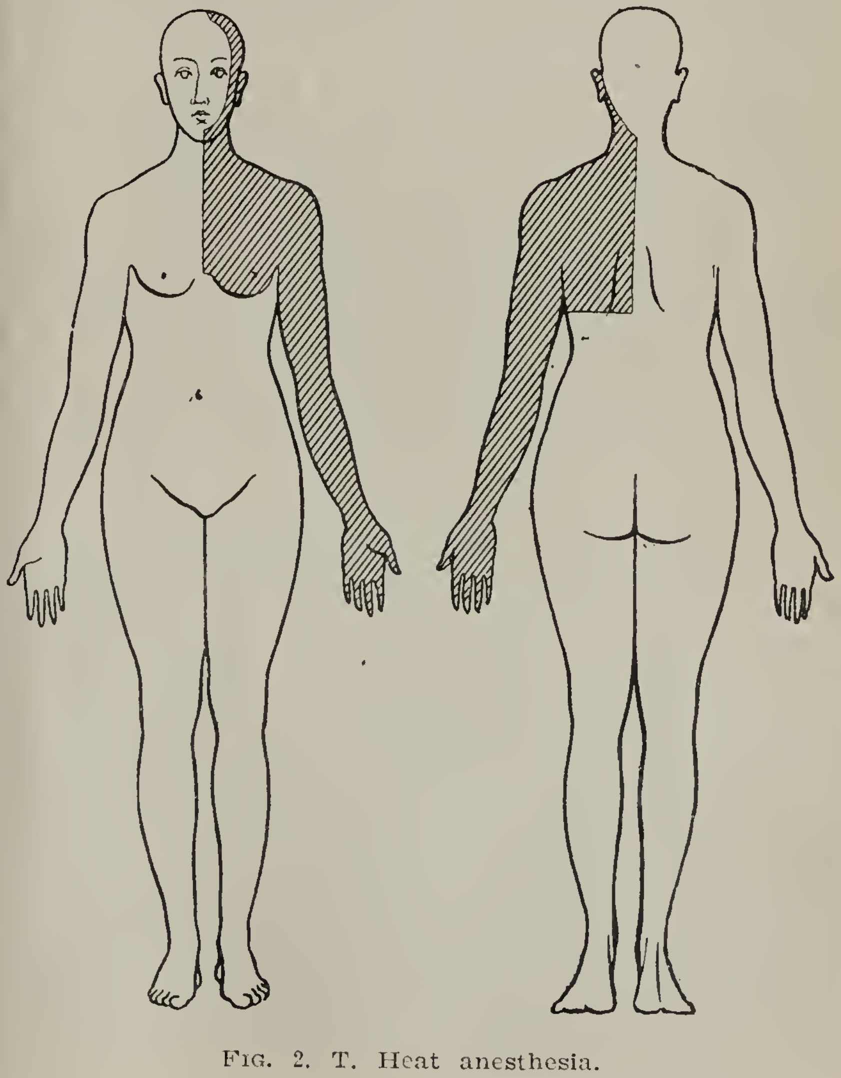


Fig. 2. T. Heat anesthesia.

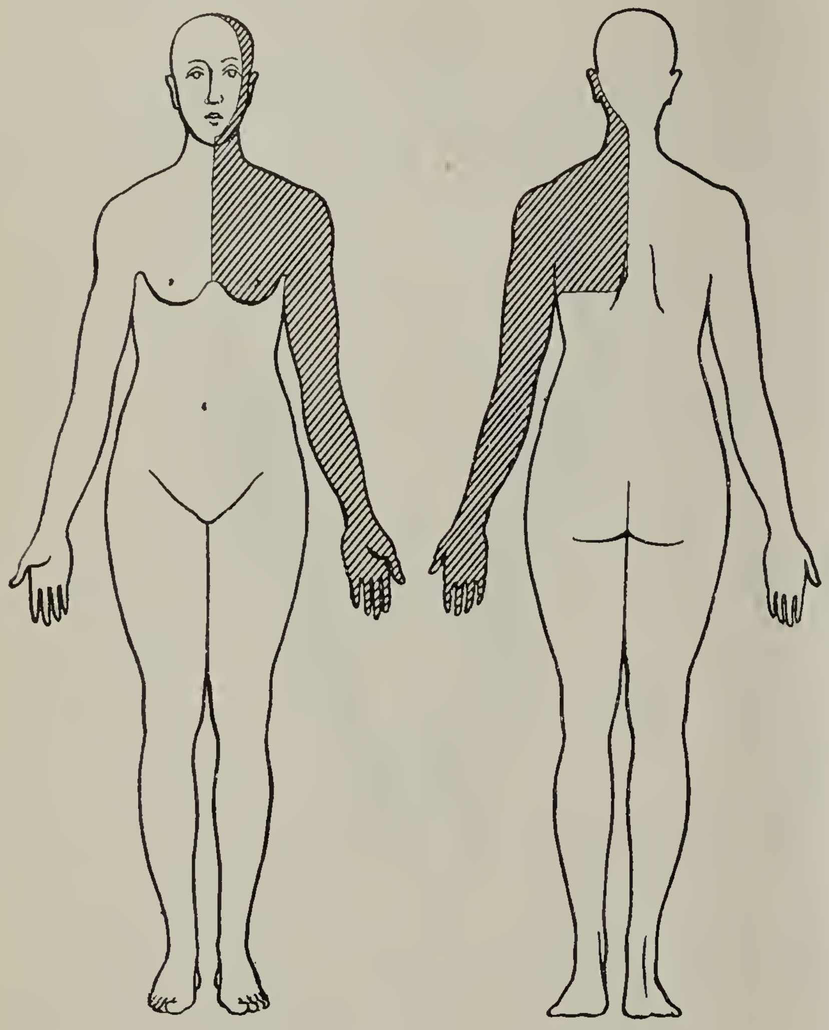


Fig. 3. T. Cold anesthesia.

in the presence of a patient who sustained an injury ten years ago. This was followed by girdle pain. Two weeks later she developed paresthesia in the left hand and anesthesia to pain and temperature on the whole left upper extremity, left half of thorax and neck and a part of the face on the corresponding side, while the tactile sensation was preserved. She also presents peculiar trophic changes of the subcutaneous tissue of the whole left limb and some atrophy of the thenar eminence and of the first interosseous space. Finally the reflexes of the affected limb are lost or very much diminished.

The case presents, therefore, a typical sensory dissociation characteristic of syringomyelia, also trophic changes of the tissue underlying the epidermis and limited to the affected limb.

Is this a case of typical syringomyelia, an affection which is characterized by a cavity with hypertrophy of gliomatous tissue, or is it a case presenting syringomyelic sensory disturbances due to any other lesion affecting the sensory fibers? Cases of some forms of disease of the cord with syringomyelic sensory dissociation have been reported. Consequently the fact of the existence of sensory disturbances alone is not sufficient for making a diagnosis of the gliosis. If, on the other hand, we assume that it was a case of true classical syringomyelia with a central cavity and secondary glia hypertrophy, in addition to the typical sensory disturbances, we would have a marked muscular atrophy, because ten years elapsed since the patient noticed the analgesia and thermo-anesthesia; this period of time is sufficient for an involvement of anterior portions of the gray matter in a disease which is essentially progressive in character. The muscular wasting in our patient is too small to make us believe in the existence of a central gliosis.

The history of trauma in this case is certainly of great importance for diagnostic purposes. One may think that onset of the disease dates far back before the trauma, as it often happened in cases reported as traumatic syringomyelia. It is, however, certain that our patient did not present a single symptom before the accident. It is, therefore, evident that the trauma can be considered here as the causative factor of the disease. The almost acute onset of the symptoms following a trauma should necessarily direct our minds toward the possibility of a hemorrhage into the cord, and, as a hemorrhage after a trauma usually occurs in the gray matter, the symptoms of the case can be easily explained. Since the disease has been in existence for ten years and, instead of retroceding, it rather progressed slightly, we must admit that secondary changes of a chronic character took place. With an analogy of cerebral hemorrhages, a hemorrhagic cyst may have formed and become surrounded by proliferated neuroglia tissue, or a necrosis of the nervous tissue took place followed by the formation of a cavity which became surrounded by proliferated neuroglia tissue.

According to Brissaud, syringomyelia was formed experimentally by traumatism. That traumatic myelitis was followed by the formation of cavities is known. (A. Q. Silock, *Trans. Path. S.*, London, 1888). Minor, Pitres, Sabrazès and others have reported a number of cases which show that a hemorrhagic focus serves as a starting point for proliferation of the neuroglia tissue. A cavity, however, is not absolutely necessary to present the syringomyelic clinical picture. In James Hendrie Lloyd's case (*Brain* 1898) there was no cavity; the necrosed tissue around the central canal and in the central gray matter was identical with that of many cases of syringomyelia. However, if his patient had lived longer, perhaps the final step would have been a cavity.

We are, therefore, embarrassed in classifying cases with posttraumatic syringomyelic sensory dissociations. If a suggestion is permissible, all the cases presenting the classical dissociation with or without muscular atrophy should be placed as those of syringomyelia, provided they do not present symptoms of other systemic diseases of the cord. Whether there is a gliosis or a cavity formed in place of an old hemorrhagic focus, or only a disintegration (necrosis) of the nervous tissue in the cord, affecting the sensory fibers so that either of these affections give rise to the sensory dissociation, all of them should be called syringomyelia. The old conception of the disease as one due only to a gliosis should be broadened, since the accumulated observations show that traumata lead to cavity formations following hemorrhages or to disintegration within the substance of the cord.

Speaking of traumatism as a causative factor of syringomyelia (in its broader sense), we understand under the term posttraumatic syringomyelia only those cases in which it is proved beyond doubt that the characteristic sensory dissociation followed shortly after trauma and never existed before it.

The present case does not show symptoms of any other form of systemic spinal disease, but does present the typical sensory dissociation. Whatever the lesion is here, a hemorrhagic focus (which is the most probable) or a primary or secondary necrosis in the cord, the disease is certainly syringomyelia, if it is only understood in its broader sense. With equal right it should be called posttraumatic, as a thorough investigation shows that the symptoms began to develop very shortly after the accident.

Our patient presents another important symptom which makes the case quite unusual, namely, the trophic changes of the subcutaneous tissue of the affected limb.

Trophic disturbances occurring in syringomyelia have been described by many observers. Various forms of skin diseases, affections of the epidermis and of subcutaneous tissue are well known. Among the last, edema is the form which has the nearest resemblance to our case.

Edematous swelling of paralyzed limbs is not a rare occurrence. In grave forms of cerebral hemiplegia, acute myelitis and in neuritis we observe edema. But we find there all the characteristic signs of real edema: Pitting, tension of the skin, etc.

Another form of swelling which has the appearance of edema, but in reality is not, was described by Marinesco under the name of "*main succulente*." In this affection the dorsal aspect of the hand presents a hard and elastic swelling without pitting; the veins and tendons are not visible; the fingers are enlarged, and their dorsal surfaces are cyanosed and hard; the skin is glossy, dry and colder than normal. According to Marinesco, this condition is not due to an edema, which is characterized by an accumulation of fluids in the subcutaneous cellular tissue and which can be easily displaced by pressure, but it is due to a hyperplastic process of the subcutaneous tissue associated with a vasomotor disturbance that influences the hyperplasia.

Besides the hard edema and "*main succulente*," cases were reported with a condition of a soft and elastic swelling without fluctuation and without any change of the color of the skin (Roth. *Arch. de Neurol.* t. xv), but all the patients presented trophic changes limited to the hand or to a portion of the forearm (E. Remak. *Berl. klin. Wochen.*, 1889, No. 3).

In our patient the fingers resemble those of "*main succulente*," the dorsal aspect of the hand reminds one of the soft and elastic swelling; on the forearm, which is enlarged, the skin is rather distended; the arm reminds one of neither of the conditions of the other portions of the limb; it is distinctly larger than the right arm, the subcutaneous tissue is markedly thickened.

The condition of the whole limb is certainly unusual, as in the literature we could not find a single instance of similar changes affecting an entire limb.

It is very probable that the pathological process is the same in all the portions of the limb; it lies in the subcutaneous tissue. If the appearance of various portions of the limb is so different, it depends probably upon the degree of its involvement.

Those observers who described edema or any other trophic changes in syringomyelia, agree on the pathogenesis of the affection. It is a well-known fact that edema was never observed in affections of the motor portion of the gray matter, for example, in anterior poliomyelitis, spinal progressive muscular atrophy, amyotrophic lateral sclerosis. The trophic changes observed in the disease under consideration were strictly limited to those portions of the body which at the same time presented syringomyelic sensory dissociation.

Our case presents a good illustration of it. The trophic disturbances are here in a direct relation with the sensory disturbances. In syringomyelia the posterior portion of the gray matter is usually affected. It is, therefore, in the same place that we should look for an explanation of the trophic changes.

The researches of the physiologists (Morat, Dastre, Steinach and others) show that vasomotor and trophic centers for the bones and integument are located in the gray matter of the posterior cornua. On the other hand, Marinesco's researches show that the same centers for the upper extremities are situated principally at the level of the eighth cervical and first thoracic segments, in which syringomyelia usually begins.

The foregoing remarks permit us to arrive at the following conclusion: In view of the fact that the sensory disturbances in our case are those of syringomyelia in its most typical form, that the trophic changes are in the strictest relation with the area of distribution of the sensory dissociation, that the affection is in the upper extremity, that hematomyelic foci after trauma in a number of cases were followed by cavity formation or only by a stage of necrosis, that the symptoms in our patient made their appearance very shortly after the trauma, for all these reasons we are justified in classifying the case as one of a posttraumatic syringomyelia.

The peculiarity of the case consists in the fact that the symptoms are unilateral and limited to one extremity, and in the fact that the trophic changes of the subcutaneous tissue cover the entire affected extremity. The latter condition makes the case unique, as all the cases reported with similar condition presented trophic disturbances only of one portion of a limb.

I wish to thank Dr. J. O. Arnold for the patient's photograph.

ZENTRALBLATT FUER INNERE MEDICIN.

February 7, 1903.

A Clinical Phosphometer. ADOLF JOLLES.

The apparatus and the method described by the author depend upon the fact that **potassium phosphomolybdate has different intensities of color at different temperatures.** The determination of the phosphorus of the blood is carried out by determining at a definite temperature the color produced by the phosphomolybdate filtrate. The details cannot be given in abstract. [D. L. E.]

A Case of Atypical Hypertrophy of the Breasts.—In the *Bulletin de l'Académie Royale de Médicine de Belgique*, (November 29, 1902), Dr. Charles Firket reports the case of a young girl of 12, otherwise in excellent health, who noticed an extraordinary increase in the size of both breasts, beginning about 6 months before her twelfth birthday. There was no fever, no gastro-intestinal or circulatory disturbance, and no loss of appetite. Yet, as the hypertrophy increased, her general condition changed; she grew thin and anemic, though she continued to grow. There was no pain, but much inconvenience on account of the weight of the enlarged breasts. As local applications were absolutely ineffective, both breasts were amputated at one sitting. She recovered and has been perfectly well since. Each breast weighed over 4½ pounds, measured 10 inches in diameter, and was almost 5 inches thick. Histologically the growth was atypical, resembling an adenoma. There was very little adipose tissue. [M. O.]

Health Reports.

Health Reports.—The following cases of smallpox, yellow fever, cholera and plague, have been reported to the Surgeon-General, Public Health and Marine-Hospital Service, during the weeks ending April 25 and May 3, 1903:

SMALLPOX—United States.

			C.	D.
ALABAMA:	Mobile	Apr. 11-18.	3	
CALIFORNIA:	San Francisco	Apr. 5-12.	15	
COLORADO:	Denver.	Apr. 4-11.	28	
FLORIDA:	Jacksonville.	Apr. 11-18.	1	
ILLINOIS:	Belleville.	Apr. 11-18	3	
	Chicago.	Apr. 11-18.	17	2
	Galesburg.	Apr. 11-18	4	
INDIANA:	Evansville.	Apr. 11-18.	3	
	Indianapolis.	Apr. 11-18.	4	2
KENTUCKY:	Covington.	Jan. 10-Apr. 18	98	
LOUISIANA:	New Orleans	Apr. 11-18.	8	
			Imported	
MARYLAND:	Baltimore.	Apr. 11-18.	2	
MASSACHUSETTS	Fall River	Apr. 11-18.	1	
	Lowell.	Apr. 11-18.	2	
MICHIGAN:	Detroit.	Apr. 11-18.	11	
	Flint.	Apr. 11-18.	1	
	Grand Rapids.	Apr. 11-18	7	
	Port Huron.	Apr. 11-18.	1	
MINNESOTA:	Winona.	Apr. 11-18.	1	
MISSISSIPPI:	Gulfport	Apr. 16.	16	
MISSOURI:	St. Louis.	Apr. 12-19.	9	
NEBRASKA:	Omaha.	Apr. 11-18.	2	
NEW HAMPSHIRE	Manchester.	Apr. 11-18.	8	
	Nashua	Apr. 11-18.	5	
NEW YORK:	Buffalo.	Apr. 11-18.	2	1
	New York	Apr. 11-18.	2	1
	Rochester.	Apr. 14-21	4	
OHIO:	Cincinnati	Apr. 10-17.	15	1
	Cleveland.	Apr. 11-18.	1	1
	Dayton.	Apr. 11-18.	2	
	Toledo.	Apr. 4-18.	19	1
PENNSYLVANIA:	Altoona	Apr. 11-18.	1	1
	Johnstown.	Apr. 11-18.	1	
	Philadelphia	Apr. 11-18.	10	1
	Scranton.	Apr. 11-18.	8	
SOUTH CAROLINA	Charlestown.	Apr. 11-18.	5	
	Greenville.	Apr. 4-11	1	
TENNESSEE:	Memphis.	Apr. 11-18.	1	
UTAH:	Salt Lake City	Apr. 11-18.	3	
WASHINGTON:	Tacoma.	Apr. 6-13.	2	
WISCONSIN:	Milwaukee.	Apr. 11-18.	1	

SMALLPOX—Insular.

PHILIPPINES:	Manila.	Mar. 4-11.	1	

SMALLPOX—Foreign.

AUSTRIA:	Prague.	Mar. 28-Apr. 4.	8	
BELGIUM:	Brussels.	Mar. 28-Apr. 4.		9
PRAZIL:	Bahia.	Mar. 21-28.		1
	Rio de Janeiro	Mar. 20-29.		13
CHINA:	Hong Kong.	Feb. 28-Mar. 7.	1	1
	Shanghai.	Mar. 9-16.		12
COLOMBIA:	Barranquilla	Mar. 22-29.		1
	Bocas del Toro	To Apr. 6.	21	3
FRANCE:	Paris.	Mar. 28-Apr. 4.		1
GERMANY:	Hamburg.	Mar. 28-Apr. 4.	1	
GREAT BRITAIN:	Birmingham	Mar. 22-Apr. 4	25	
	Dublin	Mar. 29-Apr. 4	12	1
	Leeds.	Mar. 29-Apr. 4	10	
	Leith.	Mar. 29-Apr. 4.	2	
	Liverpool.	To Apr. 4.	62	6
	London.	Mar. 29-Apr. 4	13	
	Manchester.	Mar. 29-Apr. 4	24	1
	Sheffield.	Mar. 21-Apr. 4	4	
INDIA:	Bombay.	Mar. 17-24		85
	Calcutta.	Mar. 14-21.		3
	Karachi.	Mar. 16-22.	1	1
ITALY:	Milan.	Feb. 1-28.	4	
	Palermo	Mar. 28-Apr. 4.	1	
JAPAN:	Yokohama.	Mar. 14-21.	1	
MEXICO:	City of Mexico.	Mar. 29-April 5	8	6
RUSSIA:	Moscow.	Mar. 21-28.	3	2
	Warsaw.	Mar. 21-28.		7
STRAITS SETTLEMENTS:	Singapore.	Feb. 21-Mar. 7.		2
TURKEY:	Alexandretta.	Mar. 21-28.	6	

YELLOW FEVER.

BRAZIL:	Rio de Janeiro	Mar. 13-29.		81
COLOMBIA:	Panama.	Apr. 6-13.	3	1
COSTA RICA:	Limon	Apr. 10.	2	
ECUADOR:	Guayquil.	Mar. 21-Apr. 4.		6

PLAGUE—Insular.

PHILIPPINES:	Manila.	Mar. 4-11.	10	8

PLAGUE—Foreign.

CHINA:	Hong Kong.	Mar. 7-14.	19	17
INDIA:	Bombay.	Mar. 17-24.		1270
	Calcutta.	Mar. 14-21.		751
	Karachi.	Mar. 15-22.	120	97

CHOLERA—Insular.

PHILIPPINES:	Cebu.	Feb. 21-28.	2	1
	Manila.	Feb. 21-28.	2	1
	Opan, Is. of Cebu.	Feb. 28.	4	4
	Talisay, Is. of Cebu.	Feb. 24.	17	10
PROVINCES:		Feb. 1-28.	135	84
Not previously reported.			532	319

CHOLERA—Foreign.

INDIA:	Bombay.	Mar. 17-24.		1
	Calcutta	Mar. 14-21.		215
STRAITS SETTLEMENTS:	Singapore.	Feb. 21-Mar. 7.		10
TURKEY:	Damascus.	To Mar. 22	28	23

SMALLPOX—United States.

ALABAMA:	Mobile	April 18-25	6	
CALIFORNIA:	Los Angeles:	April 4-11	7	
	San Francisco	April 12-19	6	
DISTRICT OF COINMBIA:	Washington	April 18-25	1	
GEORGIA:	Atlanta	April 18-29	5	
ILLINOIS:	Belleville	April 18-25	1	
	Chicago	April 18-25	17	
	Galesburg	April 18-25	3	
INDIANA:	Indianapolis	April 18-25	1	
IOWA:	Dubuque	April 18-25	1	
MAINE:	Eastport	April 22	3	
MARYLAND:	Baltimore	April 18-25	1	
MASSACHUSETTS:	Cambridge	April 18-25	1	
	Holyoke	April 18-25	4	
	Lowell	April 18-25	2	
MICHIGAN:	Flint	April 18-25	1	
	Grand Rapids	April 18-25	2	
	Port Huron	April 18-25	1	
MISSOURI:	St. Louis	April 19-26	5	
NEBRASKA:	Omaha	April 18-25	4	
NEW HAMPSHIRE	Manchester	April 18-25	5	
	Nashua	April 18-25	3	
NEW YORK:	Buffalo	April 18-25	4	
OHIO:	Cincinnati	April 18-25	2	1
	Dayton	April 18-25	1	
	Hamilton	April 18-25	1	
OREGON:		April 22	250	
PENNSYLVANIA:	Altoona.	April 18-25	2	
	Carbondale	April 14-21	2	
	McKeesport	Mar. 28-Apr. 4.	3	
		April 18-25	3	
	Philadelphia	April 18-25	22	1
	Pittsburg	April 18-25	18	2
	Reading	April 13-20	4	
	Scranton	April 18-25	6	
SOUTH CAROLINA	Charleston	April 18-25	2	2
TENNESSEE:	Memphis	April 18-25	1	
UTAH:	Salt Lake City	April 18-25	16	
WASHINGTON:	Tacoma	April 13-20	2	
WISCONSIN:	Milwaukee	April 18-25	1	

SMALLPOX—Foreign.

BELGIUM:	Brussels	April 4-11		6
BRAZIL:	Rio de Janeiro	Mar. 29-Apr. 5.		3
CANARY ISLANDS	Las Palmas	Mar. 21-Apr. 4.	44	
CHINA:	Hongkong	Mar. 7-14	4	1
COLOMBIA:	Barranquilla	April 5-12		1
	Cartagena	April 5-12		1
FRANCE:	Rheims	April 5-12		1
GREAT BRITAIN:	Birmingham	April 4-11	6	
	Bristol	Mar. 28-Apr. 11.	6	3
	Cardiff	Feb. 21-Mar. 28.	22	1
	Dundee	Mar. 28-Apr. 11	1	
	Leeds	April 4-11	7	1
	Liverpool	April 4-11	66	2
	London	April 4-11	5	
	Manchester	April 4-11	11	1
	Newcastle-on-Tyne.	Mar. 21-Apr. 11.	4	
	South Shields	Mar. 21-Apr. 11.	8	
INDIA:	Bombay	Mar. 24-31		100
	Calcutta	Mar. 21-28		2
MEXICO:	City of Mexico.	April 5-12	14	6
RUSSIA:	Moscow	Mar. 27-Apr. 4.	1	1
	Odessa	Mar. 27-Apr. 4.	2	2
	St. Petersburg	Mar. 27-Apr. 4.	33	4
STRAITS SETTLEMENT:	Singapore:	Mar. 7-14		1
TURKEY:	Alexandretta	Mar. 27-Apr. 4.	3	

SMALLPOX—Insular.

PHILIPPINES:	Manila	Mar. 7-21	9	

YELLOW FEVER.

BRAZIL:	Rio de Janeiro	Mar. 29-Apr. 5.		33
COLOMBIA:	Panama	Apr. 15-22	2	1
COSTA RICA:	Limon	April 17		1
ME¼ICO:	Vera Cruz	April 11-25	10	4

CHOLERA—Insular.

PHILIPPINES:	Provinces	Feb 28-Mar. 14.	326	225
		Not previously reported	467	316

CHOLERA—Foreign.

INDIA:	Bombay	Mar. 24-31		1
	Calcutta	Mar. 21-28		32

PLAGUE—Insular.

HAWAII:	Honolulu	April 15		1
PHILIPPINES:	Manila	Mar. 7-21	24	17

PLAGUE—Foreign.

CHINA:	Hongkong	Mar. 7-14	17	17
INDIA:	Bombay	Mar. 24-31		1755
	Calcutta	Mar. 21-28		816

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See Advertising Page 8

VOL. XI. NO. 20 MAY 16, 1903 $5.00 PER ANNUM

The American Medical Association. The meeting of the Association last week in New Orleans seems to have been a successful one, and we shall have the pleasure of presenting brief abstracts of the proceedings in the various sections. We have not been able to find space for all the annual orations, but as these have been printed by most of our weekly contemporaries, the omission will not so much be felt. We present below, however, brief editorial comments on the excellent papers by Dr. Anders and Dr. Jonas. Both these writers selected very timely subjects for discussion in their papers, and a perusal of the originals at length will repay all medical readers. We published Dr. Billings' presidential address in our number of last week, because we felt the subject of medical education, of which he treated, was of such importance that his discussion of it should have the widest possible circulation. We say again, as we said then, that Dr. Billings did well, as the accredited spokesman of the profession, to speak clearly on this subject without fear and without favor. It is the one theme that cannot be too often agitated at the present time in this country. Let us hope that some order will come out of the chaos that now reigns.

The election of Dr. John H. Musser to the presidency of the American Medical Association was in every way a most fitting one. Dr. Musser has for years been identified with medical teaching and with the progress of scientific medicine in one of the most important centers of medical activity in the United States. The profession in Philadelphia has especial reason to be satisfied with this selection, and also with the fact that the office went to a medical man and an eastern man. If the principle of rotation is to be observed by the Association in the bestowal of its favors, these considerations should have held good for next year, as they did. The choice of Atlantic City for the place of the next meeting will also be satisfactory to members generally throughout the East. That celebrated resort offers many advantages for such a gathering. Although we have always held that the large medical centers are the best places for large medical conventions, we think that Atlantic City is so near Philadelphia and New York that it will suffer no disadvantage from being in itself not a medical center.

Cancer and Immunity.—Dr. A. F. Jonas, in his oration on Surgery, delivered at the recent meeting of the American Medical Association, discusses cancer from the point of view of its undoubted infectivity in certain cases, its probable etiology, and the light which has been shed on the general subject of immunity. Dr. Jonas' résumé of the work done in the effort to determine the etiology of cancer is interestingly presented, and we believe he has done well to adopt his conclusions upon this phase of the subject by quoting the conclusions of the Cancer Committee of the Harvard Medical School. Dr. Jonas discusses in an equally satisfactory manner the present status of the theory of immunity, and, while nothing is added to our knowledge on this subject in this contribution, the paper is of value in presenting with simplicity and clearness a subject of considerable complexity. As the result of his review of the etiology of cancer and the theories of immunity Dr. Jonas concludes that the cancer question must be solved along chemical lines. We are well aware that infectious energy does not depend on the bacteria itself, but on its products, which are purely chemical, and he holds that it would seem to matter little whether the specific parasite is found or not. Ehrlich's side-chain theory has furnished us with an excellent working hypothesis, which Jonas compares to the atomic theory in chemistry, and it appears that the field of chemistry will be the one in which the solution of cell-metamorphosis, as it is observed in pathological conditions, will be found. We may never know what influences are responsible for normal cell-division, but it is highly probable that we shall be able to determine the cause for atypical and excessive cell-growth.

The birth and growth of the cell is restricted by certain limitations, and is regulated by chemical laws, and the problem which presents itself is the ascertaining of the exact influence which carries cell division beyond its normal bounds and causes excessive cell-growth as we observe it in malignant neoplasms. It is apparent that the process is one of localized excessive nutrition. Simple traumatism itself does not develop cancer, but the lowered resistance thus produced aids the introduction of the specific cause. Dr. Jonas states his view by holding that a specific toxin must be introduced, probably also an intermediary body to complete the side-chain, which increases karyokinetic energy. The life or death of the cell depends upon its intracellular and extracellular composition, which after all reduces the problem to a chemical one.

Social Conditions in America and Their Relation to Medical Progress and Disease.—In the address in "Medicine" delivered before the American Medical Association at the recent meeting in New Orleans, Dr. Anders pays a glowing tribute to the medical profession of America. He speaks of its altruistic devotion to the interests of the public, of its enthusiasm in scientific investigation, of the improvements in the sanitary conditions that have been brought about by its persistent and energetic action. He urges a careful study of the history of medicine, particularly in America, that we may understand more clearly what our medical ancestors have accomplished. He then discusses certain factors in American life that influence—or are supposed to influence—more or less the course of disease. Taking pneumonia as a type, and New York and Philadelphia as typical cities, he has endeavored to determine whether the concentration of the population in small areas increases the mortality. It does not appear, however, from these statistics, which have been very carefully collected and made as accurate as statistics can be made, that the concentration has such a disastrous effect. Thus, in the most densely occupied area of ground in the world, the tenth ward of New York City, with its population of 638 persons per acre, the death-rate for four years was only 16.6%, whereas in the fourth ward, with only 220 persons per acre, it averaged 20%. When we take into consideration the fact that the density of population is due to the accumulation of tenement houses, that tenements are occupied, as a rule, by the poorest class of inhabitants, whose nutrition is usually insufficient, and whose work is either exposing or decidedly unsanitary, the difference is not so remarkable. Thus, in averaging the worst and the best wards in New York City, the difference was 18% and 14.3%, and in Philadelphia 21.8% and 9.5%. Nevertheless, there appears to be some slight difference against the more densely populated centers.

The American Medical Association deserves to be congratulated upon Dr. Anders' address. It was not merely laudatory; it contained a distinct inspiration to follow ideals that had been set before us by our predecessors and to do better, and at the same time it indicated a line of research that has been more or less neglected by students of morbid conditions.

Dr. Keen's Address.—Our sympathies with some of the laymen who control our numerous hospitals are sometimes sadly jarred by their own inept way of doing and seeing things. In saying this, however, we refer to only a minority, for we believe that most of these functionaries have a realizing sense of their duties. It is this small minority, which is often a very officious one, and which persistently keeps itself out of accord with medical aims and medical interests, that needs occasionally to have the benefit of a homiletic discourse. There can be no greater misfit of a man than one who serves as trustee or manager of a hospital, and thinks it is his special function to watch the doctors with the eye of a detective and the soul of a martinet. He is the man who dislikes autopsies and distrusts medical students and young doctors; who listens willingly to tales of cruelty, and takes his cue, if needs be, from sensational reporters. Such managers there are occasionally, and they can do hospital work great injury.

We think that Dr. Keen, in his address before the Congress of American Physicians and Surgeons, has shown admirable judgment and moderation in his discussion of hospital trustees. The keynote of his remarks is a plea for perfect sympathy between the managers and staff. The address is particularly well done, inasmuch as it assails no man, or class of men, but delivers some Parthian shots that will be all the more effective because they are good-natured and not entirely expected. Dr. Keen has had a large experience in hospitals, and he points out that, while the first function of such institutions is to heal the sick, this is not their only function—a fact which some of the laity can never sufficiently get into their minds.

Among the striking features of Dr. Keen's address is his recommendation of a retiring-age for hospital surgeons and physicians. It has often been said of these worthies that "few die and none resign"—but Dr. Keen would have them all retired at 65. Coming from a veteran surgeon, who refers with pardonable pride to his own record of 40 years in the hospitals, this suggestion must be received as the prompting of a wide experience; and yet few of us would willingly see the author of this address retire from his brilliant career in accord with his own suggestion. We trust that Dr. Keen will extend the time-limit.

The American Association of Pathologists and Bacteriologists.—If one may judge by the program, the members of the youngest association of the Congress of American Physicians and Surgeons, that is, the American Association of Pathologists and Bacteriologists, are doing some notable work. We doubt whether a series of articles of greater importance has ever been collected. Easily first in general interest is paper No. 21, The Etiological Factor in Variola, by Professor Councilman, of Boston. This is regarded with conflicting emotions by the medical profession. On the one hand, there is the history of uninterrupted failure and mistakes to diminish our hopefulness, and on the other, Dr. Councilman's distinguished career as a pathologist, and his well-known carefulness and accuracy in work, to increase it. There can be no doubt that something very interesting will be reported.

Another interesting feature of the program is the extraordinary amount of work that is being done by American investigators upon the various blood and bacterial ferments; of the 44 numbers no less than 21 relate to this subject. Aside from these, however, there is comparatively little relating to bacteriology; only 9 articles, of which 3 relate to the tubercle bacillus. One of these, "Observations upon the Distribution and Culture of the Chancroid Bacillus," promises to be of considerable interest.

There are two articles on the nervous system, one upon the blood, and the others relate to various matters in pathology or are the report of individual cases. Among these, one of the most interesting promises to be "A Contribution to the Knowledge of the Development and Pathology of the Islands of Langerhans of the Pancreas," by Dr. R. M. Pearce, these bodies having attracted recently much attention from clinicians as well as pathologists because of their supposed relation to diabetes.

Altogether the program is a credit to the Association, and one of which the medical profession of the United States may well be proud.

Pennsylvania Law and Christian Science.—The Supreme Court of Pennsylvania has handed down a decision sustaining the action of the late Judge Arnold, of Philadelphia, in refusing to grant a charter to the Christian Scientists. Judge Arnold took the ground, if we recollect clearly, that the Christian Scientists were an organization for profit, but the Supreme Court goes much further, and much more directly, to the main point, in holding that it is against both law and public policy to grant a charter to a set of people who proclaim their belief that disease is a figment of the imagination, and that it is their peculiar right and province to abolish it by prayer. It does seem almost absurd that it should require a judgment of the Supreme Court, given in all formality and due legal solemnity, to brand this preposterous delusion as it deserves. Still, so it is; and Judge Potter has stated the points so clearly that even the infatuated Eddyites themselves ought to see them.

Judge Potter makes very clear what we have more than once stated in these columns; namely, that this is not a question of religious belief, but a question of practice. With religious belief *per se* the law in this country does not concern itself, but when any form of religious belief crystallizes into a system of practice that is in violation of law and ethics, the law condemns and suppresses it. In this respect Christian Science is on exactly the same footing as Mormonism. Both these pestiferous cults proclaim practices which are against law and morals. The religious belief of the one, and the mumbo-jumbo of the other, are of no concern to any rational man; but the practices of both of them are inimical in the highest degree to the welfare of the State and of the public, and should be put down with a strong hand.

Of all the specious arguments ever advanced, the most transparent is the one in favor of religious toleration for a sect which, like Mormonism, undermines domestic life with a sewer of licentiousness, or for a cult which, like Christian Science, imperils the public health with an imbecile and credulous plea that disease is only sin!

We trust that the decision of the Supreme Court of Pennsylvania will be taken as a precedent by tribunals in other States—in some of which there is too often visible a tendency to obstinate wrong-headedness on all subjects relating to scientific medicine.

The Antiquity of Hospitals.—Many centuries before the Christian era there existed in India and Ceylon institutions which performed the functions of hospitals (Real-Encyclopädie, Eulenburg). They were built and maintained by the Buddhists. In the Scriptures there is a mention of what the Hebrews called Bethesda, but this was nothing more than a few rude huts in the neighborhood of a mineral spring supposed to have healing properties. According to Lecky (*History of European Morals*), the first hospital was founded by a Roman lady named Fabiola, about the fourth century, at Rome. Soon after another hospital was founded by St. Pammachus, and another by St. Basil at Cæsarea. During the crusades numerous hospitals arose in all parts of Europe. San Spiritu, built by Innocent III, was erected in 1204 at Rome. The first hospital in England was built by Lanfranc, Archbishop of Canterbury, in 1080. The first hospital of any size erected in America was the Pennsylvania Hospital in Philadelphia, begun in 1751 by Dr. Bond and Benjamin Franklin.

A Wrong Prognosis.—How important it is for a doctor not to consign his patients to a premature death, is shown clearly in some interesting correspondence of the poets Shelley and Leigh Hunt. In 1822 these wandering bards had joined Byron in Italy, intending to publish a periodical called the *Liberal.* The periodical came to grief (as many a better one has done), and Shelley was eventually drowned in the Gulf of Spezzia. Leigh Hunt had his wife and six children with him as part of his contribution, and Mrs. Hunt was naturally in poor health. In the emergency they called in the distinguished Italian surgeon, Vacca, of Pisa. "He decides," wrote Shelley, "that her case is hopeless and . . . . must end fatally." Hunt himself wrote: "My friend brought the celebrated surgeon, Vacca, to see Mrs. Hunt. He had a pleasing, intelligent face and was the most gentlemanlike Italian I ever saw. Vacca pronounced his patient to be in a decline; and little hope was given by others that she would survive beyond the year." This was in 1822, but history records that Leigh Hunt's wife did not die until 1857—a period of 35 years!

These facts are given in the works of Byron, recently published by Murray, to which we have several times alluded, and which contain not a little of medical interest.

Andrea Vacca-Berlinghieri, born in 1772 and died in 1826, was a distinguished surgeon of Pisa, and one of the most noted of his contemporaries in Italy. Probably his best-known work was on a method of extracting stone from the bladder by way of the rectum. He was evidently not an expert in lung diseases, else Mrs. Leigh Hunt would have died sooner! Her case reminds us of the adage that a creaking gate hangs longest on its hinges.

Reviews.

Cellular Toxins, or the Chemical Factors in the Causation of Disease. By Victor C. Vaughan, M. D., LL. D. and Frederick G. Novy, M. D., Sc. D. Fourth Edition. Lea Bros. & Co. 1902.

The romance of biology is the field that is gradually unfolding before our gaze. Fifty years ago, when bacteria were unknown, it was felt by some that the science of medicine, broadened as it had been by the discovery of auscultation, by the development of percussion, and by the careful systematic study of disease, had almost reached its limit. To-day, when we know the names and some of the characteristics of the bacteria associated with a small proportion of the infectious diseases, the same statement is being heard. And yet, every hour almost, some new discovery is being made which amplifies our knowledge, or indeed may almost revolutionize it. It is a long step from the old humoral doctrine to the modern doctrine of these peculiar substances, call them toxins, ptomaines, agglutinins, or what you will, that are elaborated in the bodies of the microscopic cells, and, once introduced into the circulation of a living organism, or mixed with the products of a living organism in the test-tube, give rise to such extraordinary physiological disturbances, or to such remarkable chemical and physical reactions. Indeed, so rapid has been the development of this subject, so novel have been the means by which the work has proceeded, that it is necessary for the progressive medical man to learn a new vocabulary in order to keep pace with it. It has been the task that Drs. Vaughan and Novy have set themselves, to summarize and analyze the work that has been done. The first part of their "Cellular Toxins" is devoted chiefly to the newer fields of the subject, the phases that have to do with the agglutination of bacteria, and the work that has followed the discoveries of Pfeiffer, Gruber and Widal; with the agglutination or solution of red bloodcells that has followed the investigations of Bordet, Ehrlich and others; with the study and nature of the so-called specific or special precipitins that has followed the discoveries of Kraus; with the interesting zoölogical and medicolegal questions that are associated with the investigations of Uhlenhuth upon the specific reactions of the bloodserum; with the interesting, almost startling, results of the investigations of von Dengern, Metchnikoff and a host of others, upon the cytolysins, and the remarkable conclusions and deductions to be drawn from this work with regard to the nature of certain diseases, and particularly with reference to therapeutics, as for example the suggestion of von Dungern in regard to carcinoma. The book can be described as a critical summary of the literature of the subject, remarkably well done. We have personally covered a large part of this literature and can testify to the completeness of the work and the accuracy of the different abstracts. It contains, aside from the manner of presentation, nothing original. The number of abstracts, however, that have to do with the work of Vaughan and Novy themselves, and the well-known value of this work to the progress of medicine, is sufficient evidence that, although in this book they are critics rather than authors, their critical faculty has been corrected by a thorough knowledge of the difficulties of original investigation. The ninth chapter is devoted to immunity; it is an excellent presentation of this complex subject. We cannot help feeling that with the increase of our knowledge regarding the actions and reactions of bacteria and the larger organisms a time will come when this subject will undergo a simplification that at the present moment, in view of the very complex experiments that have been performed, seems impossible. But the nature of this book precludes indulgence in prophecy. It has been the intention of the authors to present the current theories, and they have done it well. Not well enough, perhaps, to make it clear to the uninitiated, but that is probably beyond the power of anyone.

Chapters X and XI deal with food poisoning and the examination of poisonous foods, and are of general interest to physicians, and of particular interest to the medicolegal expert. The same is true of chapter XIII., which speaks of certain ptomaines obtained from putrefying organic material that give reactions similar to those of some of the alkaloids.

Chapters XIV and XV represent the essential part of the first edition of this book, which was entitled The Ptomaines and Leucomaines. The literature on this subject goes back much further than those upon the subjects treated in the earlier portion of the book.

We cannot refrain from expressing ourselves as very much pleased with this book. It has the great advantage of being written for a definite purpose, of fulfilling that purpose very satisfactorily, and of being alone in its field. It is remarkably up-to-date, as such a work should be, including, as it does, the investigations of Flexner and Nogouchi upon the venom of serpents. The adverse criticism that we have to make concerns the flimsy character of the binding and the poor quality of the paper. The printing is good and the proofreading is excellent. [J. S.]

Saunders' Medical Hand-Atlases. Atlas and Epitome of Traumatic Fractures and Dislocations. By Professor Dr. H. Helferich, Professor of Surgery at the Royal University, Greifswald, Prussia. Edited, with additions, by Joseph C. Bloodgood, M. D., Associate in Surgery, Johns Hopkins University, Baltimore. From the fifth revised and enlarged German edition. With 216 colored illustrations on 64 lithographic plates, 190 text-cuts, and 353 pages of text. Philadelphia and London. W. B. Saunders and Co., 1902. Cloth, $3,00 net.

The present edition of this valuable atlas of fractures and dislocations has been enriched by the addition of 9 skiagrams and 21 text-figures and by the lengthening and correction of the text. The injuries which one most frequently meets are described in detail, while the rarer forms are dismissed with a few words. In order to assist in the interpretation of the skiagrams, the author uses outline-sketches of skiagrams of normal joints. Fractures and dislocations are best studied in the hospital, laboratory and museum. For those who lack clinical opportunities or who have not access to a surgical laboratory or a pathological museum, the next-best thing is a careful study of an atlas with the corresponding parts of a skeleton in his hand. The atlas before us pictures the visible external deformity, shows the skiagram, portrays the anatomical preparation and illustrates the method of dressing of the fracture or dislocation.

The book has been Americanized by Dr. Joseph C. Bloodgood, who makes some valuable additions to the text from his own experience and from current literature. The plates and text-figures are admirably executed, the type is clear, the paper is of a high grade, and the binding is good.

Although we do not agree with some of the details in the treatment advised, we strongly recommend this atlas to students, general practitioners and surgeons. [F. T. S.]

The Practical Medicine Series of Year-Books, comprising ten volumes on the year's progress in Medicine and Surgery, issued monthly under the general editorial charge of Gustavus P. Head, M. D., Professor of Laryngology and Rhinology, Chicago Post-Graduate Medical School. Vol. II, General Surgery, Edited by John B. Murphy, M. D., Professor of Surgery, Northwestern University Medical School. November, 1902. Chicago: The Year-Book Publishers.

The 1902 edition of this year-book is a much better work than the edition of 1901. The abstracts are of greater length, and to the man content with abstracts of much greater value. The paper of this edition is of a higher grade, and the type and cuts are much more clear. The critical comments are numerous and quite lengthy and, coming from such a well-known man as the editor, of great interest and value to the practising surgeon. "Procrastination is still the cause of the greatest mortality in surgical diseases. The carcinomata are still unrecognized until their inoperable and fatal metastases have taken place. The pulmonary abscess or gangrene is not differentiated from its preceding pneumonia. Mechanical ileus is too frequently confounded with paralytic ileus, circumscribed peritonitis and fat necrosis. Middle meningeal hemorrhages are not treated until their permanent or fatal damage is accomplished. Peritonitis is still unoperated until fatal desquamation or blistering of the peritoneum has taken place. The strictured urethra and enlarged prostate are tolerated until irreparable renal changes result."

The newer fields of surgery, pancreatic, renal, vascular and nervous, are well represented and particular attention is given to anesthesia. As might be expected, the gall-bladder and vermiform appendix demand a large share of attention.

Although we note the absence of any reference to several important papers which have been published during the past year, the reviews are representative and of sufficient length adequately to meet the demands of the general practitioner. [F. T. S.]

A Text-Book of Surgical Principles and Surgical Diseases of the Face, Mouth and Jaws for Dental Students. By H. Horace Grant, A. M., M. D., Professor of Surgery and of Clinical Surgery in the Hospital College of Medicine; Professor of Oral Surgery in the Louisville College of Dentistry etc. Philadelphia and Landon: W. B. Saunders and Company.

The object of this book is to present to the student of dentistry the principles of dental surgery and to discuss such surgical lesions as are likely to require diagnosis and perhaps treatment by the dentist. Only such details as belong to a technical understanding of the subject are given. The author opens his book with a brief consideration of bacteriology, and then proceeds with the essentials of inflammation, ulceration, gangrene and the surgical fevers. The treatment of surgical emergencies is laid down, and a chapter is devoted to anesthesia both general and local. Eleven of the 29 chapters are devoted to diseases and injuries of the face, mouth and jaws.

The book is necessarily elementary, as few dentists practise even minor surgery. The language of the book is simple and clear, the paper and illustrations are excellent, and the type is large and distinct.

We recommend the work to those for whom it is intended, the students of dentistry. [F. T. S.]

Eddyism in the Sixteenth Century.—"Until it is learned that generation rests on no sexual basis, let marriage continue." ("Science and Health, with Key to the Scripture," one hundredth edition, 1896, p. 274). If Mrs. Eddy had lived in the sixteenth century, would she have endorsed the following decree of the Parliament of Grenoble, February 13, 1537, or would she, like most of us, have "winked the other eye"?

"Considering the evidence showing that it is more than fours years since the said Lord of Aiguemère has carnally known the said Lady of Auvermont; considering the defence of the said lady, declaring that, although she has not carnally known her husband, yet having imagined in a dream the person and contact of the said Lord of Aiguemère, she experienced the same sensations of conception and pregnancy that she might have received in his presence, and affirming that, since the absence of her husband, for four years, she has never had intercourse with any man, and that she has nevertheless conceived and borne the said Eammanuel, which she believes to have come about by the force of her imagination; considering the deposition of the Ladies of Albriche, of Pontrinel, of Orgeval, etc., affirming that such an accident may happen to women; that such things have happened to themselves and that they have conceived children of which they have been happily delivered, which resulted from certain imaginary intercourse with their absent husbands, and not from copulation; considering the attestation of the midwives and of the physicians; the court decrees that the said Emmanuel is and shall be declared the legitimate and true heir of the aforesaid Lord of Aiguemère, and charges the appellant to hold the said Lady of Auvermont as his wife in estate and honor. (*Gazette hebdomadaire des Sciences médicales de Bordeaux.*)

News and Notes.

AMERICAN

PHILADELPHIA AND PENNSYLVANIA.

Director of Public Health and Charities.—Mayor Weaver announced on May 4 the appointment of Dr. Edward Martin as the new director of Public Health and Charities. The new incumbent is well known in Philadelphia medical circles. He was born in Philadelphia in 1859. He received his A. B. and A. M. from Swarthmore College. He was graduated from the Medical Department of the University of Pennsylvania in 1883. He is Professor of Clinical Surgery at the University Hospital, surgeon at the Howard, St. Agnes, Philadelphia and University Hospitals, a trustee of Swarthmore College and a director of the Western Savings Fund. When the Spanish-American war broke out Dr. Martin was surgeon of the Third Regiment, and went to Tampa with that body. He was appointed Brigade Surgeon by President McKinley, and afterward was made Sanitary Inspector of the Fourth Army Corps by General O'Reilly.

Professor Kehr's Clinic.—While en route to the Congress of American Physicians and Surgeons in Washington, Professor Hans Kehr, of Halberstadt, Germany, gave 2 clinics at the Polyclinic Hospital, May 6 and 7. Professor Kehr is well known for his work in surgery of the gall-bladder.

Presbyterian Hospital.—Drs. John W. Gordon, Frederick N. Henderson, Frank C. Knowles, Tasker Howard and W. Otis Thompson were elected resident physicians at the Presbyterian Hospital. The last-named is a graduate of Jefferson Medical College, while the first four are graduates of the University of Pennsylvania.

An Historical Letter.—The Medical Department of the University of Pennsylvania has received from the Board of Trustees of the Rush Medical College, Chicago, a letter written by Dr. Rush to Dr. Pettikin on April 12, 1812. Dr. Rush was professor of chemistry in the University from 1768 to 1789, of the theory and practice of medicine 1789 to 1792 and of clinical medicine till the time of his death in 1813.

Society Meetings Next Week.—The following societies will meet next week at the College of Physicians, Philadelphia at 8.15 P. M.; Monday evening, May 18, Section on Medicine; Wednesday evening, May 20, Section on Otology, and Thursday evening, May 21, Section on Gynecology.

Methodist Hospital.—As a result of the competitive examination held recently the following men were elected as resident physicians for the ensuing year. Drs. H. M. Imboden, W. D. Richmond, W. C. Lippincott and John B. Kaufman. The first-named is a graduate of Jefferson Medical College, and the remainder are graduates of the University of Pennsylvania.

Bequests.—By the will of the late Hiram Brooke, who died April 21, the Pennsylvania Hospital, German Hospital, Jefferson Hospital, Episcopal Hospital and the Bethany Dispensary have received $2000 each; St. Joseph's Hospital, Insane Department of Pennsylvania Hospital and the Jewish Hospital $1000 each; Philadelphia Dispensary, St. Timothy's Hospital and the Home for Consumptives, Chestnut Hill, $500 each. Various sums were left to other charities throughout the city.

Pennsylvania Hospital.—The annual meeting of the contributors of the Pennsylvania Hospital was held on May 4. During the year just closed, 40,701 patients were treated, and of these only a small number paid for board and treatment. The prevalence of typhoid fever in the city and the inability of the poor to obtain coal, necessitated the opening of an emergency ward for the winter, and as many as 120 persons suffering from typhoid fever occupied beds in the wards at one time. A large and well-equipped storage plant has been installed by John Story Jenks, one of the managers, and the Memorial Building, dedicated to medical and hygienic treatment, presented to the department for insane women by another of the managers, John E. Gillingham, has been completed. A gift of $15,000 was received from Frederick A. Ayer, of New York, the income of which is for the publication of the reports of the Ayer Clinical Laboratory. These managers were elected: Benjamin H. Shoemaker, T. Wister Brown, Charles Hartshorne, James T. Shinn, John B. Garrett, John W. Biddle, John T. Lewis, Jr., John S. Jenks, Joseph E. Gillingham, Archibald R. Montgomery, Henry H. Collins and Joseph B. Townsend, Jr. Benjamin H. Shoemaker was elected president and James T. Shinn, secretary. The officers of the different departments were all re-elected. Expenditures for the Pine Street Hospital for maintenance during the past year had been $135,184, which is $37,000 more than the income.

Dr. Mayo's Visit.—Dr. William J. Mayo, of Rochester, Minn., was the guest of the Academy of Surgery at its meeting on May 11. Dr. Mayo read a paper on "Three Hundred and Three Operations on the Stomach." Before the meeting of the Academy, Dr. Mayo was tendered a dinner at the Rittenhouse Club by Drs. Richard H. Harte, William J. Taylor and Robert G. Le Conte. A number of invited guests were present. Following the meeting a reception was given Dr. Mayo at the Hotel Bellevue.

Professor von Mikulicz's Clinic.—Professor von Mikulicz-Radecki, the well-known German surgeon, will hold a clinic on stomach surgery at the Jefferson Hospital on May 26.

Cerebrospinal Meningitis at League Island.—There have been 3 deaths from cerebrospinal meningitis in the 8 cases which have occurred among the sailors on board the *Minneapolis* and *Puritan* at the League Island Navy Yard. Two cases of measles are also reported.

NEW YORK AND NEW JERSEY.

Scarlet Fever on the Columbia.—Scarlet fever has broken out on the steamship *Columbia* at the Brooklyn Navy Yard. Three of her crew have been taken down by the disease during the last week. There are over 1000 sailors on the vessel, and the strictest quarantine is enforced.

Dr. George L. Peabody, who has resigned the chair of materia medica in the College of Physicians and Surgeons, Columbia University, has received a handsome silver loving cup from the student body.

Camden County Medical Society, Camden, N. J.—At the annual meeting, held May 12, the following officers were elected for the ensuing year: President, Dr. John W. Marcy; vice-president, Dr. Joseph H. Witts; secretary, Dr. Paul Mecray; and treasurer, Dr. John W. Fithian.

Damages Awarded.—Dr. Justin Herold, of New York, has recovered a verdict of $12,158 against the Metropolitan Street Railway Co. for injuries he sustained three years ago in a collision, while a passenger on one of their cars.

Dr. H. H. Rodman, of New York, who was surgeon of the hospital-ship *Maine*, has been presented by the British War Office with the war medal and clasp for the South African War, and also with the medal for the China War.

NEW ENGLAND.

Care of Massachusetts' Insane.—At a recent meeting of the committee on public charity institutions of the Massachusetts Legislature, Dr. Codman, of the State Board of Charities, advocated the passage of the act made necessary by the new law providing for the care of the insane. There are at present 900 insane in the Almshouse of the State. Under the new act there will be no authority for keeping these patients in the almshouses, and the Board has recommended the passage of legislation which will enable them to be cared for in the almshouses for the present. The bill suggested by the Board provides that the cities and towns caring for these chronic cases in their almshouses shall receive $2.80 per week for each patient, this being about the average cost. There would be an overcrowding of the state institutions if the board were compelled to take care of all these 900 patients at this time.

Research on Floating Hospital.—Using for a basis the results of former researches, especially what Shiga has done in Japan, the Boston Floating Hospital this summer will study the etiology of dysentery, and treat the patients with the newly discovered antitoxin for this and allied diseases. It is through the investigation by the Rockefeller Institute for Medical Research that this may be done. The decision in the matter was left to Dr. Theobald Smith, State bacteriologist for Massachusetts, and on his recommendation those in charge of this investigation authorized the medical staff of the Boston Floating Hospital to employ a suitable person for the work. Arthur I. Kendall, Ph. D., is their choice. He is a graduate of the Massachusetts Institute of Technology; is one of the Lawrence

State Experiment Station bacteriologists, and took his Ph. D. in bacteriology at Johns Hopkins by special work under Professor Welch. He will have the aid of Dr. Hibbert Winslow Hills and the laboratory of the Boston Board of Health.

Association of Military Surgeons.—The Russian Government has appointed Dr. Wreden as its officiel representative to the Congress of the Association of Military Surgeons, which will meet in Boston, May 19 next.

SOUTHERN STATES.

The American Neurological Association held its twenty-ninth annual meeting at the Arlington Hotel, Washington, D. C., on May 12, 13 and 14.

American Medical Association.—At the recent meeting held in New Orleans, La., May 5 to 8, the following officers were elected for the ensuing year: President, Dr. John H. Musser, Philadelphia; First Vice President, Dr. G. C. Savage, Nashville, Tenn.; Second Vice President, Dr. Isadore Dyer, New Orleans; Third Vice President, Dr. C. L. Hall, Missouri; Fourth Vice President, Dr. G. F. Jenkin, Iowa; Treasurer, Dr. Henry P. Newman, Chicago; Secretary, Dr. George H. Simmons, Chicago; Board of Trustees, Dr. W. H. Welch, Baltimore; Dr. Myles F. Porter, Fort Wayne, Ind., and Dr. M. L. Harris, Chicago. Surgery and Anatomy, Dr. C. A. Powers, Denver, Chairman; Dr. E. W. Andrews, Chicago, Secretary. Hygiene, Dr. Alexander Lambert, New York, Chairman; Dr. J. S. Miller, Chicago, Secretary. Materia Medica, Dr. O. T. Osborne, New Haven, Chairman; Dr. C. D. N. Hallberg, Chicago, Secretary. Diseases of Children, Dr. C. G. Kerley, New York, Chairman; Dr. C. F. Wahrer, Fort Madison, Ia., Secretary.

Medal for Dr. Travers.—Dr. John C. Travers, of Baltimore, has received one of the West Indian medals from the Treasury Department at Washington, which were awarded to all persons who participated in the engagement off Cienfuegos, Cuba, on May 11, 1898, during the Spanish-American War. At that time Dr. Travers was a surgeon on board the revenue cutter *Windom*, co-operating with the navy.

American Academy of Medicine.—At the meeting held in Washington, D. C., May 11 and 12, the following officers were elected for the ensuing year: President, Dr. John B. Roberts, of Philadelphia; vice-presidents, Drs. T. B. Davis, of Pittsburg; J. H. McBride, of Pasadena, Cal.; J. P. Searcy, of Tuscaloosa, Ala., and S. A. Knopf, of New York; secretary, Dr. Charles McIntire, of Easton, Pa.; assistant-secretary, Dr. A. R. Craig, of Columbia, Pa.; and treasurer, Dr. E. A. Green, of Easton, Pa. The next meeting will be held at Atlantic City, N. J., June 11 to 13, 1904.

Congress of American Physicians and Surgeons.—At the opening meeting, the president, Dr. W. W. Keen, of Philadelphia, announced that a committee had been appointed to take charge of the project of erecting a memorial in this city to the late Dr. Walter Reed, of the Army Medical Department, whose experiments tended to prove that mosquitoes transmit the infection of yellow fever. It is proposed to raise at least $20,000 for the memorial.

American Therapeutic Society.—At the meeting held in Washington, D. C., the following papers were read on the first day, May 12: Cardiac Drugs in Heart Disease, by Dr. O. T. Osborne, of New Haven; Altitude Treatment, by Dr. J. N. Hall, of Denver; X-Rays in the Cure of Morbid Growths, by Dr. Reyburn, of Washington, D. C.; Gall-Stones, by Dr. Fowler, of New York, and the Control of the Purity and Standard Quality of Drugs, by Dr. W. H. Wiley, of Washington, D. C.

CANADA.

(From Our Special Correspondent.)

An Amendment to the British Columbia Medical Act was recently suggested to the Premier of the Pacific province when a large delegation of medical men waited on him asking that the amendment which is now before the Legislature should be so altered as to permit of legitimate grievances being heard and not mere trifling complaints. It was suggested by the doctors that any complaint against a medical practitioner should first be made before a Supreme or County Court judge, and it would be for him to determine whether the complaint was of sufficient gravity to be the subject of investigation by the Medical Council. The Premier considered that the suggestions of the delegation were reasonable and would probably be adopted.

Darcy Island (B. C.) Leper Station has passed from the jurisdiction of the City of Victoria to that of the provisional government, and this after long years of agitation on the part of the Victoria city council. An order in council was recently passed at Ottawa which provides that before the provincial government gets its share of the Chinese capitation tax, they shall pay over to the various cities in the province the amounts which the latter have expended on patients sent to Darcy Island. There are but three patients at the station now, and weekly visits are paid them by the inspector; quarterly visits are made by Victoria civic officials.

The Physicians of the Province of New Brunswick are seeking further protection and have a bill before the legislature looking toward that end. The amendment to the New Brunswick Medical Act provides that no duly registered member of the New Brunswick Medical Society or College of Physicians and Surgeons shall be liable to any action for negligence or malpractice by reason of professional services unless such action be commenced within one year from the date when, in the matter complained of, such professional services terminated.

Ontario Will Soon Have an Asylum or Hospital for Epileptics.—The Ontario Government has decided to erect public buildings at Woodstock, Ontario, and for the purpose an item of $30,000 has been placed in the estimates which will be for a hospital for epileptics. The official insane in Ontario are classified into 3 classes, the harmless insane, such as epileptics of whom there are said to be no less than 1,000 in the province; the curable; and the incurable. All these 3 classes will in time be kept in separate buildings. The institution will be developed on the detached building principle.

The New Protestant Contagious Diseases Hospital for Montreal, to be known as the Alexandra Hospital, is now an assured fact owing to the vexed question having been settled by the action of the City Council encouraging the building of separate hospitals for the Roman Catholic and Protestant communities. Subscription lists have been opened, toward which Sir William Macdonald has contributed $10,000, the Hon. George A. Drummond, $2,500, and several others like large amounts. The Notre Dâme hospital authorities are also moving rapidly in the matter of the Catholic institution, and it is expected that both institutions will be fully equipped by next September.

The Insane in British Columbia, according to the recent report of Dr. Manchester, the medical superintendent of the B. C. Asylum, at the commencement of the past official year numbered 284 patients, with eight on probation. During the past year 121 were admitted to the institution, 95 males and 26 females. The increase in admissions as compared with the previous year shows 6, all males. The discharges during the year numbered 61 and the deaths, 26, which figures are identical with those of the previous year. The year closed with 16 patients on probation, and there remained in residence 311. The total number of insane in the Dominion of Canada according to statistics is 16,495, or 3.1 to the 1,000 of population. In the other provinces the numbers are as follows: Manitoba, 565; New Brunswick, 1,054; Nova Scotia, 1.392; Ontario, 7,511; Prince Edward Island, 357; Quebec, 5,245.

The Proposed Dominion Medical Council has received a set-back, but it is to be hoped only for a time, through the action of the Quebec legislature defeating by a large majority the motion which sought to have that body adopt the Canada Medical Act, 1902. The Canada Medical Act, after several years of effort on the part of Dr. Roddick, M. P., Dean of the Medical Faculty of McGill University, was successfully got through the Dominion Parliament last session. Since then all the provinces with the exception of Quebec have expressed their acceptance of it through their medical councils, and all have taken the steps necessary to give their acceptance effect. Recently there has been an agitation in the province of Quebec for amendments to the Canada Medical Act; and the matter was fully discussed at the Montreal Medical Society in March at which several amendments were decided on. The Medical Faculty of the University of Toronto has considered these proposed amendments and has issued a memorandum stating that these proposed amendments cannot be accepted by Ontario.

MISCELLANY.

Cholera in the Philippines.—A despatch from Manila under date of May 10 states that the quarantining of army transports bound for San Francisco has been resumed on account of the cholera. The epidemic is making slight gains.

Bubonic Plague in Peru.—A despatch from Quaquil, Ecuador states that Callao and Piser, Peru, have been officially declared infected with the bubonic plague.

To Regulate the Opium Habit.—The Philippine Government in considering the badge system of controlling opium-eating in the islands. The Taft government has come to the conclusion that the traffic in the drug must be restrained, and that the practical way to do it is to grant concessions for its sale and then hold the concessionaries strictly to account for their transactions. They would be allowed to sell only to persons addicted to opium and confirmed in the habit, and would be obliged to report the number of persons whom they supplied and the amounts sold to each individual daily. The syndicate that wants the concession consists mainly of Chinamen of large capital, and they are urging the adoption of the badge system of identifying opium consumers. This system is in vogue in China and proves of great service there in regulating the traffic, and shows just how much of the drug is used and can be taxed. The concessionaries would, under heavy penalties, be restrained from selling to any badge wearer more than the stipulated amount shown on the badge. The opium to be sold is that which has been boiled and prepared, and the syndicate would pay for the license to manufacture and also for dealing in the drug in a retail way.

Yellow Fever at Costa Rica.—A despatch from Limon dated April 23 reports 3 cases and 2 deaths from yellow fever. The disease appears to be increasing, and to be graver in type.

Adulteration of Chinese Tobacco.—Dr. Patrick Manson has recently shown that Chinese tobacco often contains appreciable quantities of arsenic, introduced, apparently, mainly with the idea of giving the weed a garlic flavor.

Foot and Mouth Disease in the Argentine Republic. A cablegram has been received by the State Department, Washington, from Buenos Ayres, confirming the reported outbreak of foot and mouth disease in the Argentine Republic. The Department of Agriculture in Washington has also received word of a fresh outbreak of the disease in a herd at Framingham, Mass., in spite of the fact that the epidemic was believed to have been wiped out in New England.

Notes.—Dr. Altamirano, of the National Medical Institute of Mexico, claims to have discovered a new narcotic in the seeds of white zapote. It is said to be used with good effect in overcoming the insomnia of insanity.—It is alleged that there is only one doctor available for a population of 13,000 in the West Indian island of Nevis.—The final census returns show that the population of India is 294,266,701.—The United States is the only country in the world possessing 3 cities of over a million people.—One hundred and fifty children out of 1000 born die before they are a year old.—Modern antiseptic treatment is credited with a reduction in mortality from large caliber wounds in the American army to 8%. In the Civil War it was 57%.—There are nearly 20,000 known medicinal remedies.—Lithium is a metal used only in medicine, its salts being valuable in rheumatic affections. It costs $1100 a pound.—Spinach has medicinal properties equal to all blue pills ever made.—Cairo has the only medical school in Egypt.—Thirteen doctors have been nominated for members of the Legislature in Kansas.—Postal cards bearing the portrait of the late Prof. Virchow are being sold in enormous quantities all over Germany.—Fear is said to be responsible for 90% of diseases contracted.—There are 25,000 pores in the hand of a man. There are 4500 muscles in the body of a moth.—Five hundred and forty pounds of blood pass through the heart within a single hour.—Quarantine was first established against infectious diseases in the tenth century.—Within the last 10 years more new methods have been devised for dealing with consumption than for any other human ailment.—Someone has been figuring out the number of words a man utters in a year, and finds the average to be 11,800,000 words.—The total number of lepers in the Philippine Islands is estimated at about 12,000.—Baldness afflicts almost any young man who spends any length of time in the Philippines.—Thirty thousand Filipinos have been vaccinated by Americans.—The 10,000,000 inhabitants of Caucasia are made up of the remnants of many ancient nomadic tribes. According to Russian statistics only 2,500,000 are Russians, 1,000,000 are Armenians, 1,500,000 Tartars and Georgians, while the rest are principally Mohammedan tribes. It is asserted that there are 30 different languages and dialects spoken in Causacia.—Owing to the difficulty of obtaining trained sanitary surveyors and inspectors, Dr. Nield Cook, the Health Officer of Calcutta, is attempting to induce the local Government to start an Institute for a six months' course of instruction in sanitation for young licentiates in medicine and surgery, who at present get no really sound instruction in hygiene.

Obituary.—Dr. Samuel Addis, at New Orleans, La., April 19.—Dr. John P. Bryson, at New Orleans, La., May 5, aged 55 years.—Dr. William N. Lemen, at Hedgeville, W. Va., May 2, aged 72 years.—Dr. H. Gray Latham, at Lynchburg, Va., May 5, aged 71 years.—Dr. Charles Haas, at Staunton, Va., May 5, aged 32 years. Dr. George W. Hunton, at Warrenton, Va., May 6, aged 78 years.—Dr. Charles William Doyle, at Santa Cruz, Cal., May 3, aged 51 years.—Dr. John J. Healy, at Philadelphia, Pa., May 7, aged 54 years.—Dr. Herman H. Schaberg, at Kalamazoo, Mich., April 24, aged 54 years.—Dr. Hiram Long, at Sunbury, Pa., April 24, aged 71 years.—Dr. H. T. Breckbill, at Columbus Grove, Ohio, April 22, aged 60 years.—Dr. Charles E. Reese, at Lowndesboro, Ala., April 25.—Dr. Thomas McCann, at Pittsburg, Pa., May 9, aged 40 years.—Dr. Edward De La Grandja, at Boston, Mass., May 11, aged 73 years.—Dr. Byron W. McKeen, at Saxonville, May 7, aged 28 years.—Dr. Frank Daniel, at Moultrie, Ga., May 8.

FOREIGN.

GREAT BRITAIN.

League of Mercy.—The Prince and Princess of Wales, as Grand President and Lady Grand President of the League of Mercy, will receive the presidents and vice-presidents, and other workers for the League, at a garden party at Marlborough House on May 22. The League has been instrumental in contributing $110,000 to the King Edward's Hospital Fund for London, and a Samaritan branch of its work is being organized.

The Craggs Prize.—The Craggs Prize of £50 ($250) will be awarded in October to the past or present student of the London School of Tropical Medicine who has made the most valuable contribution to tropical medicine.

CONTINENTAL EUROPE.

The Rothschild Polyclinic.—A polyclinic has just been opened in the Rue Mercadet, Paris, by Baron Henri de Rothschild, who purposes to give lectures to medical students and doctors on the treatment of newborn children, among whom the mortality is very great in France, in connection with the decrease of population.

Victoria Memorial Hospital, Nice, France.—The cornerstone of the Victoria Memorial Hospital was laid at Nice, France, May 7, by the Grand-Duchess Mary of Saxe-Coburg and Gotha, who was accompanied by Princess Beatrice.

The Seegen Prize.—It is announced that Prof. Joseph Seegen proposes to offer a prize, under the auspices of the Imperial Academy of Sciences in Vienna, for the best answer to the following question: "Is any part of the nitrogen of the albuminates which have undergone metabolism in the animal body eliminated either by the lungs or by the skin in a gaseous form?" The prize offered amounts to about $1,000, and essays may be written in German, French or English, and must be sent before February 1, 1904.

Professor Zakharoff, of the Faculty of Medicine of the University of Warsaw and Director of the Veterinary School of that city, is likely to fall a victim to his zeal for scientific research. In making a necropsy of the brain of a dog which had died of rabies, he inflicted a slight cut on one of his fingers, to which he paid no attention. About a fortnight later symptoms of hydrophobia appeared, and he was taken to the Pasteur Institute, which is under the direction of Professor Palmyski. There is said, however, to be no hope of Professor Zakharoff's recovery.

The Latest Literature.

BRITISH MEDICAL JOURNAL.

April 25, 1903. (No. 2208.)

1. An Address on the Importance of an Early Diagnosis of Cancer of the Stomach, With a View to Radical Treatment, with Remarks on Operative Results Immediate and Remote. A. W. MAYO ROBSON.
2. The Surgical Treatment of Gastric Ulcer. C. MANSELL MOULLIN.
3. Case of Partial Gastrectomy, with Remarks upon the Treatment of Malignant Diseases of the Stomach. B. G. A. MOYNIHAN.
4. Case of Chronic Pancreatitis, with an Account of the Post Mortem Examination. GILBERT BARLING.
5. An Analysis of 110 Operations for Strangulated Hernia. WILLIAM THORBURN.
6. Two Cases of Interstitial Nephritis in Congenital Syphilis. With Remarks on Syphilis as an Etiological Factor in Nephritis. G. A. SUTHERLAND and J. W. THOMSON WALKER.
7. Knock-out Blows. JAMES GRAY DUNCANSON.

1.—Robson says that it is desirable to make an **early diagnosis of carcinoma of the stomach** in order that a radical operation may be performed at the earliest possible moment. It may be needful, indeed, to do an exploratory operation in order to complete or confirm the diagnosis; but this exploratory operation carries little or no risk in the early stages of the disease. In a case in which a tumor is perceptible an exploratory operation is advisable for the purpose of radical or palliative treatment. When the disease is too extensive to permit of a radical operation, the palliative operation of gastro-enterostomy may considerably prolong life. Indeed, after this operation some cases, thought to be examples of extensive carcinoma, clear up. In cases of extensive disease of the cardiac end of the stomach, gastrotomy may prolong life and prevent death by starvation. In a case in which both removal and gastro-enterostomy are out of the question, jejunostomy may prove of service to the patient. In some cases complete cure will follow the radical operation of removal of the disease. [J. M. S.]

2.—Moullin believes that, in the future, **chronic ulcer of the stomach** will be regarded as an indication for operation just as much as chronic inflammation of the appendix. He has operated upon 15 patients with 2 deaths; in 12 of these patients the ulcer was excised or ligatured; in 2 gastrojejunostomy was performed, and in one the ulcer was found in the duodenum. In acute ulceration there are only 2 indications for operation, perforation and hemorrhage. [F. T. S.]

3.—Moynihan states that **malignant disease of the stomach** begins, in the majority of instances, in the pylorus just below the lesser curvature: that from this point it spreads most rapidly in the submucosa; that the rate of growth toward the cardiac orifice is rapid, toward the duodenal side extremely slow, and that the tendency of the growth is to drift toward the curvatures. There are 3 chief lymphatic areas of the stomach; an area along the lesser curvature, an area along the greater curvature, and an area which comprises the greater tuberosity of the stomach and which is rarely affected by carcinoma spreading from the pylorus. An operation which removes the pylorus together with the first 2 areas will remove the primary growth, the lymphatic vessels draining the area in which the primary growth occurs and the lymphatic glands into which these vessels drain. Moynihan reports such a case, the patient dying, 312 days after operation, of metastases in the lungs. [F. T. S.]

4.—Barling reports the case of a man, who complained of epigastric and right hypochondriac pain accompanied by shivering, vomiting and jaundice. The condition was thought to be due to gall-stones, and the patient was operated upon. At the operation, however, no gall-stones were found, but a firm lobulated mass was found in the region of the head of the pancreas which, it was feared, was a malignant growth. The operation was followed by marked improvement: but 4 years later the same train of symptoms returned, and the patient was operated on a second time; the gall-bladder was emptied of fetid bile, pus and 2 gall-stones. The gall-bladder was drained, and the drainage tube was retained for 10 months. As soon as the drainage tube was removed and the sinus nearly closed, the old symptoms returned. The patient was then operated upon a third time, the gall-bladder was anastomosed to the transverse colon in order to get the bile around the obstruction caused by the pressure of the enlarged pancreas on the common bile-duct. After this operation the patient, who at first improved, died from intestinal hemorrhage, which calcium chloride was powerless to control. At autopsy the liver, stomach, colon, spleen and duodenum were firmly bound together and to the abdominal wall by adhesions. There was a sloughing ulceration in the lower part of the gall-bladder, from which the hemorrhage came. The pancreas was hard and dense and presented evidences of **chronic interstitial pancreatitis**, both macroscopically and microscopically. [J. M. S.]

5.—Thorborn publishes an analysis of 110 operations for **strangulated hernia.** [F. T. S.]

6.—Sutherland and Walker report 2 cases of **interstitial nephritis in congenital syphilis.** In one case, that of a child, aged 16 months, there was an associated arteritis obliterans of the cerebral arteries. In both cases the disease process in the kidneys consisted of a diffuse infiltration of the interstitial tissue of the cortex. In both cases there were evidences of congenital syphilis. The kidneys in both cases were fully developed. The importance of syphilis as a causative factor in these cases cannot be disregarded. The authors believe that syphilis is the sole cause of many cases of interstitial nephritis in children. [J. M. S.]

7.—Duncanson discusses **knock-out blows,** the principal of which are the epigastric, the cardiac and the blow on the angle of the jaw. [F. T. S.]

LANCET.

April 25, 1903.

1. The Hunterian Lecture on the Symptoms and Diagnosis of Stone in the Kidney. R. CLEMENT LUCAS.
2. The Lumleian Lectures on Infective Endocarditis Mainly in Its Clinical Aspects. Lecture III. T. R. GLYNN.
3. An Address on Dietetics. ROBERT HUTCHINSON.
4. The Drainage of the Knee Joint in Acute Suppurative Arthritis. HAROLD L. BARNARD.
5. Invagination of Meckel's Diverticulum. J. F. DOBSON.
6. Notes of a Case of Extirpation of a Tumor of the Prostate for Retention of Urine. W. PRIOR PURVIS.
7. A Case of Acute Ependymitis in an Infant. J. A. COUTTS.
8. A Case of Dropsy, the Result of Inflammation of the Kidney, Treated by Laparotomy. HENRY PAUL PLANER.

1.—In his Hunterian lecture Lucas discusses the **symptoms and diagnosis of stone in the kidney.** The symptoms are spoken of in detail, that of pain being first considered. This is the symptom which more than any other first draws attention to the existence of stone, although in a number of cases pain may be altogether absent. In order that it be of service in the diagnosis of renal calculus it must be unilateral. The character of the pain varies greatly in different cases, though the usual pain is of a gnawing and aching character, extending from the loin through to the front on a lower level. Attacks of renal colic are most significant, producing characteristic symptoms. Many instances are on record of unusual transference, radiation or reflection of pain in renal calculus, such as pain in the knee, hip, ankle and foot. Lucas refers to a patient who was treated for an epididymitis in which the pain was due to a renal calculus which he removed. Occasionally the pain is worse at night. Tenderness over the kidney is a sign of value, especially when the stone is large or angular. A valuable symptom is that of pain increased by any jolting exercise. It has been said by some writers that the pain varies with the composition of the calculus, but Lucas places little reliance upon this, believing that the pain depends much more upon the position and mobility of the stone than on its composition. He refers to a method of examination for eliciting pain which he describes as the "stamping test" and which consists in having the patient flex the thigh of the affected side acutely upon the abdomen while he supports himself by the hand resting upon some firm object, and then suddenly bringing the limb down and stamping the heel firmly on the ground. The kidney in this way suddenly loses its muscular support, and the jar carried through the pelvis and spine is communicated to it. If a calculus is present a sudden acute pain is commonly caused by his manœuver. In one case a severe renal colic was started by this test. Hematuria is the second symptom discussed. It is associated with so many affections of the kidney that taken alone it is of little value in the diagnosis of calculus. It must be remembered that it occasionally occurs in persons out of health, without being the expression of any serious pathological condition. It is a symptom which may be entirely absent throughout the course of the case, and, on the contrary, it may be the only symptom. Lucas refers to a case in which it was the only symptom, yet in this case he removed a kidney filled with stones. Hematuria due to calculus is almost invariably caused and increased by severe exercise. When it follows an attack of renal colic, it is very characteristic of calculus. When hematuria is dependent upon calculus, it quickly subsides with rest in the horizontal position. Calculus hematuria may be so great as to cause death; in such cases the death is due to ulceration of a large branch of the renal artery or vein. Frequent micturition may be met with in renal calculus, but this is by no means constantly present, and it would appear to be due more often to conditions secondary to the stone than to the reflex effect of the calculus itself. Lucas refers to a case in which, instead of frequency of micturition, a condition of extreme tolerance arose in which the patient only passed urine once in 24 hours. This tolerance was because of the pain and straining caused when urine was passed. Extreme irritability of the bladder and painful micturition felt in the perineum and at the glans penis may be caused by a stone impacted in the ureter. Frequent micturition with sudden uncontrollable desire to pass urine and incontinence may be caused in children by a renal calculus. Retraction of the testicle during renal colic is occasionally noticed in adults, but is a much more obvious and important sign in children. The passage of a small calculus or gravel on previous occasions is perhaps the most important feature to be obtained from the former history of the patient. Lucas refers to 3 cases in which he first elicited the sign of grating due to multiple calculi. He also records a case in which he operated for total suppression of urine after the removal of one kidney. When the kidney was opened a stone was found lodged in the mouth of the ureter. This operation was done 17 years ago, and the patient is now perfectly well. In speaking of the use of the X-rays as a diagnostic means, he says that it has added much to the precision of diagnosis and that its failures will probably be greatly lessened in the future. At the present time, however, its negative results cannot be implicitly relied upon. At Guy's Hospital last year there were 28 cases in which calculi demonstrated by the X-rays were removed by the surgeon; 8 cases in which the surgeon found calculi which the X-rays failed to show; and 2 cases in which the X-rays discovered calculi which the surgeon failed to find by operation. It is stated that family-history is often very misleading in cases of renal calculus, causing one to suspect tuberculosis of the kidney. The latter portion of Lucas's address deals briefly with the differential diagnosis of renal calculus. [J. H. G.]

2.—Glynn, in his third lecture on **infective endocarditis,** points out that anemia was very marked in many of his patients; usually most pronounced in the chronic cases. A leukocytosis was present in all but 2. In a number of the cases epistaxis was a symptom, and petechiæ were present in 10. In one case a hemorrhage occurred in the retina. In 35 diarrhea was present, and in 15 vomiting occurred. In 29 cases albuminuria was present, and in 15 the urine contained blood. In one of his cases there was a renal infarct without the occurrence of albuminuria, hematuria or clinical manifestations. Referring to endocardial murmurs, he points out that in many of his cases a recent endocarditis occurred upon an old sclerotic lesion and did not modify the previous pre-existing murmurs. He lays particular stress upon the changeable murmur in malignant endocarditis, giving many instances in which there was an alteration in the time of the endocardial murmur, in some an increase in its intensity, and in some a change of location. He has also noticed an alteration in the character of the pulse-tracings in several cases. The clinical course in the greater number of his cases was of the chronic type persisting for several months, in one instance as long as 8 months. Cerebral embolism occurred in 6 cases and cerebral hemorrhage in 5. In 18 instances death was due to pneumonia, and in 5 cases death occurred suddenly, due to aortic disease. He points out that the diagnosis of malignant endocarditis is sometimes extremely difficult. This is usually due to the anomalous character of the temperature in some cases and in some of the chronic forms; fever is entirely absent. Satisfactory auscultatory signs are not always available on account of the rales from associated bronchitis. As a direct point in the diagnosis, the development of a murmur or of other signs of endocardial trouble after a primary or secondary affection from pneumonia, typhoid fever, urethritis, is of great diagnostic value, and especially so when there is an alteration in the type, or a renewal of pyrexia. The physical signs of disease of the valves may be absent for some time in infective endocarditis, and, when malignant endocarditis declares itself as a complication of heart disease with failing compensation, the manifestations of septicemia are often ill-pronounced and masked by the preexisting troubles. Protracted cases may resemble pernicious anemia. He thinks that culturing of bacteria from the blood and the occurrence of a leukocytosis are important signs, but he has obtained negative results in both of these conditions in a few of his cases. Referring to the prognosis he points out that recovery in infective endocarditis is a rare event. He gives a brief history of several cases in which recovery occurred. Finally, he briefly refers to the treatment and remarks that the future may bring improved methods of serum treatment. Meanwhile the physician must not adopt an inert and despondent attitude, remembering that recovery in an apparently desperate case is possible, but must patiently follow the rational indications of treatment, sustain the strength of the patient by the aid of tonics and stimulants, diminish as far as is possible the multiplication of bacteria in the organism by the administration of antiseptics, and strengthen and regulate the action of the heart by cardiac tonics. [F. J. K.]

3.—Hutchinson contributes an article on **dietetics.** He points out that a healthy man can live upon any sort of diet, provided it is capable of digestion and absorption and fulfils 2 well-defined conditions, namely—(1)that the food yields enough potential energy to supply the daily outgoings from the body in the form of heat and work, and (2) that it contains enough proteid to replace the daily and inevitable destruction of tissue. At some length he then discusses these 2 factors in dietetics. He holds that there are 3 great groups of diseases in which one can reasonably anticipate that dietetic means will be potent for cure; these are: (1) Diseases of the organs (stomach and bowels) which prepare and elaborate the food; (2) diseases of metabolism (e. g., fever, obesity, malnutrition, diabetes and gout) in which there exists a perversion of the usual methods of dealing with the nutritive constituents of the food by the cells; (3) diseases of the excretory organs (especially the kidneys) which are concerned in removing from the body the end-products of the food. He discusses at some length dietetics relating to these 3 great groups of diseases. [F. J. K.]

4.—Barnard reports 9 cases in which he has **drained the knee joint both anteriorly and posteriorly for acute suppurative arthritis.** He states that acute pyogenic infection of the knee joint is one of the most dangerous of suppurative diseases and one of the most unsatisfactory that a surgeon can be called upon to treat. Many of these cases occur in hospitals and follow wiring of the patella or the removal of the semilunar cartilages or foreign bodies, and result in death or amputation, ankylosed joints and long-standing open sinuses. After referring to the failures from repeated or continuous irrigation of the joint and from extensive transverse incision dividing the patella or its tendon, Barnard advocates the posterior as well as anterior drainage. He presents drawings showing 2 posterior pockets of the synovial membrane which invariably contain pus and which it is impossible to drain through a lateral incision. These pockets can be found by making an incision directly over the posterior aspect of the condyles. Care must be taken not to injure the long saphenous and the external perineal nerves. These pouches terminate above and behind the condyles in the sacs which are beneath the corresponding head of the gastrocnemius.

Several of the cases reported, in which this treatment has been employed, have given excellent results, and all have been greatly benefited by the treatment. Barnard advises that all really acute cases of suppuration in the knee joint with great temperature should be treated by both anterior and posterior incisions and particularly if the suppuration arises from punctured wounds. In cases due to auto-infection and in subacute cases in which the temperature is not above 102° he feels inclined first to employ the lateral incisions. [J. H. G.]

5.—Dobson reports an interesting case of **invagination of Meckel's** diverticulum occurring in a boy, 4½ years of age. The condition had existed for 36 hours prior to operation. The symptoms consisted in acute abdominal pain accompanied with vomiting and the passage of blood and mucus by the bowels. There was also a palpable tumor in the right iliac region. When the abdomen was opened, an intussusception of the ileocolic variety was found and reduced without much difficulty until the apex was reached. At this point a Meckel's diverticulum was found invaginated and forming the apex of the intussusception. It was impossible to reduce it, and therefore it was excised with a portion of the bowel and an anastomosis made. The abdomen was drained, as there was a large amount of free fluid in the cavity. The morning following the operation the patient was extremely ill, the pulse had risen and death seemed apparent. One and a half pints of normal salt solution were given intravenously, free stimulation by strychnine hypodermically was employed and the lower bowel washed out. A copious evacuation of extremely offensive bloody fluid resulted, and the patient immediately began to improve, making a good recovery. Dobson refers to the 13 cases which have been reported of invagination of Meckel's diverticulum. In order that invagination take place it is essential that the apex of the diverticulum be free and not attached by ligament or adhesion to any other structure. In the large majority of cases it has been found impossible to reduce the invaginated diverticulum, although the invaginated bowel may be withdrawn. In all cases it is better to remove the diverticulum if it cannot be reduced. When resection is necessary, the question of anastomosis or the formation of a temporary artificial anus arises. Whenever a plastic operation is done on the intestinal tract during an acute attack of obstruction, it is a wise precaution to adopt drainage of the peritoneum. [J. H. G.]

6.—Purvis reports a case of **retention of urine due to a tumor of the prostate** which was successfully removed by the suprapubic route, occurring in a man, 69 years of age. [J. H. G.]

7.—Coutts reports a case of **acute ependymitis** occurring **in an infant, 3 months of age.** The condition was described as one of postbasal meningitis. The child was ill for 6 weeks, during which time it was necessary to feed it through a nasal tube. Convulsions were frequent during the illness. The anterior fontanelle bulged distinctly, and through it a futile attempt was made to remove fluid from the lateral ventricle. At the necropsy the lateral ventricles were found distended with offensive pus, and the foramen of Majendie appeared to be completely blocked. There was no macroscopical dilatation of the central canal of the spinal cord. The bacteriologist is doubtful whether a streptococcus which was found was a variety of the pneumococcus. Coutts believes that this case was one of primary acute inflammation of the ventricular ependyma. It has always been, as it was in this case, impossible to diagnosticate the condition. The onset of the symptoms was much more frequent and persistent than in an ordinary case of postbasic meningitis. The temperature also toward the end of the third week began to rise, while in most cases of postbasic meningitis it has reached the normal or fallen below it. [J. H. G.]

MEDICAL NEWS.

May 9, 1903. (Vol. 82, No. 19.)

1. Medical Education in the United States. FRANK BILLINGS.
2. Social Conditions in America in Their Relation to Medical Progress and Disease. J. M. ANDERS.
3. Cancer and Immunity. A. F. JONAS.
4. On the Resemblance of Malignant Endocarditis to Typhoid and Paratyphoid Infections. HENRY L. ELSNER.
5. Nephrorrhaphy in Intermittent Hydronephrosis. J. WESLEY BOVEE.
6. Extraperitoneal Ligation of the External Iliac for Femoral Aneurysm. WILLIAM B. CRAWFORD.
7. Intussusception: Report of a Case Reduced by Operation. GEO. TULLY VAUGHAN.

1.—See **Philadelphia Medical Journal,** May 9, 1903.

2.—See editorial, **Philadelphia Medical Journal,** May 16, 1903.

3.—See editorial, **Philadelphia Medical Journal,** May 16, 1903.

4.—Elsner calls attention to the resemblance of **malignant endocarditis to typhoid and paratyphoid:** (1) The typhoid type of infectious malignant endocarditis has rarely been diagnosticated during the life of the patient by those with whom the author has seen these patients. (2) The detection of the focus from which infection springs has presented the greatest difficulties. At times it is impossible to reach a satisfactory conclusion. [T. M. T.]

5.—In Bovée's article he gives the **treatment of hydronephrosis** as follows: Nothing can be more rational than the employment of some means to prevent renal displacement. Various bandages with repeated modifications have been used for this purpose, with little success. Nephrorrhaphy is the remedy *par excellence.* In a number of cases the author has been surprised by the absolutely permanent relief of the suffering from this condition in which nephrorrhaphy has been done. [T. M. T.]

7.—Vaughan gives the varieties as follows: **Ileocecal,** in which the ileum with the cecum slips into the colon, the ileum continuing to push the ileocecal valve in front of it, and to invaginate the colon. (2) **Enteric,** in which the small intestine telescopes itself. (3) **Colic or colicorectal,** in which the colon telescopes itself or the rectum. (4) **Ileocolic,** in which the ileum slips through the ileocecal valve, the cecum and colon maintaining their normal positions. [T. M. T.]

MEDICAL RECORD.

May 9, 1903.

1. Medical Education in the United States. FRANK BILLINGS.
2. Social Conditions in America in Their Relation to Medical Progress and Disease. J. M. ANDERS.
3. Cancer and Immunity. A. F. JONAS.

1.—See **Philadelphia Medical Journal,** May 9, 1903.

2.—See editorial, **Philadelphia Medical Journal,** May 16, 1903.

3.—See editorial, **Philadelphia Medical Journal,** May 16, 1903.

NEW YORK MEDICAL JOURNAL.

May 2, 1903.

1. The Tendo Achillis Shortened for the Restoration of the Function of the Calf, Lost as a Result of a Previous Tenotomy. RUSSELL A. HIBBS.
2. A Case of Nevus of the Scalp and Nose Treated With Hot Water Injections. FREDERIC GRIFFITH.
3. The Treatment of Gastric and Duodenal Hemorrhages. MAX EINHORN.
4. The Uses of Suprarenal Extract in Nose and Throat Diseases. BEADMAN DOUGLASS.
5. The Operative Treatment of Stenosis of the Larynx Following Intubation and Tracheotomy; Report and Exhibition of Cases. ARTHUR B. DUEL.
6. An Anastomosis Ring. WILLIAM L. KELLER.
7. Suprascrotal Operation for Varicocele, with Ligature of the Spermatic Artery. E. STYLES POTTER.

1.—Hibbs discusses a method of **shortening the tendo Achillis for the restoration of the function of the calf, lost as a result of a previous tenotomy.** The function of this tendon was destroyed in patients previously operated upon for equinus following infantile paralysis. The operation is performed as follows: A 4-inch skin incision is made and the fibro-adipose tissue occupying the space between the ends of the divided tendon is split longitudinally at its middle point. The 2 halves are then folded, one above and one below on the tendon and secured by through-

and-through silk sutures. The foot is then placed in a position of extreme equinus and kept so for a period of 6 weeks. Three patients were operated upon by this method, and the results obtained were very satisfactory. [P. B. B.]

2.—Griffith reports the case-history of an infant girl, 7 months of age, who was treated **for nevus of the scalp and nose with hot water injections.** Sterile water at a temperature of from 180° to 200° F. was used, and injections were made every third day. Further growth entirely ceased after the first injection, and shrinkage with flattening of the surface of the mark took place. The injections were used without the aid of an anesthetic. The writer says that the chief danger following this method of treatment is that of embolism, but this tendency is overcome by having the water near the boiling-point when the injection is made, thereby insuring prompt and firm coagulation. [P. B. B.]

3.—Einhorn contributes a paper **on the treatment of gastric and duodenal hemorrhages.** Hemorrhage from the stomach, the writer says, is due to disintegration of the bloodvessels in consequence of ulceration, seldom of erosions. Duodenal hemorrhage is almost always due to a distinct ulceration of this portion of the intestine. Before considering the treatment he dwells at some length on the diagnosis, but he thinks there should be no great difficulty in arriving at a correct diagnosis if the history and symptoms are intelligently interpreted. The method of treatment he outlines as follows: (1) Measures directed toward checking the bleeding and (2) combating the underlying disease producing the hemorrhage; but this paper is largely limited to the discussion of checking hemorrhage. Small hemorrhages, as a rule, require no treatment whatever. Larger hemorrhages require absolute rest, total abstinence from food and drink, and the administration of opiates to quiet peristalsis and to calm the patient. An ice-bag should be placed over the epigastrium, and of the drugs to be used gelatine subcutaneously or adrenalin are the most resourceful. The author then describes several experiments with adrenalin that seem to demonstrate its power as a hemostatic. Among the surgical procedures to be employed, if necessary, are cauterizing or excising the bleeding area and the performance of a gastro-enterostomy. [P. B. B.]

4.—Douglass outlines the uses of **suprarenal extract in the treatment of nose and throat diseases.** The first indication for the employment of this agent is to diminish bleeding during and subsequent to operation. However, it is never wise after operation to consider the operative technique perfect without packing the nasal chamber, inasmuch as, after a powerful contraction of the bloodvessels and irritation of the vasoconstrictor nerves, there must, of course, follow subsequent relaxation and dilatation of the vessels. The author then discusses the untoward symptoms and dangers of this drug. Among the other conditions for which suprarenal extract can be employed are, as an aid to diagnosis, operations upon the tonsils and for the removal of adenoids. In simple epistaxis and in acute inflammatory conditions of the nose, pharynx or larynx, it is one of our most brilliant remedies. Drainage through the accessory sinuses of the nose in antrum or frontal sinus disease is also facilitated by the use of this agent. In chronic laryngitis or in tubercular or syphilitic laryngitis it does not seem of much value. In the treatment of malignant growths it is of some benefit from its action upon their vascular supply. [P. B. B.]

5.—Duel contributes a paper on the **operative treatment of stenosis of the larynx following intubation and tracheotomy.** Three case-histories accompany the article. Cicatricial contractions had formed in these patients just above the tracheotomy wounds. This newly formed tissue was carefully dissected out through a median incision in the trachea. [P. B. B.]

6.—After repeated use of the Murphy button and other mechanical devices in performing intestinal and gastro-intestinal anastomoses, especially in gunshot cases, Keller is convinced that there is room for much improvement in this direction. He, therefore, has devised an **anastomosis ring** which seems to overcome the chief objections to the Murphy button and at the same time to possess all its advantages. This ring is made of aluminum, is divided into 3 segments and grooved externally to accommodate the ends of the divided intestine. The method of introduction is as follows: A purse-string suture is placed at each end of the intestine, then the ring is placed in one end by the index and little fingers and the suture tied down between the opposing surfaces of the spring; the other end is then introduced and secured in a similar manner. The ends of the intestine are held in the ring by the catgut suture, and the serous surfaces are kept in apposition by the spring. Therefore, no outside serous sutures are required. The purse-string suture and the segment suture should be of catgut in order that absorption will free the ring at the proper time. [P. B. B.]

7.—Potter describes a **suprascrotal operation for varicocele, with ligature of the spermatic artery.** The etiology, symptoms and indications for operation are first discussed at some length. The operation is performed as follows: An incision is made at the external ring, extending over the cord to the scrotum. The tissues are then divided down to the cord. This, with the vas, artery, nerves and pampiniform plexus, is drawn through the incision, the vas and nerve separated, the veins, artery and connective tissue ligated above and below, and the intervening portion removed. The stumps are brought in apposition and secured. The cord is then returned and the external wound closed. The advantage of this operation are: (1) The incision is made above the scrotal tissue and thereby permits a far neater dissection and less manipulation of the parts; (2) the relations are more easily discerned, and, therefore, less time is required than in the open scrotal operation; (3) a better application of the dressings is possible. [P. B. B.]

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

May 7, 1903. (Vol. CXLVII., No. 19.)

1. President's Address. Medical Education in the United States. FRANK BILLINGS.
2. Cancer and Immunity. A. F. JONAS.
3. Brachial Paralysis, Postnarcotic. F. J. COTTON and F. W. ALLEN.
4. Pyronin-Methyl Green: A Brilliant Double Stain for Cells and Bacteria. WILLIAM F. WHITNEY.
5. Light in Anthropometrical Signalment. WILLIAM ROLLINS.

1.—See **Philadelphia Medical Journal**, May 9, 1903.

2.—See editorial, **Philadelphia Medical Journal**, May 16, 1903.

3.—Cotton and Allen emphasize the following points in their article: (1) Paralysis of part or all the muscles supplied by the brachial plexus with some sensory involvement is not uncommon after narcosis, though rarely mentioned. (2) Its cause is not toxic but mechanical. It occurs only when the arms are long held above the head or lie in abduction, never if they lie flexed on the chest. (3) The mechanism is a pressure on the nerve roots, probably between the clavicle and the muscles over the transverse processes of the cervical vertebræ, or from stretching over the head of the humerus in abduction. (4) The trouble is essentially functional without known lesions. (5) The lost function returns *in part* very early. Total recovery is often long-delayed, but apparently is to be counted on. (6) The possibility of the accident should be impressed on students, on house officers and on all of us. (7) In view of this risk the arms of a patient under ether should always, when possible, be flexed with the hands on the chest. If other positions are unavoidable, they should not be continued without change. [T. M. T.]

4.—Whitney concludes his article with the statement: It should be remembered that, if the slides and covers are scrupulously clean, the smears spread thin and evenly, turbid solutions filtered, and the diffused color thoroughly washed out, then the chances of a successful preparation are always greatly increased. [T. M. T.]

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

May 9, 1903.

1. Medical Education in the United States. President's Address, Delivered at the Fifty-fourth Annual Session of the American Medical Association at New Orleans. FRANK BILLINGS.
2. Cancer and Immunity. Oration in Surgery. A. F. JONAS.
3. Social Conditions in America in Their Relation to Medical Progress and Disease. Oration in Medicine. J. M. ANDERS.
4. Diagnostic Value of Bloodpressure Determinations in the Diagnosis of Typhoid Perforation. GEORGE W. CRILE.

1.—See **Philadelphia Medical Journal**, May 9, 1903.

2.—See editorial, **Philadelphia Medical Journal**, May 16, 1903.

3.—See editorial, **Philadelphia Medical Journal**, May 16, 1903.

AMERICAN MEDICINE.

May 9, 1903.

1. Medical Education in the United States. FRANK BILLINGS.
2. Social Conditions in America in their Relation to Medical Progress and Disease. J. M. ANDERS.
3. Cancer and Immunity. A. F. JONAS.

1.—See **Philadelphia Medical Journal**, May 9, 1903.

2.—See editorial, **Philadelphia Medical Journal**, May 16, 1903.

3.—See editorial, **Philadelphia Medical Journal**, May 16, 1903.

IL POLICLINICO. (SEZIONE MEDICA).

February, 1903.

1. A Contribution to the Study of Loss of Mental Vision. A. GIANNELLI and G. TOSCANI.
2. Influence of the Nervous System Upon Cadaveric Rigidity. O. PASCUCCI.
3. Nutritive Value of Milk Diet According to the Method of Administration. P. VINCENZO.

1.—An interesting case, of which the salient characteristic was **loss of mental vision**, is reported by Giannelli and Toscani: this being, as far as they could learn, but the fourth of its kind on record. The patient lost entirely the power to call up the mental picture of her husband, though recognizing him in person or by photograph. All efforts to evoke the mental image by means of stimuli through organs of sense other than the visual, as by the husband's voice, the touch of his hand, etc., failed utterly. This the authors attribute to interruption between the cerebral center in which visual images are registered, and the associated paths; direct excitation of the center—as from a photograph—being necessary to recall the mental picture. [R. L. F.]

2.—Pascucci has studied in animals the **effect of the nervous system upon cadaveric rigidity** through hemisection of the spinal cord and removal of a cerebral hemisphere. He finds that, in general, rigidity sets in first in those parts innervated by the uninjured side of the brain or cord. [R. L. F.]

3.—Vincenzo has taken up this question in its relation to the intervals of administration; studying in a series of patients the amount of albumin absorbed by the system, as indicated by the amount eliminated in the feces and urine in the form of nitrogenous compounds. Two liters of milk were given in 24 hours at intervals of 5, 4, 3, 2 and 1 hours, the amount of each feeding being, according to the interval, 500, 400, 300, 250 and 150 cc. Care was exercised in the selection of patients for the experiment, to exclude those with gastro-enteric affections, albuminuria and fever. An exclusive milk diet was maintained for 5 days, and nitrogenous elimination by the feces estimated upon the third, fourth and fifth days. It was found that nitrogenous loss was least after administration of 500 cc. every 5 hours; being but 15.34%. The loss after administration of 250 cc. every 2 hours was 19%; after 150 cc. every hour, 19.34; after 400 cc. every 4 hours, 23%; and after 300 cc. every 3 hours, 23.35%. That no relation existed, however, between the quantity of fixed albumin in the body and the amount of nitrogen eliminated in the feces, was evidenced by subtraction of the amount of nitrogen eliminated in feces and urine from the amount introduced. The amount of fixed albumin seeming to vary according to the nature of the patient's malady. Hence it is concluded that the nutritive value of milk does not depend upon intestinal absorption. [R. L. F.]

LA RIFORMA MEDICA.

March 11, 1903.

1. A Cardiotoxic Serum. L. FERRANNINI.
2. Etiology of Infantile Cardiopathies of the Left Heart. L. CONCETTI.
3. Paroxysmal Tachycardia of Epileptic Nature. G. BELLISARI.

1.—Ferrannini describes the effect upon the hearts of toads and frogs of **cardiotoxic serums** obtained through injection of an emulsion of frogs' hearts into guinea-pigs, and a like emulsion from toads into rabbits; the serum of the guinea-pigs so treated, being injected into frogs, and that of the rabbits into toads. The hearts of the animals subjected to injections of these **cardiotoxic serums** were then exposed, and, by means of an instrument brought in contact with those organs, an accurate tracing of their action was obtained. This showed excitation of the frogs' hearts after injection of small doses of the cardiotoxic serum from guinea-pigs, and depression from large doses. Control injections of normal serum, even in large doses, were practically without effect. But little influence was seen upon the heart action of toads subjected to injections of cardiotoxic serum taken from the rabbits. [R. L. F.]

2.—The generally accepted idea that rheumatism is a potent factor in the **endocarditis** of children is called into question through the studies pursued by Concetti, who, through cases which have come under his personal care and those collected from the literature, finds that endocarditis is a much more infrequent sequel of rheumatism in children than is generally supposed; and that the disease enters into the etiology of cardiac affections much more frequently in adult than in early life. He holds that the greater part of so-called acquired **cardiopathies in children** is rarely due to faulty embryonic development; and that the manifestations of such deviations from the normal may be evidenced before birth or during the early years of life. Thus, contrary to the general opinion, **congenital affections** of the left heart may be as frequent as those of the right. [R. L. F.]

3.—From an exhaustive study of this subject Bellisari draws the following conclusions: (1) There is a variety of **paroxysmal tachycardia** which may be considered as the equivalent of an **epileptic attack**. This may have its origin, as does the ordinary epilepsy, in neuropathic inheritance, trauma or in some cortical affection. (2) The symptoms of this form do not differ from the so-called essential tachycardia. (3) The diagnosis rests upon the patient's history, the nocturnal occurrence of the attacks, phenomena which precede and follow them, and the effect of bromide treatment. (4) Such tachycardial attacks may be interpreted as an arrest of the cardio-inhibitory function of the vagus from irritation of the cortex. (5) The prognosis is, in general, more certain than in those cases in which the cause is unknown. (6) None the less the frequency of the attacks may bring about a permanent hyposystole, though in such cases the existence of an anatomical lesion of the myocardium, independent of the neurosis. cannot be excluded. [R. L. F.]

March 25, 1903.

1. Contribution to the Study of Septicemia from the Micrococcus Tetragenus in Man. L. FORNACA.
2. Arteriosclerosis with Aortic Insufficiency, Angina Pectoris, Hypertrophy and Dilatation of the Left Ventricle, Relative Insufficiency of the Mitral Valve. (Phenomenon of Self Help.) F. SCALESI.

1.—Will be abstracted when concluded.

2.—Scalesi discusses the case of a man who, after suffering acutely from repeated attacks of angina pectoris during a year, found that the severity of the attacks was much attenuated after the onset of dyspnea and edema. Examination revealed arteriosclerosis, aortic and mitral insufficiency; and Scalesi is disposed to class the case among those of so-called self-help, believing with Pawinski that the amelioration of stenocardia after development of aortic and mitral insufficiency is attributable to diminished bloodpressure. [R. L. F.]

FIFTY-FOURTH ANNUAL MEETING

OF THE

American Medical Association

AT

NEW ORLEANS

May 5th, 6th, 7th and 8th, 1903

GENERAL SESSION, TUESDAY, MAY 5.

After the meeting had been called to order by the president, Dr. Frank Billings, Rev. H. G. Davis, of the Carondelet Street Methodist Church, offered a prayer. The Mayor of New Orleans delivered a speech of welcome on behalf of the city, followed by General Leon Jastremski, on behalf of the State, and H. P. Dart, on behalf of the New Orleans bar. Dr. J. A. Witherspoon, of Nashville, Tenn., first vice-president of the American Medical Association, responded to these addresses of welcome. Then Dr. Isadore Dyer, of New Orleans, announced the arrangements made for the entertainment of the visiting physicians and their families. The president was then introduced by Dr. Witherspoon, and delivered the annual address on **Medical Education**, which was published in full in the **Philadelphia Medical Journal** of May 9, 1903.

In the evening, Dr. A. F. Jones, of Omaha, Neb., delivered at the Carondelet Street Methodist Church an oration on the **progress in surgery**, with special reference to cancer and immunity. The next evening the oration in medicine, on **medical history**, was delivered by Dr. J. M. Anders, of Philadelphia.

SECTION ON MEDICINE.

TUESDAY ATERNOON, MAY 5.

After the address of the chairman, Dr. W. S. Thayer, of Baltimore, a paper on **the restorative influence of ozone on the blood** was read by Dr. L. Curtis, of New York. Until recently blood examination consisted mostly of blood count; now photographs can be taken in the different diseases if the blood be recently drawn. This shows the physician when and how to begin his treatment. Curtis believes the person with pure blood is immune to disease. When an abnormal state of the blood exists, there is great danger of disease. Ozone destroys the morbid constituents of the blood and restores nutrition. It may be given in surgical as well as in medical cases. Several cases of mastoiditis, sunstroke and paresis have been cured after 10 treatments with ozone. It readily increases hemoglobin and red bloodcorpuscles. In a case of severe persistent headache with facial paralysis, after applying an electrode, the patent was completely cured. After applying an electrode in a case of bloodpoisoning from pelvic abscess, there was a marked change in 14 days; the patient was up and after 3 weeks was dismissed from the hospital.

Dr. F. C. Valentine, of New York, read a paper on **the boy's venereal peril.** The youth should be instructed before he becomes a patient of the physician. Gonorrhea kills more, destroys and disables more, than all other diseases combined. He was unaware that it could kill within 14 days, by the gonococci traversing the fourth ventricle of the brain. The young man should be warned of the dangerous nature of gonorrhea. He is simply murdering his wife when he marries with this disease. Dr. Walsh thought some such instruction should be taught in universities. Dr. Robins disagreed with Dr. Valentine only as to the age of the boy. Dr. Rochester and others agreed fully with Dr. Valentine.

Dr. T. J. Happel, of Trenton, Tenn., read a paper on **continued fever, neither malarial nor typhoid; a clinical study.** Medical men of the North contend that all continued fevers must either be classed as malaria or typhoid, but physicians of the South can readily recognize a third fever that shows neither Widal's reaction nor plasmodia malariæ. The most skilled bacteriologists have examined the secretions and blood during this fever and confirmed the statement. Dr. Happel has treated over 100 cases, and in no case has the fever lasted over 5 weeks, nor has it gone over 104°. Headache is the most prominent symptom. There is no jaundice, gastritis or high temperature as in the others. It terminates by crisis and profuse sweats. Quinine does not have any effect upon this form of fever. It is not ushered in abruptly by a chill, but preceded by malaria for a few days, probably a week, or by slight pains in the back and head. After a few days all pain ceases, and there are no clay-colored stools, tympanites or anorexia (in fact a strong desire for food in many cases). The tongue never bleeds, in fact is almost normal. Generally the brain is not affected at all. Delirium has not been observed, and there are no traces of epistaxis, harsh, dry skin or suppression of urine. The pulse varies from normal to 90, with temperature from 102° to 104°. The treatment is, as in other fevers, hydrotherapy. Dr. Tyson, of Philadelphia, thinks they are either typhoid or malaria and does not consider it a special continued fever. Dr. Van Zandt, of Texas, thinks it is mild typhoid fever. He recommends acetozone in the treatment of typhoid. Dr. Winnifred, of Nashville, agrees with Dr. Happel and calls it toxienteric fever. He states that it occurs regardless of age and season.

Dr. R. M. Harbin, of Rome, Ga., read a paper entitled **a chemical observation of 90 cases of typhoid fever with 4 deaths, with special reference to therapeutical fasting.** Typhoid is much more prevalent in southern than in northern states. Seventy-nine of these patients drank well-water, and 11 drank hydrogen water. The death-rate in the colored race is much less than in the white, and the disease is also much less frequent. Recent observations in Georgia have shown that deaths from typhoid almost equal those of tuberculosis. Farmers are especially subject to the disease, on account of their surroundings. In the South in general its death-rate equals that of tuberculosis among the whites. The drinking-water is the main cause. The treatment consisted in rest, diet and cold baths, followed by symptomatic treatment. No routine treatment was used except the administration of turpentine which certainly lessened the congestion of the intestines. Opiates were used when much diarrhea existed. Fasting for 24 hours in the early stages is one of the best measures and almost seems to abort some cases. Sponging and baths are best to reduce the temperature, using hot or cold water, according to the individual case. An excess of food in the intestinal canal increases peristalsis and favors the absorption of toxins. After fasting for 24 hours a rigid liquid diet should be given, such as broths or egg albumen. Gelatine prevents hemorrhages and emaciation. Milk should be prohibited in pure form, as it may form a curd at any time, which is worse than any solid food, the patient dying from hemorrhage or perforation. The milk can be given with coffee or cocoa which prevnts curdling. Dr. Harbin reports one case in which death occurred from hemorrhage after a glass of milk and lime-water. Dr. J. N. Hall, of Denver, spoke on **typhoid fever at high altitudes with a résumé of 600 cases.**

WEDNESDAY MORNING, MAY 6.

Dr. J. R. Eastman, of Indianapolis, read a paper on the **limitation of nonsurgical treatment in intestinal obstruction.** The causes of acute bands of adhesions are volvulus, embolus of the mesenteric arteries and foreign bodies. They may be due to ptomaine poisoning. Simple incision with cleansing of the stomach cures many cases, while morphine completely masks the symptoms. Some cases of volvulus can be treated by injecting water, but surgical treatment is generally necessary. Young children stand celiotomy very well, and it is best to employ surgical means with them, as their intestines are easily ruptured by injection. A favorable result is sometimes gained by colonic treatment. Surgical treatment is successful in the early stages. He contends that tubercular peritonitis may produce all the symptoms of obstruction, and that morphine is exceedingly dangerous in these cases.

Other papers read were on **the circulatory element in acute diseases and its management,** by Dr. L. F. Bishop, of New York; **weakness and dilatation of the heart due to chronic nutritional diseases,** by Dr. G. W. McCaskey, of Fort Wayne, and 3 papers on **uncinariasis,** by Drs. A. J. Smith, of Galveston, T. A. Claytor, and C. W. Stiles, of Washington.

WENESDAY AFTERNOON, MAY 6.

A paper on **tropical dysentery** was then read by Dr. Chas. Mason, of Fort Sam Houston, Texas. The disease is of great importance, especially in camps in the tropics. The mortality-rate is high. There occurred 259,000 cases of dysentery in the Federal army; in the South African campaign it was very prominent, nearly 4 times as frequent as any other disease. It occurs all over the world, spasmodically in the temperate zone, and in some islands. It is most prevalent during the rainy season and is due to bad hygiene, etc. There are many varieties. Many forms of amebæ cause the disease. Bacilli have been discovered in the intestinal canal. A specific ameba was discovered by various investigators. Two distinct types, acute and chronic, are due to "ameba dysentericæ." Bacillary dysentery is an acute disease which is characterized by loose and copious stools. It affects the large intestine and the lower end of the ileum. The amebæ are killed easily by antiseptic solutions, sunlight, etc. They are found in the mesenteric glands and in the intestines but in no other place. Shiga has demonstrated that the bacilli have been found after 8 months. Milk is coagulated by amebæ, which are never found in healthy persons. In the intestinal walls they are found agglutinated in blood. Cases of laboratory infection have been reported, the changes beginning in the mucosa and extending to the deeper parts. The amebæ cause large ragged ulcers and inflammation. In deeper layers the bacilli are found in pure cultures. Liver abscess is common. It is caused by the drinking-water, dust and flies; exposure to cold, starvation, etc., are predisposing causes. The period of incubation is short. Dysentery occurs in 24 hours. The disease comes on suddenly with tenderness over the abdomen, many bowel movements, tenesmus, straining, coated tongue, fever, etc. The disease may assume a chronic type, fever 103°. Sudden fall of the temperature is an unfavorable sign, the skin being hot and dry. Death occurs by cardiac exhaustion. The thirst is marked. In the chronic stages there is pus. Spleen and liver are not enlarged. Red bloodcorpuscles are at first increased, then diminished. The nervous system is not much affected. The urine is small in amount. There may be nephritis, high fever, headache, sleeplessness, delirium, etc. Manson seems to think that the disease is often associated with malaria. Local rectal troubles are to be excluded by direct examination. Liver abscess hardly ever occurs in the amebic form, though it is common in the bacillary form. The prognosis depends upon the severity of the lesions. Nervous symptoms are an unfavorable sign. Recovery is rare in severe cases, death occurring in 10 days frequently. The treatment consists in the prevention of the extension of disease, through disinfection, sterilized utensils, control of the water- and food-supply and absolute rest in bed. The diet should be completely liquid, milk with lime-water, strong broths, and chicken-broth. Shiga's treatment was quoted. The disease is shortened by the serum treatment and more recoveries are obtained. In the chronic cases ulcers are always found in the rectum.

The next paper was by Dr. J. H. M. Knox, of Baltimore, on the **summer diarrheas of infancy.** Treatment has been unsuccessful on account of the vast number of bacilli and organisms found in the intestinal canal. Stools of infants were examined, and many contained the bacillus dysentericus. All babies exhibited some form of intestinal disorder. The agglutination test is very good to isolate the specific organisms. If the blood of patients agglutinates, the test is diagnostic. He found that the organisms are in the intestinal canal, in healthy babies also. Forty-two cases were admitted to the hospital in 7 weeks, of 4 years of age and less. Two colored patients were admitted. Mothers gave a good history. The patients suffered from diarrhea and vomiting, malaria, restlessness and fever. The Shiga bacillus was observed in the stools. Some patients showed profound intoxication, ending in coma, tenesmus, etc. Some cases became chronic after prepared foods had been given, with emaciation and loss of weight. There were diarrhea, green mucous stools with soft white lumps, no blood and no marked prostration. One infant of 5 months had been fed on condensed milk; the stools increased, no blood, moderate fever, marked rectal tenderness, with death ensuing; autopsy showed small ulcers and involvement of the mesenteric glands. Colitis was marked in 12 cases. Ileocolitis usually begins with dyspetic symptoms. Shiga's bacillus was found in nearly all cases. Stimulants must be given. Summer diarrhea shows that the bacillus dysentericus is the cause. The bacteriological finding is highly important in order to establish treatment. The source of infecton is always to be traced to food and water. It is essential to find out the character of the water-supply and the kinds of food used. Unboiled city water is a cause. Infection of milk is brought about by dilution with water. Shiga's bacillus was found in every case in a widespread epidemic. Children suffering from marasmus, rickets, etc., are always susceptible.

Dr. Wm. Britt Burns, of Memphis, read a paper on **malarial dysentery.** The ameba coli is one of the causes of dysentery and dysenteric affections with typhoid pneumonia, etc. Flexner has discovered the germ. Tropical dysentery bears a close relation to malaria. Like malaria it appears in endemic spots, like malaria it has a predilection for low and damp soils. It is associated with malaria in general. The plasmodium malariæ always is a cause of dysentery. Malarial parasites have been found in the intestinal mucosa. Emaciation is extreme, with peritonitis, the large intestine being adherent to the small intestine, the colon being displaced and distorted. Numerous ulcers are present, confined to the lower portion of the intestine. The ulcers are prominent, projecting above the surface, of an ashy color, the edges jagged, oblong, lying transversely in the gut, lesions confined to the colon, as a rule. The microscope shows the amebæ. Collections of amebæ appear in the intestines. Ulcers finally eat their way into the intestines to the submucosa. The bloodessels are considerably dilated; crypts are deformed and no new crypts are seen. Surfaces of ulcers are necrotic and contain amebæ. Bloodvessels are dilated, the vessel walls necrotic, lymph-channels enlarged, uniform masses of fibrous tissues are always found, the nuclei are not colored; micro-organisms are scattered all over, thus accounting for the severer lesions. The changes in the tissue are always marked, later becoming necrotic. Abscess of the liver may occur; milary abscess rarely. Any part of the liver may be involved. The abscess may break through the diaphragm, into the bronchi. The liver-cells show a change on account of the deposition of the amebæ. Amebæ are found in the bloodvessels. There is nothing in the symptoms to distinguish it from ordinary acute dysentery found in the South. Pain and tenesmus, etc., are present, and the patient then consults a physician, knowing that the stools are filled with blood. Afterward the disease becomes chronic, and then it may disappear. It is divided into 3 forms, acute, severe and very severe. The symptoms are intensified in each form. The disease passes from a mild type to the most violent form. Alcoholics fare badly (beer drinkers especially). The chlorides are diminished in severe forms. The stools are composed almost entirely of blood and mucus. Before death the stools are lessened, with less blood. Liver abscess is more often associated with amebic dysentery. The symptoms of liver abscess are pain in the right shoulder, jaundice, fever, pain in the liver, coated tongue, rapid pulse, etc. Appendicitis appeared in one case, peritonitis in several instances.

Dr. T. B. Futcher, of Baltimore, presented a paper on a **study of amebic dysentery occurring at Johns Hopkins Hospital.** Amebæ may occur in stools of healthy persons and are found in chronic diarrhea, tuberculosis, hemorrhoids, etc. There are three varieties, ameba intestinalis, not pathogenic; ameba coli mitis, pathogenic to man and cats, ameba coli Lerch, pathogenic to man and cats. The usual habitat of the ameba coli is the large intestine. Other situations are in the buccal cavity, in the tartar of the teeth, in the urogenital tract. In an abscess on the floor of the mouth, amebæ were obtained from the abscess. We are unacquainted with the parasite outside of the mouth. Amebic dysentery, contracted by the mouth, is not confined to the tropics; sporadic cases have occurred in England. The disease occurs in Maryland, more often between the ages of 21 and 30 years. A chronic case of diarrhea in children is looked upon as being caused by the ameba. The blood count is important. Anemia always exists, but the red cells are nearly normal, probably due to the diminished secretion. The average hemoglobin in 13 cases was 66%. Ciliated infusoria were always found in the intestine, also strongyloides intestinalis. Fifteen out of 21 cases had multiple abscess of the liver, while a single large abscess may be situated in the upper lobe. Hepatic abscess may rupture externally, into the lung, pericardium or kidney. Amebæ reach the liver through the radicals of the portal vein. Amebic empyema occurred in one case with rupture.

Statistics were then read upon **the treatment of dysentery**, by Dr. J. M. Anders, of Philadelphia, who said that rest in bed is essential to promote resolution of inflammation. Fresh, pure air and diet are important, minimizing intestinal contents. Milk should be predigested. Albumen water is excellent. Fats increase intestinal decomposition, carbohydrates also. Diffusible stimulants, as champagne, saline solution and strychnine are contra-indicated. Indiscretion of diet will cause a reproduction of the disease. An abdominal bandage should be worn. The drinking-water must be boiled, and the feces disinfected. Ipecac is the best drug to give; it tends to produce a flow of bile, while its primary action is that of a stimulant. Ipecac contracts the intestinal wall. He advises 15 to 25 drops of opium; mustard plaster to abdomen; 60 gr. of ipecac given, compress over eyes, continued for 3 or 4 days. Absolute quiet must be insisted upon. Prevent vomiting by giving small doses in children. Ipecac is considered a specific in amebic dysentery. Magnesium sulphate is the best saline, ʒ j every ½ hour, until stool. Diluted sulphuric acid is also given. Fellon advises calomel and bismuth subnitrate. Calomel is succeeded by bismuth for 3 or 4 days. Guaiacol, salol, or napthol, may be combined with the salines or bismuth or both. Sulphur is a very good drug. The administration of sulphur and Dover's powders has effected several cures. Sulphuretted hydrogen prevents the growth of the germs. Antidysenteric serum has been used also. Very weak topical applications, astringent and antiseptic solutions have also been employed. Copious enemata of quinine (1000-2000) may be necessary. Silver nitrate, tannic acid, mercuric chloride (1-2000), zinc sulphocarbolate and salicylic acid are used, too. Dr. Alexander Lambert, of New York, says he has found patients suffering from amebic dysentery who lived 25 miles from New York. He has not seen liver abscess often. He uses quinine and silver; salol and castor oil by the mouth. Most of the patients have improved. They suffer most from pains at night, cramps in legs. Dr. I. L. Van Zandt, of Texas, said that he gave sodium hypophosphite to a child who had green actions, and the next day the stools were yellow. He gives buttermilk and considers it better than anything. Dr. T. S. Dabney, of New Orleans, uses sodium sulphate and magnesium sulphate, as they act admirably on the liver, with acidulated drinks of nitromuriatic acid. The bacillus thrives in an alkaline medium, therefore acid drinks are given. Aromatic sulphuric acid and quinine by the mouth are of value in malarial dysentery.

THURSDAY, MAY 7.

Dr. W. H. Welch, of Baltimore, read a paper on **the prophylaxis of typhoid fever.** The typhoid bacillus is the cause of typhoid fever, the blood containing specific substances. Reception is within the alimentary tract only; injected beneath the skin the bacillus will never produce typhoid fever. There is no positive or experimental proof otherwise. The alimentary canal is the place in which the bacilli live. Feces and urine contain the bacillus; it remains in the urine during convalescence and after the patient is discharged. The drinking-water is a cause; the water-supply must be looked into. The patient must be predisposed to it. Most cases appear between the ages of 15 and 25 years; it occurs in childhood and in old age also. Exposure to very bad hygienic conditions is a predisposing cause. The main source of infection is the patient. Prevent patients from disseminating the germ, by disinfection of urine and feces. Direct contagion occurs frequently, from direct transmission by infected articles and utensils. The common fly is a transmitter. The disease exists in tenement houses, and is brought on by overcrowding in lodgings, etc. The bacillus may be distributed in a variety of ways; drinking-water is a prime source. Water-mains may be infected with bacilli by the joints being loose, and the bacilli are sucked in. The conditions are horrible in this country, where the amount of contamination is very great. The soil is a great source of infection, as the excretions are transmitted in the soil. Foods are also a great cause, such as celery and other raw foods. Infection may occur through the air. Milk is also a transmitter; since the cans are washed with water, milk being an excellent medium for the growth of the bacilli. A milk epidemic in Maryland was cited. Oysters may be a possible source of origin, a more dangerous one. The Atlantic City epidemic is a conclusive example, the oysters becoming infected after a break in the sewer. The Chesapeake Bay oysters are above suspicion. To conclude, the ultimate source is always the typhoid fever patient.

The prophylaxis of typhoid fever was the title of a paper read by Dr. J. S. Fulton, of Baltimore. Drinking-water is a source of typhoid fever, as are typhoid defecations. During the Spanish-American war, of 100 cases in the hospitals, ½ escaped diagnosis. The prophylaxis of typhoid is studied too little. Of every 7 persons that died of typhoid 3 died from malaria. The Mississippi belt shows a large number of typhoid patients. The confusion of typhoid and malaria is prevalent everywhere. The Delaware Board of Health surmises that all cases of the so-called midsummer madness were either typhoid or paratyphoid. Of all the mortality in the South from malaria ½ is due to typhoid fever. Continued fever should be looked upon as typhoid after running 10 or 12 days. Typhoid occurs in old age; it is common in childhood. Typhoid in children in Philadelphia outnumbers all other maladies. In New York it is called New York fever for the want of another name. It is a peculiar disease of the country. Typhoid shows an inverse ratio to density of population. Pittsburg has a very high mortality, as has Savannah also. Dr. Musser, of Philadelphia, said that early diagnosis of the disease is essential, by culture methods, and by the microscope. Three cases occurred in one family. Carelessness with the excreta caused infection of the drinking-well. Lack of care is a great fault of the physician. The community must be enlightened, cities must be properly drained and cleaned. The physician should see that the people carry out his orders. Let a physician have an assistant to watch the patient, make diagnosis, examine urine, etc. The government should be responsible for diagnosis and the government should prevent the spread of infection by the disinfection of the urine. He advises urotropin. A trained bacteriologist or a government expert should examine urine; disinfection of stools is also necessary.

Manner of infection and prophylaxis of yellow fever was the title of a paper by Dr. J. Carroll, U. S. A. Sir Wm. Ferguson, in South Africa, observed that the fever was conveyed by vessels. The period of incubation ranged from 11½-27 days. The mosquito theory was first advanced in 1881. Finlay discovered the theory and found that patients bitten by the mosquito of ships infected with the fever contracted the disease. The germ has to go through a life cycle in the mosquito, similar to that of the plasmodium malariæ. Various experiments were made, but in no case could the disease be produced by the insect kept less than 12 days. Parasites must be present in the peripheral blood of the patient for the insect to become infected. In August, 1899, 60 deaths from yellow fever occurred in Tampa, Fla. In August, 1901, an epidemic, in which 3 died, occurred in Santiago, by infection through an infected mosquito. Yellow fever is produced only and solely by the mosquito. S.E.Chaillé, of New Orleans, stated that the female stegomyia mosquito can convey the germ. Isolate every patient and the disease will be destroyed. Isolation is necessary. This was proven in Havana, not one case occurring in the last 3 years. Other Cuban cities have escaped yellow fever without waging effective warfare on mosquitoes. The greatest duration of 11 infected stegomyia was an instance in which one lived until the one hundredth and fifty-fourth day. It is yet to be determined how long a stegomyia may live under exceptional circumstances. By the destruction of mosquitoes the disease has been mitigated. New Orleans, La., could furnish many instances when the disease was introduced. Fomites failed to infect persons after they had been infected. Without anopheles malaria does not occur, although the disease has been attributed to water and water melon. The blood of a yellow fever patient is infected 4 days after the attack. The conviction gained ground that yellow fever was an infectious disease. Infection by fomites was supposed and they were believed to carry the disease. More places than New Orleans have suffered. General Ben. Butler demonstrated that the disease could be eradicated by cleanliness. He was heartily endorsed by the doctors, public and press. Dr. Elisha Harris was cited. Stegomyia is the sole cause of yellow fever.

SECTION ON SURGERY.

TUESDAY AFTERNOON, MAY 5.

The session was opened by the reading of the **chairman's address** by Dr. James E. Moore, of Minneapolis, as follows: No special point of greatest interest marked the part year's work in surgery, but rather was it characterized by a gradual improvement in every line. Particularly was this noticed in the establishment of a laboratory for medical research and for investigation of the several prominent problems now interesting the surgical world. In addition to this, the establishment of laboratories for research in medical colleges was notable. This paper was a special plea for exploratory abdominal operation for accurate diagnosis, provided the operator be expert in the recognition of pathological and normal body tissues, and a perfect aseptic technique be practised. By exploratory incision is meant free incision, with the use of the exploratory needle or grooved director. The latter methods are no longer regarded as safe. Incision is needed for final diagnosis, most frequently in the abdomen, and is recommended particularly in rupture of the bladder as better than injection of air or gas. It is also indicated for an inflamed appendix or acute epigastric peritonitis. Above the umbilicus the surgery of the abdomen is not as well developed as in the lower part, gall-bladder surgery being the exception in this respect, as it is most advanced. Early exploration for diagnosis in cancer, followed by radical operation, is at present the only hope for cure. Exploration is also best in the treatment of abdominal wounds, to examine for perforations following penetration. The same is the case in typhoid perforation, in which local anesthesia can be used. Besides these conditions, exploratory incision is also indicated for intestinal obstruction and chronic peritonitis, particularly of tubercular type. The one warning which is to be given is to those surgeons whose limited experience will not enable them to derive any benefit after the incision is made. To this class the writer's advice is, keep out.

Dr. H. J. Whitacre, of Cincinnati, then read a paper entitled the **Report of a Case of Suppression of Urine Enduring Eight Days, Relieved by Decapsulation of the Kidneys.** The case was presented in full, and the conclusion reached that the benefit met with was entirely due to stripping off the capsule, thereby either relieving tension, or allowing freer vascularization of the cortex of the kidney.

Dr. J. H. Guthrie, Dubuque, Iowa, followed with a paper on **Fat Necrosis of the Kidney.** Fat necrosis in the kidney is exactly similar to the same process elsewhere. He reported a case in which the kidney had been incised, and an oily fatty emulsion had exuded from the wound.

Dr. A. H. Ferguson, of Chicago, read a paper entitled **The Surgical Treatment of Nephritis.** He claimed priority over Edebohls, as his paper on the subject had appeared one month earlier than the latter's. He went extensively into the history of the subject, and followed it with a report of cases in which he had practised decapsulation with marked improvement, even in one case of the parenchymatous type. Dr. Bevan, of Chicago, said that he was much interested in the papers, as referring to a point not generally worked up by the profession. He divides suppression of urine into 3 types, obstructive, reflex and nephritic. The first is the most important. He prefers nephrotomy to decapsulation, under nitrous oxide gas or local anesthesia. This gives free drainage and lessens congestion. Dr. Jepson, of Iowa, urges caution as to operation and thought it best for adherent capsule or for one with hemorrhage beneath it. Dr. McLaren, of Minnesota, questioned the advisability of stripping off the capsule in preference to splitting it. Dr. Gibbons, of Scranton, believes firmly in the advisability of decapsulation and has done it frequently with good results. Dr. Guitéras, of New York, thinks that the operation of decapsulation is still in its infancy. He called attention to unilateral Bright's disease and stated that a pathological report of 500 cases gave only one unilateral Bright's disease. Dr. McArthur, of Chicago, has been skeptical the last year. He tried decapsulation in one case on one kidney only; he found marked improvement, so much so that patient begged for operation on the other one. He did so with great improvement to the patient. He believes it a mistake to cut away the entire capsule; he prefers equatorial incision on the posterior surface with shelling out of the kidney. Dr. Dunsmoor, of Minneapolis, endorsed Dr. Bevan as to use of nitrous oxide gas and local anesthesia in operation. Dr. Winslow, Baltimore, mentioned the case of a patient seen and treated in this way, with marked improvement. Dr. Whitacre, in reply, thought decapsulation better than nephrotomy, as it relieves tension over the entire kidney; it was not, however, applicable to large white kidneys. Dr. Ferguson, in reply, described the technique of decapsulation and gave his views as to the cause of improvement.

Dr. B. B. Davis, of Omaha, then read a paper on **The Indications for Cholecystectomy.** He showed that better results followed this procedure than that of cholecystostomy as regards mortality and after-effects. No fistulæ or adhesions are likely to follow, and the complete relief given contrasts strongly with the painful condition often following cholecystostomy.

Dr. F. A. Dunsmoor contributed a paper on **The Call for Exploratory Operation in the Gall-Bladder Region.** He showed the safety of doing this, also pointed out the great advantages to be gained by accuracy of diagnosis after this measure, which is rarely followed by hernia, and cited cases showing benefits from this procedure. Dr. Mayo, of Minnesota, agrees with Dr. Dunsmoor as to the necessity for frequent exploration, also with Dr. Davis as to preference of cholecystectomy if the case is a favorable one. Cases in which stone is in the duct or the bladder give the best results from cystectomy. If bile is present and the duct open, cystostomy is best. It should be the rule to provide drainage of the bladder in the latter operation. Dr. Murphy, Chicago, said that removal of bladder sometimes gives return of symptoms. There are 2 causes; the stone remaining and flexion of the duct. Two elements in primary operation are examination of the duct for stone, and breaking up of adhesions on the under side of the duct. Dr. Ochsner, Chicago, thinks all surgeons increase the number of cystectomies with increased experience, as more careful examination is made then, and treatment is better carried out. Unless proficient, cystostomy is better for the patient. Dr. Hamilton, Columbus, described Mayo Robson's clinic, and pleaded for greater information as to technique in future papers. Dr. Gibbons, Pa., still sticks to the operation of Lawson Tait, and thinks exploratory incision very useful. Dr. Davis, in reply, said that, if the patient is not good for cystectomy, he would perform cystostomy, also if operated upon early. Dr. Dunsmoor, in reply, thought that, unless competent, surgeons should keep out of the gall-bladder region. He called attention to the fact that gall-stones are found in the liver substance as well as in the bladder.

WEDNESDAY MORNING, MAY 6.

Dr. V. B. Knott, of Sioux City, Iowa, opened the session with a paper entitled, **A Contribution to the Surgery of Gastric Ulcer.** He referred to symptoms, diagnosis and treatment of adhesions to surrounding viscera. The latter are most often found as adhesions to the liver or pancreas, because ulcers are frequently at the pyloric end of the stomach. A valuable point in diagnosis is to make the patient assume the knee-chest position. If adhesions exist between the anterior wall of the abdomen, pain is relieved; if between the stomach and other organs, the position causes dragging on adhesions with aggravated pain. The treatment is exploratory laparotomy and separation of adhesions if possible. If inoperable, gastro-enterostomy may be done for relief. If raw surfaces are left after breaking up adhesions, they should be covered with omentum to prevent the formation of new bands. A report of cases followed.

Dr. H. D. Niles, of Salt Lake City, read a paper on **The Surgical Conception of Pyloric Obstruction.** This condition is due to cancer or ulcer in 95% of cases, and treatment should be surgical rather than medical. Operations on the upper half of the abdomen were comparatively safer than on the lower half, with good asepsis and technique. Gastroenterostomy should be preferred in ulcer because the surgeon is unable to say how many ulcers are present, and is likely to leave one or more unremoved. He presented a theory upon the causation of ulcers as due to local inflammation, supplemented by disturbed bloodsupply and the action of the digestive juices. There are 2 objects in the modern treatment of ulcer: the establishment of a communication between stomach and duodenum, and the removal of the pathological condition; while the first is imperative, the second is not always necessary. Rational treatment is surgical rather than medical. Ninety-five per cent. of cases are malignant and are only overcome by operative measures. The pathological condition is reached, exposed, and better treated in this way. Mortality is small if diagnosis and operation are early. Exploratory incision is simple and safe, allowing timely removal of any threatening condition.

Dr. A. J. Ochsner, of Chicago, then read a paper on **Clinical Observations in Stomach Surgery.** He approved of surgical treatment of ulcer as best for 3 reasons: the easy diagnosis nowadays; technique had been perfected, and a number of cases thus treated showed permanency of cure. He stated that he always does the posterior form of gastroenterostomy, as then there is no mechanical flowing back of food. He prefers McGraw's elastic ligature method, but also uses the Murphy button satisfactorily. He described Fowler's method in detail. He was not satisfied with the results of pyloroplasty by the Heinecke-Mikulicz operation, as it leaves a pouch-like deformity very annoying at times. Most cases are carcinomata of the pylorus, when he prefers to do gastro-enterostomy. The Murphy button is an ideal method for this, provided 3 points be observed: Grasp just enough tissue to secure perfect union; select lowest point so as to get best drainage of stomach contents into intestine, and go far enough away from the stomach in the intestine, to be certain of avoiding any tension. He thinks gastrectomy will always be rare and useless. Partial gastrectomy, leaving some of the stomach, has been tried with good results. He then dwelt upon points of technique in all anastomoses, and finished with a report of cases. Dr. Andrews, of Chicago, said that surgery in the upper abdomen was less dangerous because of the fixed position of the viscera and the greater ease in reaching them. The existence of chronic stomach trouble was an indication for operative interference. Surgical rather than medical treatment was indicated. Dr. Mayo, of Minnesota, said surgery of gastric ulcer is really surgery of the complications resulting from the ulcer. Practically all cases producing complications are in the pyloric region. Therefore gastro-enterostomy in the cardiac portion gives better drainage and better results. Extirpation is only a good operation for cancer of the stomach, and it is not difficult. The gastrohepatic omentum and all of the lesser curvature must be removed, as glands therein are always involved. Some of the stomach can be left. Dr. Wagner, of Chicago, related his experience with a case which he took for carcinoma, but which proved to be a mass of omental adhesions, giving rise to symptoms of malignancy. Dr. Rodman, of Philadelphia, believes in early excision of ulcers (partial gastrectomy), which gives a low rate of mortality and avoids complications. He believes in anterior gastro-enterostomy according to Mayo's plan, as it is easy, if not quite so practicable. Dr. Cordier, of Kansas City, dwelt on the practicability of excision of ulcers. He prefers gastro-enterostomy with the Murphy button. Dr. Knott was glad of the unanimity of opinion as to the condition being best dealt with surgically. Dr. Niles prefers gastro-enterostomy to excision. The ulcer gets well if rested, and removal of one ulcer does not guarantee that all trouble has been removed. Dr. Ochsner, in closing, said that gastrectomy was not at all improbable. The reason for the large mortality in his cases was blundering. He described details minutely and dwelt upon the fact that the gastro-hepatic omentum must be removed.

Dr. Beverly Campbell, of St. Joseph, Mo., then read a paper on **The Single Cuff Method of Circular Enterorrhaphy: A New Method.** He pointed out the requirements for an ideal method: It must be applicable to pathological as well as normal tissues; it must give the least amount of lessening of the lumen of the bowel, and it must be speedy. Then he submitted his method, in which he first cuts through serosa and muscularis, then by gauze dissection rolls this back in the shape of a cuff. Next he cuts through the denuded stump. This is practised on one end of the bowel in resection, and, after the gut is resected, the other end is sutured to the denuded stump, and the cuff then rolled back over the line of junction and sutured. This gives reinforcement of the line of suture, and perfect protection against leakage. He claims the following points in its favor: Unchanged caliber of the bowel lumen; leakage obviated; practical and easy to perform; pressure necrosis not needed in repair; least complicated; gives rapid convalescence; and is applicable to all parts of the intestine. He submitted a report of experiments upon dogs to sustain these claims, also reporting in detail 2 cases in which this procedure had been tried with 50% mortality.

Dr. J. H. Dunn, of Minneapolis, read a paper upon **Intestinal Resection with Report of Fifteen Cases; Nine by Button and Six with Suture.** He concluded that the Murphy button was the best mechanical device and the Connell suture the best suture method. The one weak point in regard to the latter was that the suture stayed in surrounding tissues of the intestine for too long a period, 30 days in his experience. His cases were submitted in full. Dr. Jonas, of Omaha, said that 4 points were to be achieved in intestinal suturing: Accurate approximation of mesenteric border (weakest point); no knots to be left outside to favor adhesions with other coils; must be water-tight and air-tight. He thinks the Connell suture undoubtedly best, and objects to the Campbell method, because it leaves knots outside the lumen of the bowel. Dr. Horsley, of Texas, prefers continuous to interrupted sutures, as the latter act as a splint, during peristalsis, to prevent widening of intervals between stitches. Dr. Walker, of Detroit, thinks Campbell's method takes too much time to perform. He prefers the McGraw elastic ligature for lateral anastomosis, as it is quick, causes no sepsis and but little disturbance. Dr. Murphy, of Chicago, brought out forcibly the point that the pathological condition of the intestine must be well recognized, and the vitality assured, as this was of more importance than the method employed. Dr. Ferguson, of Chicago, praised the Campbell method, as he thinks it quick and that fewer sutures are needed. Failures are more frequent from a bad selection of the spot for resection than from the method used. Sacrifice more bowel if necessary to secure the favorable spot. Dr. Campbell, in reply, said knots outside the lumen in his method were not dangerous, as these sutures did not penetrate the submucosa, and therefore were not likely to be infected and give rise to adhesions.

WEDNESDAY AFTERNOON, MAY 7.

The session was opened by Dr. J. T. Bottomley's paper on **Multiple Osteomyelitis.** This was the report of a case showing multiple foci, occurring in an adult, 43 years old, much later than usual. It was due to the streptococcus pyogenes. His conclusions were that early diagnosis and immediate operation gave the best results. Dr. E. H. Nicholls, of Boston, followed with a talk upon **Osteomyelitis.** He dwelt upon the pathological process and upon the way in which repair was effected, bringing out the point that the latter was due to the action of the endosteum and periosteum. There are 3 stages of the process to be relieved: *Acute type.*—By prompt drainage to prevent general infection. Remove only cortical bone to accomplish this. If seen early, drainage can be complete without disturbing the marrow. Avoid curetting this, if possible, because of danger of injuring endosteum. *Subacute type.*—First you can remove the entire necrotic shaft. New bone grows from the periosteal shell, and complete regeneration follows. Or you can wait till the periosteal shell is thicker, then remove both shell and shaft, and regeneration occurs from the periosteum remaining. *Chronic type.*—The treatment is the same as for the latter type, except that sequestrum and periosteal shell are both removed, with regeneration from periostum. Dr. DeForest Willard, of Philadelphia, considered this an important topic, as many surgeons are tardy in making early diagnosis. Operation should be done in the first 48 hours. The only promising relief is prompt draining of medullary cavity. Rheumatism often masks the diagnosis for some practitioners. Dr. Stewart, of Minnesota, said that this condition occurs more often than is recognized, and is commonly diagnosed as rheumatism. The diagnosis is unquestionably the important point. He disagrees with Dr. Nicholls as regards the leaving of marrow in the acute type, and prefers its removal by curetting. He thinks it is not always necessary to remove the entire bone. Dr. Murphy, of Chicago, dwelt upon early diagnosis as most essential. It is easily made by pain, temperature, delirium, and at first no effusion into the joint nearby. Inside of the first 48 hours there is no pain upon pressure, unless it be made deep and constant, when the location of the point of infection is indicated by it. When located, free incision and relief of tension in the shaft is the first indication. Secondarily, a flap in the shaft may be made for freer and more permanent drainage. Dr. Gibbons, of Scranton, for diagnosis, applies to bone percussion, which elicits pain. He then chisels and opens freely. Dr. Nicholls agrees with the necessity for early diagnosis, but disagrees as to the ease of making it. Nonarticular pain in the young should always be regarded as suspicious. He dwelt upon refraining from disturbing the marrow, if possible, thereby avoiding injury of the endosteum. He thinks it not always necessary to remove the entire shaft of bone.

Dr. J. A. Wyeth, of New York, presented a paper entitled **Treatment of Vascular Tumors by the Injection of Boiling Water Into Them.** These tumors are classified anatomically into arterial, venous and capillary. The theory of this method is to coagulate the blood in the vascular neoplasms by injecting some substance causing this, into the vessels supplying the part. He tried paraffin first, but later gave it up in the favor of boiling water. This causes coagulation and arrest of circulation in the part, with ultimate disappearance of the neoplasm by granular metamorphosis with absorption. He exhibited his apparatus for injecting water, and reported cases in which he had tried it. The remedy had already been used for hemorrhoids and fistulæ, and he intends to try it in tubercular adenitis and in gonorrheal buboes, believing it will destroy the germs present. Dr. Mayo had seen cases reported by Wyeth. He got apparatus from him and tried it on a case of venous angioma, inoperable on account of danger to surrounding structures; this treatment gave wonderful improvement. Dr. Lord, of Omaha, believes this method preferable to the knife. He has tried injection of iodine, with precautions taken to prevent the dislodgement of the embolus formed, which gave immediate and beneficial results. Dr. Gibbons suggested trying this method in fibroma of the uterus of immense size. Dr. Massey, of Philadelphia, does not think it applicable to tubercular adenitis. Mercuric cataphoresis gave good results in this in 5 of his cases.

Dr. W. J. Mayo, of Rochester, Minn., submitted a paper on his **Further Experience With the Vertical Overlapping Method for the Radical Cure of Umbilical Hernia.** The cause of the poor results heretofore achieved in this condition was due to downward traction of the abdominal contents upon the fixed point, the umbilicus. The vertical overlapping method gives less tension and greater security from relapse. Essential points of the operation are the liberation of the lower margin of the ring for one inch laterally. Then this is slid up 2 inches into a pocket between aponeurosis and peritoneum. This gives a fixed point of attachment for weight bearing structures above the umbilicus, and distributes the traction more widely. The greater the intra-abdominal tension, then, the closer the opening is compressed. A report of 35 operations successfully treated in this way was submitted. Dr. Ochsner, of Chicago, praised the operation particularly because textbooks are so faulty in the description of treatment. The object should be to reproduce the condition of the linea alba. Dr. Murphy, of Chicago, had had an unfortunate experience with the old method, so had learned the new method and practised it with great success. Drs. Warthin, of Louisville, and McGehee, of Minnesota, endorsed the Mayo operation. Dr. Ferguson, of Chicago, would not condemn the old method entirely. His objection to the Mayo plan is that nothing is left in the center but fibrous tissue. He modifies it by transplantation of the recti muscles nearer to the front. Dr. Mayo disclaimed priority for the operation.

Dr. W. T. Eckley, of Chicago, then presented an interesting paper upon the **Evolution of the Mammalian Straight Gut; with Special Reference to Peritoneal Changes Incident to Rotation.** He presented a mechanical device particularly adapted for students, favorably endorsed by Drs. Wills, of California, and Gibbons, of Pennsylvania, upon this addition to the teaching appliances of human anatomy. Dr. F. B. Lund, of Boston, read the next paper on **The Value of Enterostomy in Selected Cases of Peritonitis.** Enterostomy is only offered after other means of relief are exhausted. It can be done with local anesthesia and should be reserved for those cases in which life is endangered by distension from obstruction. The technique of the operation was described. He prefers local anesthesia. This method is applicable for the acute distension following appendicitis operations. A report of cases followed. Dr. M. B. Tinker, of Baltimore, said if the gut is not brought out to the external surface of the wound, the fistula will close spontaneously. Excoriation of the skin may be relieved by placing the patient in a tub of warm water. Dr. Porter, of Fort Wayne, emphasized the point that many cases of peritonitis would recover if tympany was relieved; therefore this operation is justifiable. Also, the fistula will close naturally if properly made. Dr. Thomas, of Washington, believed the cause of the peritonitis should be attacked first. A solution of alum is the best means of producing peristalsis after operation. Dr. Lund, in reply, said he believed that the fistula is better closed by operation than if left to nature.

Dr. F. D. Smythe, of Memphis, read the next paper on the advantages of **Cholecystectomy Over Cholecystostomy and Cholecystorrhapy.** He showed the great advantage of removal of the bladder over either of the two operations, and reported 2 cases.

Dr. R. H. Gibbons, of Scranton, Pa., submitted a paper on the **Dangers Attendant on Attempt at Gaining the Period of Interval in Operation for Appendicitis.** This was a plea for early diagnosis and early operation as avoiding the dangers attendant upon waiting till the attack has passed, and operating in the interval. He dwelt upon the value of McBurney's sign of tenderness at this point, and mentioned Edebohls' palpation of the appendix as the best diagnostic means. He concluded by stating that the mortality should be 1/100 of one per cent. if operated upon in the pre-inflammatory stage. Dr. Niles, of Salt Lake City, believes in operating when the diagnosis is made, because of the uncertainty of knowing the exact condition present in the abdomen. Dr. Ochsner, of Chicago, wished to state his position clearly, as he thinks he is misunderstood. He believes in immediate operation, provided the infection is still in the appendix or the pre-inflammatory stage is diagnosed. He also believes in his plan of waiting and starvation if the infection is outside of the appendix, or the pre-inflammatory stage has passed. Deaver's bad results with this plan were due to imperfectly carrying it out. He only carries out his plan till the period of inflammation is over, when he advises operation. Dr. Mayo was glad all are agreed on one point, namely, to operate in the first 48 hours. After the first 48 hours, if infection is still in the appendix, operate. After the material of infection is outside of the appendix, Ochsner's plan is best, as preliminary to later operation. Dr. Gibbons, in reply, insists upon immediate operation on detection of slight disease. Deaver gets a bad class of cases because of the attitude of the profession in Philadelphia, there being about 6 different treatments in vogue there.

THURSDAY MORNING, May 7.

Dr. DeForest Willard, of Philadelphia, opened the proceedings with a paper on **Sunshine and Fresh Air vs. Röntgen and Finsen Rays in the Treatment of Tuberculosis of Bones and Joints.** His conclusions were that sunlight and fresh air, with fixation of the part, was the best treatment for tuberculosis of hard tissues; that treatment by tent-life was successful both in winter and in summer; that there should be established sanatoria for the treatment of tuberculosis of hard tissues; that concentration of the sun's rays was beneficial in the treatment; that X-rays inhibit the growth of the germ in the laboratory, but that this is not definitely proved about the germ in the tissues; that both actinic and X-rays were to be used as adjuncts to other methods, not as superseding them. Dr. J. C. Stewart, of Minneapolis, followed with a paper entitled **Epithelioma Under the X-rays. A Preliminary Report of the Histological Changes.** This was an exhaustive report of the changes following upon the treatment of epithelioma with the X-rays. The changes shown were fatty degeneration, vascularization in the center of the pearls, the formation of elastic tissue in the vicinity of the vessels, hyaline degeneration in the pearls, and necrotic changes in the cells. Dr. Christian, of Boston, was not prepared to say what is the exact cause of the improvement, but does not think the fatty degeneration important. Dr. Nicholls, of Boston, said the X-rays were evidently beneficial, but all cures are to be regarded with suspicion. He thinks the action of the rays is a penetrating mild irritant, sufficient to cause necrosis of low-grade cancer tissue. He calls attention to the fact that the X-rays can also produce cancer, giving a case illustrating this. He never saw a true Plimmer body in epithelioma. He believes in operative treatment first, followed by X-ray treatment. Dr. Ridlon, of Chicago, does not think sunlight alone curative in joint tuberculosis. The effect of outdoor treatment is rather a general improvement of the patient's health. He is not encouraged by his experience in the use of X-rays for bone tuberculosis. Dr. Lund, of Boston, agrees with Nicholls as to the caustic action of the X-rays in cancer. He thinks them specially indicated in epithelioma of the face. Dr. Willard, in reply, dwelt on the point that the light-treatment was merely to be used as an adjunct to the other methods, in cancer and tuberculosis. Dr. Stewart dwelt upon vascularization as one positive fact in the curative effects of the rays.

Dr. J. E. Summers, of Omaha, then related a case of **Varix of the Inferior Mesenteric Vein, Complicated by Chronic Ulcerative Colitis.** This was relieved by gastroplication and the Morrison operation for the purpose of relieving the congested condition. Later an artificial valvular fistula was made in the cecum, and irrigation was practised with a good result. Dr. Milliken, of Texas, considered the use of the appendix for irrigation not good practice. Dr. Summers, in reply, agreed with Dr. Mililken as to the limited use of the appendix for irrigation. He believes his case was due to pressure of the pancreas causing varix of the vein.

Dr. Charles A. Powers, of Denver, then reported a case of **Congenital Dislocation of the Radius,** followed by an exhaustive review of the cases on record, their symptoms and treatment. A point in the discussion was advanced by Dr. Willard that, for relief of extreme pronation in these cases, separation of the pectoralis major was a good plan. Dr. J. P. Lord, of Omaha, reported a case of **Acute Epiphysitis of the Head of the Femur Causing a Condition Subsequently Simulating Congenital Misplacement,** a sequel of pneumonia. He recommended treating this condition as though misplacement of the head had resulted in congenital hip dislocation. Dr. Ridlon said that the only chance for a satisfactory result was placing the great trochanter in the acetabulum to take the place of the head. Abduction and fixation in this position were necessary. Dr. Townsend, of New York, considered abduction of the thigh the main point to be obtained. The diagnosis of misplaced head is always possible by feeling the head.

THURSDAY AFTERNOON, MAY 7.

Dr. W. H. Earles, of Milwaukee, opened the session with an article on the **Necessity for More Care in the Treatment of Skull Fractures.** He laid especial emphasis upon the following points: Fractures of the skull are not always recognized until too late; when not properly treated at the time of fracture, death or serious remote consequences frequently result; if properly treated they usually result satisfactorily; with ordinary care and cleanliness, they may be treated by the average surgeon under ordinary conditions; the duty of every surgeon is to feel sure that he has done all possible for the patient. Often too little is done. Dr. Sherrill, of Louisville, scores the classical division of brain injuries. Symptoms of concussion always indicate injury to the brain. Dr. Wagner, of Chicago, cited 2 cases showing the necessity of trephining in all cases. Dr. Sullivan, of Chicago, dwelt upon the need for surgical intervention in all cases of compound fractures, with good drainage. Dr. Brown, of Alabama, reported a case of hemorrhage from the middle meningeal artery, the result of whooping cough. Trephining was done with good result. Dr. Witherspoon, of St. Louis, dwelt upon fracture of the base of the skull. Do not irrigate ear or nose, as infection might be carried in. Dr. Earles, in reply, emphasized the lack of recognition of the exact condition by too careless examination.

Dr. J. B. Bullitt, of Louisville, followed with a report of a case of **Epispadias.** This was treated by the modification of Cantwell's operation suggested by Dr. Parham, the result being almost perfect, except for one little opening through which urine dribbled when passing water. Dr. Parham, of New Orleans, disclaimed originality, only suggesting the combination of Van Hook's method with that of Cantwell. The latter operation is by far the best for this condition. Dr. Martin, of New Orleans, reported a case, giving his reasons for adopting the Van Hook modification. Dr. Fenner, of New Orleans, was impressed by the perfect restoration of normal anatomy following this operation. He reported a case operated upon by him. He advises buttonholing the peritoneum for drainage. Dr. Bullitt, in reply, thinks Martin's suggestion of an injection of paraffin for incontinence of urine a good one, as is Fenner's plan of buttonholing the peritoneum.

Dr. Rudolph Matas reported a case of **Cicatricial Ankylosis of the Jaw; A Contribution to its Operative Treatment.** He dwelt on the causes of this condition, and reported the history of a case in which a condition of bilateral cicatricial ankylosis had been overcome by excision of the bony cicatrices, followed by plastic flaps from the skin of the neck and cheeks, to supply the mucosa of the mouth. The final result was functionally good, with a minimum amount of deformity. Dr. Murphy, of Chicago, related 2 cases which gave great trouble, finally relieved, in somewhat the same manner, by plastic work. Dr. Eastman, of Indiana, related a case of unusual etiology, caused by forcing a splinter into the right angle of the inferior maxilla by a fall. Dr. Martin, of New Orleans, reported a case cured by the use of an apparatus resembling a clothespin, which the patient used constantly between the teeth. He thinks removal of the jaw would have been better treatment in Matas' case. Dr. Ochsner, of Chicago, believes in early operation, while the subject is young, as then deformity will often correct itself. Dr. Matas, in closing, dwelt upon the value of the plastic skin flaps to supply the mucosa of the mouth. He thinks Martin's suggestion of removal too drastic. He agrees that the earlier in life it be treated the better the result will be.

Dr. A. D. Bevan, of Chicago, read a **Further Contribution to the Surgery of Undescended Testicle.** This is a rather common condition. Besides mental distress, there are also physical disadvantages if it is not corrected. Hernia, actual or potential, is always present, with great liability to injury from external violence or muscular contraction, and gangrene. Lastly, malignant lesions are more apt to follow in misplaced testicles than in normally situated ones. The main point in his treatment is that he found that the tense structures preventing release of the testicle were the spermatic vessels. These can be ligated and cut without causing atrophy of the testis. The vas deferens is of sufficient length to allow reduction of the testis and placing it in the scrotum. The main points in the operation are ligation and division of the spermatic vessels, if needed, and formation of the tunica vaginalis from the vaginal progress of peritoneum found in the canal. Also never anchor the testis to the scrotum, but pass a purse-string suture through the neck of the dartos to retain it in position. He closed by urging early operation before puberty, at 6 to 10 years. Get the testis into the scrotum before puberty and give it a chance to develop there. Dr. Eckley, of Chicago, described the development of the sexual organs, and showed why the vaginal process precedes the testicle in descent. Dr. Wagner, of Chicago, cited a case in which he had operated successfully by this method. Dr. Bartlett, of Chicago, thinks, if the testis must be removed for this, it should be after the eighteenth year, so as to allow virile development beforehand. Dr. Rodman, of Philadelphia, prefers putting the testicle in its normal place to removal, for 3 reasons: For better mental effect; less danger of malignancy in a normally placed testicle; and it will not develop in the inguinal canal. Early operation is undoubtedly preferable. Dr Bevan, in reply, said, if late in life, he would be guided by the individual case as to removal. He dwelt on the ease with which the testicle can be brought down by his modification.

Dr. J. B. Murphy, of Chicago, then read a paper on the **Surgery of the Urinary Tract in the Female, Experimental and Clinical,** dwelling on the salient points in the treatment of kidney and ureters. Insults to one kidney are always reflected to the other, even to the reproduction of tumors. He recommends decapsulation and free division of the kidney for pyelonephritis. Nephrectomy is not to be done for this. Hydronephrosis is merely a symptom, but is often treated as a disease. Immediate suture of the pelvis produces rapid union. The only portions of the ureters not easily accessible are the lower 2/5 of the male ureter. For stone in this portion he goes through the bladder wall in the female. Dr. McLaren, of Chicago, was impressed with the suggestion for the treatment of pyelonephritis; also as to opening the ureter through the bladder wall. Dr. Goodhill, of Iowa, agreed in the main, but preferred to sacrifice a diseased kidney to drainage. He condemns catheterization of the ureters on account of the danger of harming the valve put at the opening by nature to protect it. He prefers segregation. Dr. Hart, of Chicago, prefers drainage to removal. Ventral opening through the bladder deserves consideration. Dr. Smythe, of Memphis, wants to go on record as pleading for ultraconservatism in work upon the diseased kidney. Dr. Matas, of New Orleans, said if the operator is not skilful, removal is best. In bilateral disease, decapsulation is best. Thorough drainage is needed. Transrenal drainage is admirable. As aid for plastic work on the ureters, he recommends the use of retrograde catheterization while union is taking place. Dr Murphy, in closing, approved of retrograde catheterization. Primary removal of the kidney is never justified except for malignancy.

Dr. A H. Levings, of Milwaukee, followed with an article on **Tuberculosis of the Mammary Gland.** He reported cases and arrived at the following conclusions: It is not infrequent, occurs during menstrual life, and is often bilateral. It is most common in women. If seen early, excise the foci; later remove the breast. Drs. Davis, Sullivan, Knight and Norton reported cases of this condition.

FRIDAY MORNING, MAY 8.

Dr. Luther Sexton, of New Orleans, opened with a paper on the **Use of Plaster in Fractures of Long Bones,** reporting cases showing the value of plaster in treatment. He brought out the point that dressings are never carried up high enough on the body to produce the greatest good. Dr. Lord, of Omaha, thinks the field of usefulness is constantly increasing. He treats intracapsular fractures of the femur with plaster dressing. Dr. Grant, of Denver, gets best results by extension with fixation around the limb. He uses plaster only after primary swelling has disappeared. This is imporant when the patient cannot be seen often. He prefers liquid glass, as it is lighter and cleaner. Dr. Brandau, of Clarksville, Tenn., explained his method for the treatment of this condition in children. Dr. Andrews, of Milwaukee, recommends Buck extension first and, after disappearance of swelling, a plaster splint. Dr. Morey, of New York, explained the three-angled chair. He suggested the addition of dextrin to plaster, as it is lighter and hardens better. Dr. Sexton thought mistakes had been due to not high enough extension of dressing on the abdomen.

Dr. M. F. Porter read a paper on **The Closure of Wounds.** He advocated the use of adhesive strips in all wounds in which there was no tension and no infection. Advantages were less trauma, better drainage, avoidance of stitch abscess, less danger of infection and better coaptation. The latter is not incompatible with perfect drainage when plaster is used. Blood oozes through spaces between the strips. Plaster is easily asepticized by formalin. Scars of the face are avoided by its use. Avoid sutures wherever possible; tension and infection are the only conditions calling for them. Less trauma and infection result with plaster strips. Dr. Summers, of Omaha, thinks the method a good one, except for abdominal incision, when sutures are necessary. Dr. Pearce, of Kansas City, thinks too much suturing is done. Plaster strips are good except for abdominal work. Dr. Perkins, of New Orleans, said that maceration of the skin and perspiration under the strips render the plan inappropriate for hot climates. Dr. Porter only recommended the plan when tension and infection are not present.

Dr. T. C. Witherspoon, of St. Louis, then read a paper on **The Operative Treatment of Exophthalmic Goiter.** He gave his experiences with this condition, and told why local anesthesia was preferable. Ligation of the superior thyroid arteries was a preliminary step in the operation, followed by removal of the gland through an incision parallel to the anterior border of the sternomastoid. Infiltration of tissues below the skin is necessary. He uses a 1/10% eucain solution. Dr. Grant, of Denver, prefers general anesthesia. He opens the capsule before ligating the arteries. Dr. Rixford, of California, uses antiseptics cautiously, as they are readily absorbed in this condition. He prefers transverse incision on account of the cosmetic appearance, and enucleates from the external and posterior sides to avoid injury of the recurrent laryngeal nerve. Dr. Witherspoon uses medical treatment for a reasonable time, then operates. A general anesthetic is contra-indicated. Early ligation of the vessels is important, if possible from behind.

Dr. F. G. Connell, Leadville, then read an article on **Subcutaneous Injections of Paraffin for Deformities of the Nose,** describing the wide field for operation in all deformities. It is only justifiable when sure of no chance of making the condition worse. Difficulties attendant upon operation were cited. He had had permanent reddening of the skin of the nose in one case. It is rarely necessary to give a general aneshetic. Inject too little rather than too much. Dr. Morton, of California, gave his results in 23 cases. The paraffin must be at the temperature of the blood to avoid embolism. The amount of tension is a guide to the amount of paraffin to be injected. The dangers are infection, tissue necrosis and embolism. Dr. Lord, of Omaha, suggested X-rays for the reddening of the skin resulting. They blanch the skin permanently. Dr. Mayo, of Minnesota, suggested loosening the tissues by the preliminary injection of saline solution. Dr. W. M. Spear, of Rockland, Me., then read a paper on **Abscess of the Spleen.** He reviewed the literature of the subject, and gave a case which had occurred in his practice. Dr. Mellish, of Texas, then closed the session with a paper on **Anesthesia.** He concluded that the employment of one anesthetic was not justifiable in every case; that the best technique and a good anesthetic were necessary; that local anesthesia was not as good if a general anesthetic can be used; that nitrous oxide was the best anesthetic, and that compression of the phrenic nerve best controlled vomiting. Dr.

Moore, of Minneapolis, thinks chloroform safer, if a good anesthetist gives it. Dr. Ochsner, of Chicago, unless he has a competent anesthetist, uses ether. In danger from chloroform the first thing to do is forced expiration, to get rid of the gas in the upper air passages, before starting artificial respiration. Dr. Tinker, of Baltimore, pleads for a more general use of local anesthesia, on the grounds of greater safety. Dr. Mayo thinks ether safer in general. Dr. Summers called attention to the postoperative rise of temperature produced by a general anesthetic. In closing, Dr. Mellish stated that chloroform was far more dangerous, even with a good anesthetist.

SECTION ON DISEASES OF CHILDREN.

TUESDAY AFTERNOON, MAY 5.

The chairman, Dr. John C. Cook, of Chicago, delivered an address on **the development and care of children.** After quoting Oppenheim's statistics upon the development of the various organs in the child's body, he commented upon the few States having child-labor laws. In 1874 Massachusetts first established such laws, and they were gradually changed until now children under 13 are not permitted to work in most of the more advanced States. Yet, several States have as yet no such laws at all. The laws are based on the affidavit of the parents, not on the physical development of the child. Dr. Cook referred to the huge number of wage-earners under 15 years of age. While the countries of Europe have overcome this child slavery by law, America still persists in degrading children in this manner. He urges physicians to aid in stopping this evil. Work is a very good thing, but work in unhygienic surroundings causes one-sided development in young children, with weak bodies and minds. Not only are the height and weight affected; the mental state is also dwarfed. To improve the present condition, the sanitary condition of factories must be improved, good ventilation, 400 cubic feet of air for each person working at night, good water, modern conveniences, etc., being advised. Good laws are necessary. Dr. Cook recommends the appointment by each State of a commission to consist of 5 members, 2 of them to be physicians, to oversee labor and education, so that reliable inspectors are appointed and factory hygiene is advanced.

Dr. W. T. Eckley, of Chicago, read a most interesting paper, showing **he anatomical and physiological correspondence between the child and the adult** in temperature, circulation, respiration, articulation, sinuses, etc., up to puberty. Fetal vestiges, such as Meckel's diverticulum, thyroglossal ducts, emissary veins, etc., remain in the adult. In many points he quoted Flechsig. Idiosyncrasy is the survival, in the adult, of the normal susceptibility to stimulation in the child. To precocity and unbalanced mind a third condition, idiosyncrasy, is now to be added. Persons with these 3 conditions are victims of development. The first is irresponsible; the second unaccountable, and in the third a father cannot be blamed for dying from taking medicine ordered for his infant. Therefore powerful drugs should always be given first in small doses.

Dr. C. F. Wahrer, of Fort Madison, Iowa, read a witty paper full of trite remarks, entitled, **Is the study of pediatrics worth the attention it gets, and does it get the attention it deserves?** Pediatrics can only be a specialty in the larger cities. In other places every man must treat many children, and this often leads to a large general practice. Fully one-half of the work of the general practitioner is among children and adolescents under 18 years of age. He concluded that not only is pediatrics worth study, but it deserves more attention in medical schools, where it is taught insufficiently and improperly, often by very young men. Dr. Boggess, of Louisville, also believed that pediatrics deserved more attention.

The last paper, by Dr. T. S. Southworth, of New York, was on **the acute suppurative cervical adenitis of infancy.** This affection peculiar to infants under 2, as a rule, is due to the absorption through the lymphchannels of infection from the nasopharynx. There is swelling of one or both lymphglands on the sternocleidomastoid muscles, with fever and suppuration in many cases. Incision, in the folds of the neck, is the best treatment, performed at the time of pointing. Then the scar is small and hardly noticeable. No anesthesia is necessary. Pressure and a grooved director may be needed to evacuate the pus through the tiny incision. A tube is left in for 3 or 4 days, with recovery in a week, in many cases. There is not usually suppuration on both sides, one side generally being absorbed. With an abortive treatment, consisting of nasopharyngeal cleansing, not half of the cases go on to suppuration. Tincture of belladonna, aconite and potassium chlorate are given internally, with Seiler's or Dobell's solution locally. He had no failures in children over one year, and but 4 failures in children under 12 months. The younger the child, the greater is the liability to suppuration, and the continuance of fever makes the occurrence of suppuration probable. Dr. A. C. Cotton, of Chicago, commended nasopharyngeal cleanliness in the prophylaxis of cervical adenitis. Dr. C. G. Kerley, of New York, has found tubercular adenitis in several children under 4 years of age. The diagnosis depends on the chronicity of the affection, together with lack of fever, and the enlargement of several glands simultaneously. He especially advises potassium chlorate as a disinfectant in all acute pharyngeal conditions. He also reported good results from the use of ice locally. Dr. Gilbert, of Louisville, believes in no local applications except ice. He uses potassium iodide in these cases. Dr. Wahrer believes that potassium chlorate should be used but conservatively, as it may and does produce nephritis. Dr. J. G. Mastin, of Chicago, advised potassium chlorate if the kidneys are known to be healthy. He considers normal salt solution the best nasopharyngeal application. Dr. H. N. Leavell, of Louisville, referred to pharyngeal affections in the etiology of acute cervical adenitis. In closing, Dr. Southworth said that he uses a spoon for instilling nasal applications into the nares. He advises caution in the use of potasium chlorate. Potassium iodide he gives only in chronic cases.

WEDNESDAY MORNING, MAY 6.

A paper on **the pathology of summer diarrhea of children,** written by Dr. G. W. Boot, of Evanston, Ill., was read by Dr. Southworth. After arranging a clinical classification of the diarrheas of children, he stated that indigestion due to food infection is most common, followed closely by that form associated with bacterial invasion. The great resemblance of the colon bacillus, typhoid bacillus and Shiga bacillus explains how these cases may be mistaken for typhoid fever. Streptococi may be found alone, or with mixed infection. Many statistics were quoted to show that Shiga's bacillus is the specific cause of most cases. He described the bacillus, its peculiarities and the pathological changes found, and stated that the lower port of the ileum is most frequently affected. The bacillus is never found in the feces of healthy persons. Often the kidneys are somewhat affected.

Dr. H. E. Tuley, of Louisville, read an article on the **every day problems in infant feeding.** He referred to the importance of strictly supervising nursing infants, their general condition, weight, digestion, etc. Even menstruation may affect the breast milk. If fever occurs, it is rapidly diminished by giving modified milk temporarily. Too much proteid generally decreases as soon as the mother gets up after the puerperium. For too little milk he gives quantities of water, milk, cereals, etc. He advises asociating modified cows' milk with breast-feeding in cases of difficult digestion. Only tuberculosis and sepsis in the mother contra-indicate breast-feeding. He advises nursing through suppurative mastitis.

Dr. Alexander McAllister, of Camden, N. J., discussed **infant feeding.** He referred to the slow progress made by the profession in this subject. We are coming back to close proximity to nature, and now consider the individual needs of the infant. Breast-feeding is best; nothing comes near it. He summarized the various modes of feeding advocated, in the order of their value, placing condensed milk and cereal foods last. He laid special stress on the importance of efforts to reduce the morbidity as well as the mortality.

Dr. A. C. Cotton, of Chicago, read an interesting paper on the **infantile digestive disturbances.** He said that indigestion was most common between the ages of 6 and 18 months. He gave in detail the symptoms of early digestive disturbances, comparing the breast-fed with the bottle-fed infant. Malnutrition predisposes to these conditions. He considers cholera infantum more common than is generally supposed. The most usual complication of gastric disturbance is stomatitis. After speaking of the illogical administration of artificial food, regardless of thermic conditions, he referred to the fact that some States now require mention of the sort of feeding upon death-certificates for infants. Diet is essential in the treatment of these conditions. He suggested physiological investigations of breast-milk, to discover a possible means of preventing such disorders.

Dr. J. R. Snyder, of Birmingham, Ala., made **some excellent suggestions for reducing the prevalence of summer diarrhea.** The disease is preventable. Much can be accomplished by individual instruction by the physician on questions of home sanitation and hygiene. He laid especial stress on the care of milk after delivery, and advised the education of the poor in this respect by the distribution of phamphlets containing rules for carrying out the advice of milk commissions. He also advocated sending physicians or students to disseminate the knowledge of good hygiene and sanitation among the poor.

Dr. E. V. Davis, of Chicago, reported **observations on breast feeding from an obstetrician's point of view.** She advised delay in cutting the cord. She also begins nursing gradually, at decreasing intervals until every 2 hours is reached by the fifth day. She reported 6 cases to show the value of condensed milk and malted foods, continued for a short time in the treatment of indigestion with colic, followed by return to the breast.

Dr. E. F. Brush, of Mt. Vernon, N. Y., read a most interesting account of **aphthæ and herpes contracted by children drinking milk from cows suffering from foot and mouth disease.** But few such cases have ever been reported. Clinically the noncontagious and contagious cases of aphthous stomatitis cannot be differentiated. He cited 5 cases occurring in children in one family, in which direct contagion was established. His experiences during these investigations were entertaining. The milk from infected cows loses is virulent intensity with age, while boiling totally destroys the infection. Stopping the milk causes the disappearance of the condition when the milk is the cause of the stomatitis.

Dr. T. D. Parke, of Birmingham, Ala., read some **observations on the prolonged withdrawal of all food in the management of certain cases of intestinal disorders.** These cases show that the long withdrawal of all but water is good in many cases of infantile indigestion. He continued this treatment for 120 hours in one case, with recovery, in an infant with severe ileocolitis. He has had but one death in 4 years, upon this treatment, prolonging the total withdrawal of food as long as is necessary.

Dr. McClanahan, of Omaha, discussed **the importance of normal lactation.** He advises giving breast-milk even when this was known to be insufficient in quantity, supplementing it with the bottle. He also believes that breast-milk exerts some bactericidal action, protecting the infant against infection. Dr. Kerley, of New York, considered a clinical classification of summer diarrheas as yet impossible. He advises a regular régime for nursing mothers, from the birth of the child, indicating the amount of rest, exercise, diet, etc. In the highest classes of society he gives one bottle daily, to permit the mother to follow her usual amusements, beginning about the third or fourth week. He referred to the fact that most men forget to separate the feeding of well from that of sick infants. In the latter condensed milk or malted foods are of value temporarily. The mortality from summer diarrhea is proven to be greater among the babies fed on condensed milk. This treatment has given excellent results; no deaths among 50 tenement-house babies, and only 30 deaths among 850 hospital cases. He advised state or municipal control of milk laboratories, so that the poor might have a cheap, pure milk. Pamphlets educating the poor are also valuable in the prevention of indigestion. He has seen 8 cases of diarrhea, due to the Shiga bacillus, treated with the Harris serum with good results. Dr. Gilbert, of Louisville, referred to death from convulsions following nursing after a severe attack of anger in the mother. Dr. Southworth recalled the work of the New York milk commission, from its incipiency to its completion. There Dr. W. H. Park took the initiative.

WEDNESDAY AFTERNOON, MAY 6.

Dr. J. G. Mastin, of Chicago, read a paper on **the relation of infant feeding to the diarrheal diseases of infancy,** discussing the physiology of digestion, lactation, and the means of influencing it. He recommended early milk analysis in every case. He also advised maintaining breast-feeding in all cases, supplementing it, when necessary, by modified milk or a wet-nurse. He prefers using cane sugar to milk sugar in modified milk mixtures. Dr. Acker, of Washington, D. C., said that mothers should not be allowed to wear corsets, so that they may be able to nurse their infants. Besides, they should be made to nurse their children. Dr. Southworth, of New York, said that, while some of these cases were due to infection with the Shiga bacillus, many were not. He reported an epidemic due to this bacillus, detailing the symptoms. Dr. Cook, of Chicago, referred to the presence of a toxemia from food already ingested before the existing cause, more food, was given. Dr. Tuley, of Louisville, moved that a committee be appointed by the chair to form a classification of the diarrheas of infancy. He also advised reducing the proteids during the hot weather. He referred to his inability to form a milk commission in Louisville. He believed that too early nursing, before the third day, could cause fissured nipples. Nursing should be stopped soon after the first year. Dr. Cotton, of Chicago, said that the hygiene of disturbed lactation was the great problem of the future. Dr. Snyder, of Birmingham, Ala., hopes that, instead of placing premiums on the heads of large families, we should aid those already born by securing good milk, good hygiene and sanitation for the poor. Race suicide does not need discussion. Lactation must be improved. Dr. Davis, of Chicago, said that the cases which she had reported were rare, having occurred during 12 years' work. In Chicago most mothers nurse their infants.

Dr. M. Ostheimer, of Philadelphia, reported a case of **probable gummata of the liver in a child of 6,** whose parents were both syphilitic, the mother having had 7 miscarriages among 13 children, only 2 of whom are still living. Until this hepatitis appeared, the child showed no signs of syphilis. There was hypertrophy of the liver, with ascites, jaundice, fever, and tenderness over an area, enlarged, nodular and palpable, near the edge of the ribs. Recovery followed on antisyphilitic treatment. A review of the meager literature on the subject was given. Dr. Gilbert, of Louisville, referred to 2 similar cases, also in little girls, now under treatment. In both cases antisyphilitic treatment effected recovery after tapping. Dr. Wahrer, of Fort Madison, Iowa, spoke of the frequency of hereditary syphilis, and the good guesses often made by giving specific treatment in cases with a difficult diagnosis. He reported several cases of this kind.

Dr. W. C. Williams, of Chicago, discussed **influenza in children**, giving the symptomatology, course, complications, etc. Clinically it often resembles diphtheria. Children seem susceptible in varying degrees, though the previous condition of the mucous membrane is important, as the severity of the attack may depend on this. As the disease is very contagious, good hygiene, sanitation, etc., are of value in its prevention. He describes the various types of the affection, catarrhal, nervous, febrile, circulatory and glandular case. Oftener the disease runs a chronic course. He reported several cases showing the varied, atypical complicâtions of influenza in children. The treatment is purely symptomatic, varying in each case. Children of all ages are affected: Relapses are common in mild and severe cases, and the microscope alone determines the diagnosis. Dr. Gilbert, of Louisville, wished that some detailed treatment had been mentioned. Dr. Kerley, of New York, stated that the disease varies so greatly that no one treatment can be advised. This year ear complications had been very frequent. Death may occur in infants from the severity of the intoxication alone. Dr. McClanahan, of Omaha, often makes the diagnosis of influenza on the fever and severe prostration alone. Hydrotherapy fails to reduce pyrexia in these cases. He also noted much otitis media and mastoid disease this year with influenza, more than with scarlet fever. He uses quinine suppositories in the treatment. Dr. Cook, of Chicago, saw 2 infants die soon after delivery from mothers with influenza. In 3 other cases cerebral meningitis occurred in infants, one of whose parents had influenza. He has noticed an eruption resembling that of scarlet fever. In closing, Dr. Williams said that the disease is due to infection of the mucous membranes. He also noted eruptions in 4 cases, like scarlet fever, followed by polyadenitis. In the treatment nasopharyngeal irrigations may be of value.

THURSDAY MORNING, MAY 7, 1903.

Dr. Cook first announced the appointment of a committee consisting of Drs. H. E. Tuley, of Louisville; A. C. Cotton, of Chicago, and T. S. Southworth, of New York, to formulate a classification of the intestinal disturbances of childhood.

Dr. P. F. Barbour, of Louisville, read a paper on **capillary bronchitis**, describing in detail the microscopical pathological changes and the symptoms of capillary bronchitis and pneumonia. He laid special stress on the bronchial element in bronchopneumonia. Congestion, spasm and dryness are present, the treatment being symptomatic. Secretion is relatively greater in the child than in the adult, on account of the increased mucin in the tissue. Ipecac he considers most effective. With coughing spells the child's head should be lowered. He advises strychnine, for it increases reflexes and coughing, and should be given in small doses frequently repeated. Opium is dangerous in bronchopneumonia. Atropine is the best respiratory stimulant and also dries up secretion. Aconite he considers a good sedative, but veratrum viride is less dangerous, especially when associated with digitalis. The prognosis is grave and the mortality high in this affection.

Dr. C. G. Kerley, of New York, read by far the best paper of the meeting on **the management of catarrhal pneumonia in infants and young children.** He particularly considered means other than the internal use of drugs, drawing his conclusions from over 600 cases. Very few cases are primary; while the most serious of the causes of secondary pneumonia are diphtheria and measles. As the disease has no limit, runs no cycle, the preservation of vital resistance by not upsetting the stomach and disturbing the child is of great value. Little irritability, restlessness or loss of sleep should be permitted. Good ventilation of the sick-room is essential; the temperature of the room should never pass 70° F.; and a flannel undershirt alone is advised. He never uses a cotton jacket. The child is kept in its crib, water is given between nursing, and the time of nursing is decreased, while the food is diluted. The bowels must be moved once a day. The child should not be needlessly disturbed, food and medicine being given at 3-hour intervals. He advised steam inhalation with creosote (10 drops to one quart of water) under a croup tent, for 30 minutes every 3 hours, allowing fresh air in every 10 minutes. With much catarrh he uses turpentine (1/3) with oil (2/3), but mustard applications make the best counterirritation The boundaries to be covered should be marked out, and the plaster is to be made with one part of mustard to 2 parts of flour, applied for 10 to 15 minutes, once in 6 or 8 hours. Later applications should be weaker. They are especially effective at the onset, as are mustard baths, especially in cases with marked prostration. Drugs internally are only indicated symptomatically, and great care is necessary not to disturb digestion. Expectorants are best given in powdered or tablet form, dissolved in water, after feeding. The ammonium salts are only given during resolution, in ½-grain doses, and antipyretics are used only when the baths are badly borne. If there is much restlessness, Dover's powder may be given, watching its effect on the bowels. Heart stimulants are, as a rule, used far too early, but are needed when the pulse becomes soft, rapid and irregular, such as 150 during sleep. He considers tincture of strophanthus best, but strychnine is also good when pushed to full doses, or till some result is noted. Digitalis upsets the stomach easily; whiskey or brandy is rarely needed and is best employed late, when other stimulants fail. Nitroglycerine may be used, but frequently cause headache. A daily sponge-bath is advised, and, when the fever reaches 104°, a sponge or a cold pack is to be given. For the sponging salt (3 1 to a quart of water), or alcohol (1 to 4 parts of water) is used. This is done under a blanket, the water being gradually reduced to 80°, continued from 10 to 15 minutes. Too frequent sponging tires the patient. Cold tub-baths have a very slight and temporary effect on this condition. He considers the cold pack the best hydrotherapeutic measure, given by using a large bath towel, the entire body being covered, to the knees. Warm water is first used, decreased gradually by sponging. The temperature is taken in a half hour. Children may be turned from side to side and enjoy the cool pack. An ice-bag is applied to the head, hot water-bags to the feet. Oxygen, given for ½ minute every half hour, is also of value.

Dr. Wahrer, of Fort Madison, Iowa, mentioned the fact that many children are literally smothered to death by the treatment of pneumonia, referring to several cases. Dr. Williams, of Chicago, laid special stress on the conservation of the child's vital resistance. Dr. Gilbert, of Louisville, uses ammonium bromide, but objects to any opiate, even Dover's powder. Dr. Tuley, of Louisville, said that the term capillary bronchitis should be discarded, as all such cases are pneumonia. Poultices, internal antipyretics and nauseating remedies are all useless. Dr. Parke, of Birmingham, Ala., referred to several cases of asthma, diagnosed bronchopneumonia. He gives strychnine by rectal injection. Dr. Barbour, of Louisville, insisted that drugs are always needed in the treatment of pneumonia. He advised the cotton jacket. Dr. Kerley, in closing, said that Dover's powder is the least dangerous sedative. Chloral should never be given, because it upsets the stomach. He believes in drugs properly used, but only when properly used.

A paper on **the safranin reaction in the urine of children**, by Dr. W. S. Cristopher, of Chicago, was read by Dr. A. C. Croftan, of Chicago. This is a comparatively new test in this country. The reaction depends on the violet color produced by the presence of very minute quantities of sugar in the urine. The details of the test, its qualitative and quantitative application, variations, chemical significance, charts, tables, etc., were given. The paper was most technical. Dr. Croftan suggested that several other bodies in the urine might give this reaction. Dr. Boggess, of Louisville, also believed that other substances might cause the test.

THURSDAY AFTERNOON, MAY 7, 1903.

Dr. McClanahan, of Omaha, representing the nominating committee, reported that their choice for chairman of the section was Dr. Charles G. Kerley, of New York; for secretary, Dr. C. F. Wahrer, of Fort Madison, Iowa; and as member of the house of delegates for 2 years, Dr. Henry E. Tuley, of Louisville. These gentlemen were then elected unanimously. Dr. Kerley made a brief address upon the responsibility of the work in pediatrics. He advocated preventive medicine in diseases of children, and hoped it would receive attention at the meeting at Atlantic City next spring. Dr. Cook, the retiring chairman, stated that this has been the best attended meeting the section on diseases of children has ever had.

A paper entitled **the treatment of scarlet fever; its complications and sequelæ** was read by Dr. H. M. McClanahan, of Omaha. He divided scarlet fever into malignant, mild, severe and septic cases, and gave details in the treatment, isolation, prolonged rest in bed, liquid diet, frequent urine examination, nasopharyngeal treatment, and the treatment of otitis media, adenitis, sepsis, cardiac disease and nephritis. He uses normal salt solution for irrigating the nasopharynx. He advised stimulation in almost all septic cases, and daily baths during desquamation. Dr. Gilbert, of Louisville, uses ammonioferric citrate throughout the course of the disease and applies lard during desquamation. Dr. Kerley also keeps patients in bed 4 weeks, even with a mild attack. He advises hydrotherapy, and nasopharyngeal cleansing. Death is generally due to complications, not to the disease itself. The urine should be examined every other day. Dr. B. R. Shurly, of Detroit, reported 2 cases of scarlet fever treated with antistreptococcus serum unsuccessfully. Dr. Dodson, of Chicago, stated that careful study has shown that the bacteria discovered by Class do not form an individual group with peculiar characteristics. Nor is any one streptococcus yet shown to be the cause of scarlet fever. Yet streptococci are almost always found in the secondary affections of scarlatina. The variations in the streptococci found explain the inefficiency of the treatment with antistreptococcus serum. Dr. Kennedy, of Louisville, suggested watching for complications throughout the disease; they may be prevented especially by keeping the nasopharynx clean.

Dr. B. R. Shurly, of Detroit, discussed **prolonged or retained intubation tubes, with a method of treatment leading to their extraction.** As a rule, the tube, rubber preferred, should be removed on the fourth day. Sometimes it has to be left or replaced. When kept in over 6 days, the condition is considered one of retained tube. He reported 300 cases of intubation, with antitoxin, with 69 deaths. Metal intubation tubes should not be used. He gave a great number of statistics, with full technical details. In prolonged cases efforts should be made every 2 or 3 days, to dispense with the tube. Tracheotomy should not be performed in these prolonged cases. Strychnine is of value in such cases. Dr. Kerley has seen but few cases of retained tubes. If a rubber tube is used, well intubated, at the right time, prolonged tubes will not occur. Force must not be used. In closing, Dr. Shurly called attention to his method of applying alum and vaseline to the tube, to facilitate extraction.

A paper on **pseudohydronephrosis, paranephritic cyst, in a boy of 3½ years, with operation and recovery,** by Dr. S. W. Kelley, of Cleveland, was read by Dr. Southworth. The symptoms followed 2 weeks after the child had been run over, and in 6 weeks there was very great distension, and a large fluctuating tumor was palpable. While the diagnosis was difficult, the tumor was undoubtedly connected with the kidney. The prognosis in these cases depends on the treatment adopted. Aspiration was not performed from fear of puncturing the colon. The cyst was removed by operation, after puncture. The condition was due to the traumatism, as the cyst communicated with the pelvis of the kidney.

ZEITSCHRIFT FUER HEILKUNDE.

February, 1903. (Volume 24, No. 2.)

1. Autochthonous Thrombi of the Brain Sinus and Large Veins of Galen. KARL WALKO.
2. The Bacteriological Diagnosis of Typhoid Fever. CHOBEI HAYASHIKAWA.
3. The Effect of Mechanical and Thermic Stimuli on the Bloodstream and Tone of the Bloodvessels. FRIEDEL PICK.
4. The Cause of the Formation of Peptone in the Blood in Leukemia. FRANZ ERBEN.
5. The Anatomical Findings in a Case of Subacute Spinocerebellar Ataxia. JULIUS SUESSWEIN.

1.—Walko reports the case of a woman of 49, with bronchitis for 20 years, who had had pneumonia and pleurisy once, and had fibroids removed by episiotomy, followed by curettement. Three days after operation she complained of headache, followed, 2 days later, by sudden vomiting, tremor, fever, speech disturbances, coma, trismus, opisthotonos, and death 11 days after the operation. Blood examination showed an absolute and relative increase in the polymorphonuclear neutriphilic and transitional cells. Autopsy showed **obliterating thrombi in the right sinus transversus, vena magna cerebri, veins of the tela choroidea, and right paravaginal veins.** The diagnosis made before death was cerebrospinal meningitis of unknown cause with chronic nephritis. A review of the literature is given. [M. O.]

2.—Hayashikawa reports in detail a great number of experiments upon **the motion of typhoid bacilli. Bacteriological diagnosis** is of value, since so many diseases resemble typhoid fever clinically. The Widal reaction should be repeated every 3 or 5 days, to make the diagnosis certain. Bacteriological examination of the feces was positive in 60% of cases, of the urine in 18%, of both together in 65%. Examination of the thyphoid spots gave bacilli in 58% of cases. Puncture of the spleen, which was absolutely without danger, was positive in 94% of cases. This was only undertaken when a certain and early diagnosis was desired. Full details of his technique are given. [M. O.]

3.—After describing his methods of measuring **the effects of mechanical and thermic stimuli on the bloodstream and the bloodvessel tone,** Pick describes experiments in massage of the extremities and abdomen, passive movements, cold and heat. Both thermic and mechanical stimulation increase the bloodstream and dilate the bloodvessels by decreasing the bloodvessel tone. [M. O.]

4.—After reviewing the literature, Erben reports several experiments undertaken upon a **patient with lienomyelogenous leukemia.** These investigations showed the presence of a **thryptic as well as traces of a peptic ferment,** not found in normal blood. These ferments seem distinctly connected with the leukocytes. Erben concludes that these ferments are set free in leukemic blood by the destruction of the cells which can, therefore, no longer hold them in combination, as was formerly the case. [M. O.]

5.—Süsswein reports in detail a case of **subacute spinocerebellar ataxia** in a woman of 71, with weakness in the legs, disturbances of gait, vertigo, vomiting, astasia, incoordination even when lying down, and loss of muscle sense. Knee jerks were absent. Cerebral atrophy and slight chronic hydrocephalus were found post mortem. Microscopically there was degeneration of the posterior tracts and roots, especially of the sacral, lumbar and lower dorsal segments on the right side, resembling initial tabes. The literature is fully reviewed. [M. O.]

Special Article.

THE DUTIES AND RESPONSIBILITIES OF TRUSTEES OF PUBLIC MEDICAL INSTITUTIONS.*

THE PRESIDENTIAL ADDRESS AT THE SIXTH CONGRESS OF AMERICAN PHYSICIANS AND SURGEONS, WASHINGTON, MAY 12, 1903.

By W. W. KEEN, M. D., LL. D., F. R. C. S. (HON.),
of Philadelphia.
Professor of the Principles of Surgery and of Clinical Surgery, Jefferson Medical College, Philadelphia.

The value of occasional and stated gatherings of the principal leaders of medical thought in the various special departments is acknowledged by all. Certainly those who have attended this Congress, now held for the sixth time, have felt its broadening influence. We are apt to become narrow when we are devoted heart and soul to one specialty, be it medicine, surgery, physiology, ophthalmology, or any other. When we meet nearly all of the more prominent men in cognate interrelated branches of medicine in Washington every third year, we are sure to find that there are as interesting and as important questions in other specialties as there are in our own; and, moreover, we are sure to find that there are men of as acute intelligence, wide reading and original thought in other than our own departments whom it is our pleasure to meet, and whose acquaintance becomes not only valuable for what we find them to be, but because of the stimulus that they give to our own thoughts.

Ordinarily the presidential address has been devoted to some special professional topic. My first idea was to select such a subject for to-night, but, as I was absent from the country when I received the very highly appreciated notice of my selection, I asked the members of the executive committee for suggestions, being sure that their united judgment would be better than my own. I was very glad when they proposed the topic upon which I shall address you, partly because it is different from the usual type of such addresses, and partly because it seems to me appropriate to the present time. I shall, therefore, give the time at my disposal to presenting to you some thoughts on "The Duties and Responsibilities of Trustees of Public Medical Institutions."

Before entering upon my topic I beg to state explicitly that what I may say is offered in no spirit of unfriendly criticism, but only by way of friendly suggestion. I have been too long and too intimately associated with scores of such trustees not to know that they are almost without exception generous, self-sacrificing, giving of their time and money and thoughtful care without stint, and often sacrificing personal convenience and comfort for the good of the college or hospital which they so faithfully serve. Anxious to discharge their trust to the best of their ability, I am sure they will accept these suggestions, the fruit of forty years of personal service as a teacher and a hospital surgeon, in the same friendly spirit in which they are offered.

There are two such classes of institutions to be considered: (1) Medical colleges and (2) Hospitals, whether they be connected with medical schools or not.

There is, it is true, a third class of trustees for a wholly new kind of medical institution which has arisen as a modern Minerva Medica, born full-armed for the fray. Of this class we have as yet but a single example—the Rockefeller Institute for Medical Research. Akin to it are laboratories for special investigations, such as the two Cancer Laboratories in Buffalo and Boston. But the Rockefeller Institute is so recent, and its scope at present necessarily so undetermined, that I would not venture to consider the duties of these trustees, and I am sure their responsibilities are adequately felt by them. Moreover, their admirable selection of a director for the institution is the best pledge of a future wise administration. I heartily congratulate the profession and America upon the establishment of so peculiarly useful an institute. Its founder has wisely left its work unhampered saving as to its general purpose, and the whole world, and especially the United States, will soon be his debtor for researches and discoveries that will abridge or even abolish some diseases, shorten sickness, prolong life and add enormously to the sum of human happiness. Could any man of wealth by any possible gift win for himself a higher reward or a happier recollection when he faces the future world?

Though not a medical institution, I cannot refrain also at this point from expressing not only for myself, but for you, our hearty appreciation of what the Carnegie Institution has done for medicine in the re-establishment of the *Index Medicus*. This publication is essentially and peculiarly American in origin, but its usefulness is worldwide. It aids alike an author in Japan or in India, in Europe or America. It is one of the best and wisest undertakings of this lusty educational giant. But to ensure the permanent publication of the *Index Medicus* the profession must show that it really values this generous gift. Unless the *Index* finds a hearty support in the profession abroad and especially at home, we can hardly expect the continuance of this unique and invaluable publication. May I earnestly ask, therefore, of this audience of the chief medical authors of the United States that each one will demonstrate his appreciation by an immediate subscription to the *Index Medicus*.

There are some matters common both to the medical college and the hospital which may be considered together. The most important of all these is the cordial and hearty co-operation of the medical men connected with the college or hospital and the boards of trustees. In order to ensure this the members of each body must be acquainted with each other. I have known of instances in which, if a professor in the medical school ventured to suggest any changes as to its management, or even to state his opinion as to the qualifications of a candidate for a vacant professorship, his suggestions were resented as an interference, instead of being welcomed as a means of valuable information. I take it for granted that we should not offer such suggestions after the fashion of a partisan either of a man or a measure, for the advancement of a friend or to the disadvantage of an enemy, but solely for the good of the institution with which we are connected. He who would endeavor to foist a friend upon an institution *because* he is his friend, and in spite of the fact that a rival is the abler man, and better fitted for the position, is just as false to his duty, to his college or to his hospital, as the trustee who would vote for the less desirable man on the ground of personal friendship, or of association in some society, church or other similar body. Of all these influences, that arising from membership in the same religious body is, I fear, the most frequent and yet most absolutely indefensible. What one's theological opinions are has no more to do with his qualifications for a professional or hospital appointment than his opinions on protection as against free trade, or whether Bacon or Shakespeare wrote Hamlet.

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*From advance sheets of the Sixth Volume, Transactions of the Congress of American Physicians and Surgeons, 1903.

I have always honored one of a board of trustees, who was an old personal friend of my father's and who had known me from boyhood, yet who in my early professional career, when I asked for his vote for an important hospital appointment, had the manly courage to tell me that he thought a rival, who was older and more experienced, was the better man for the place and that he should, accordingly, vote for him and not for me. I confess it was at the time a bitter disappointment to me, but I never had so high an opinion of my father's friend as after he denied me his vote.

There should be, in my opinion, but two questions asked in considering the election of either a professor or a hospital physician or surgeon. First, which one of the candidates for the place has the best qualifications from the medical point of view? This should include not only his scientific knowledge, but his ability practically to impart or to apply that knowledge. Secondly, are his personal qualifications and character such as to make him a desirable incumbent of the position? It must be remembered that a man may be scientifically and practically an extremely able man, but of such a quarrelsome disposition, or the unfortunate possessor of some other similar personal disqualification, as to make him a most undesirable member of a staff. The personal equation may be quite as important as the scientific qualification. Of course, his personal moral character should be above reproach. To place a drunkard or a libertine in a position of so much responsibility and influence is to abuse a trust. No patient should be confined to the care of such a man, and still more no such man should be made an instructor of young men, upon whom his influence would be most disastrous.

It is often extremely difficult for a layman to reach a correct conclusion as to the qualifications of medical men for college or hospital appointments, because of the confident, yet conflicting, statements of their friends. But there is apt to be a certain clear partisanship in such statements which betrays the purpose of the speaker. Especially will this be so if he advocates the election of A or B on the lower grounds of friendship, social position, or for other similar motives. The man who is advocating the best man because he *is* the best man has the stamp of sincerity upon every word.

Perhaps the most striking example I can adduce of such an unfortunate misjudgment is Dr. S. Weir Mitchell, who was denied a professorship in both the medical institutions of his native city, thus depriving them of the most brilliant medical genius that America has produced within my personal recollection. For him it is now a matter of indifference, and for American literature it has been a gain. But for medicine, and especially for physiology, it was an immense loss. Both of his rivals were estimable, worthy gentlemen who held an honorable position in the profession, it is true, but Mitchell is a genius. "Eclipse was first; the rest were nowhere."

One of the best methods of bringing the medical board and the board of trustees into more intimate contact would be to have the dean or a committee of the faculty, or, in a hospital, if the staff is not too large, the whole staff invited to the meetings of the board. Here I can speak from personal experience. At the Orthopedic Hospital and Infirmary for Nervous Diseases in Philadelphia, there are three surgeons and three physicians. These members of the medical staff are invited to meet with the board of managers at each monthly meeting, excepting the annual meeting, when the medical staff is elected. They are free to express their opinions on any topic relating to the management of the hospital to which their judgment may contribute something of value, but when a decision is taken they have no vote. It is purely in an advisory capacity and for the purpose of giving and receiving information that they are present. The plan works exceedingly well. When economy is necessary in the hospital, the staff is fully acquainted with the fact and can co-operate with the trustees; when expenses have run up from carelessness in the wasteful use of dressings or appliances, a halt is called; when, alas, very rarely, the treasurer is all smiles, and plans for the extension of the hospital, or the installation of some new addition to the plant are contemplated, their knowledge as to the necessity, for instance, of a hydrotherapeutic or an X-ray plant, or a new operating room, is of the greatest possible value. Nothing but good, in my opinion, can come from such personal co-operation.

One of the difficult questions which boards of trustees have to face is whether there shall be a fixed age at which a college professor or a hospital physician or surgeon shall retire from the active duties of his post. I firmly believe that they should fix such a retiring age in the interest of the students and the patients. As age advances, a man's opinions and his practice become "as petrified as his arteries." He is incapable of constant study, of adding to his knowledge or of keeping up with the feverish strides of medicine. He ought then to be relieved of his cares and his duties. If no rule exists, he is allowed to continue his inefficient or even disastrous work, or by some harsh suggestion is compelled to give place to another more competent man. A rule is a condition accepted when he is appointed, and just as in the army and navy, when an officer reaches 64 or 62 years of age he is retired on reduced pay, and because it is a rule he does not feel hurt or humiliated; so in a college or a hospital, when time and the rule bring us to the period when we must gracefully retire, no one's reputation is injured or his feelings lacerated.

I have ascertained that the following rules are in force in some of the larger institutions:

At Harvard, the age when a professor may request to be retired is 60, provided he has been in the service of the university for 20 years, with a reduced pay ranging from one-third to two-thirds of his salary. At 66 he may be retired by the President and Fellows partly or wholly. The details of the plan are admirably arranged.

At Chicago, while no plan is yet in force, largely, I presume, because of its recent establishment on the present basis, such a plan will soon be made operative.

At Columbia the retiring age, after 15 years of service, is 65, either at the request of the professor or upon motion of the trustees, and on half pay.

At Yale the retiring age is 65, after 25 years of service, and on half pay, but the retirement is not compulsory. It will probably be made compulsory before long.

At Cornell the retiring age is 70, but the Pension Fund will not be available until 1914. The retiring pension will then be $1,500.

At the University of Pennsylvania and at Johns Hopkins no retiring age is fixed.

The only hospitals I know of in which a retiring age is fixed, are the Massachusetts General Hospital and the Boston City Hospital. At the former the compulsory retiring age of the surgeons is 63, and of the physicians 65. At the Boston City Hospital the visiting surgeons are retired at 65. but the physicians, gynecologists and all the other medical officers continue in service indefinitely—a very curious anomaly.

These varying but in the main identical provisions, when any exist, show the trend of thought and practice. They generally apply to the medical department, except that, in case a professor is engaged in the practice of his profession and so has a private income, the provision for continuing a portion of his salary does not apply. This is right and fair. Of course, in all hospitals in which there are no salaries, no provision as to reduced salary would obtain.

The point I wish to emphasize is, however, that the age limit (which in my opinion should be 65) should be *compulsory* and so not be invidious in any given case. It will be objected that not a few men are in full intellectual and physical vigor at 65, and it will be a detriment to the institution to lose their services when their ripe experience and admirable teaching are most desirable. I admit it. But for every one such case of harm done by compelling a man to stop, there are a score of instances of men who are doing vast injury by their inefficiency. Moreover, in the very few cases in which it might be allowable, as boards of trustees make rules they can unmake them, and in special cases they could pay a graceful compliment and preserve to the institution their exceptional men by extending the limit to 70. In no case can I think it wise to go beyond this limit.

In some of the universities I have quoted a sabbatical year of rest or study is allowed a professor. He is put upon half pay, and his place is filled by a temporary substitute, who receives the other half of his salary. I believe that in present conditions this should not be applied to medical faculties, for nearly all of the professors are in active practice and take sufficiently long summer holidays. These latter are often spent in observation and study abroad—a most useful and remunerative employment of a holiday—and serve the purpose of the sabbatical year for men whose entire time is given to their teaching. In hospitals it certainly should not apply.

One of the recurring questions in hospital and college management is whether there should be a certain number of doctors on the board. I know that there is a wide diversity of opinion upon this point. My own belief is that a small proportion well-chosen medical men is a distinct advantage in such boards of trustees. I have said a "small proportion," for it should not be, I think, larger than probably 20 per cent.; and I also said "well chosen"; that is, they should be men of large mental caliber and executive ability. It should be distinctly understood, if not indeed absolutely expressed, in institutions in large cities at least, that any physician or surgeon placed upon such a board should never be eligible, even by resignation from the board, for a position on the faculty or the medical staff. In small towns the lack of suitable persons for hospital trustees and members of the hospital staff might make it desirable not to institute such a rule.

Moreover, such medical men should be selected for trustees as by their mental training, social relations and personal character would be, so far as it is possible for human nature to realize such a position, absolutely free from influences arising from personal jealousy or professional bias. If it were a social club, it would be perfectly proper to vote against a man because he is personally distasteful, but where it is a scientific body responsible for the education of large numbers of young men and for the care of still larger numbers of hospital patients among the poor, even if a candidate were personally unfriendly I should vote for his election if he were the man best fitted for the place.

Turning now to the duties and responsibilities peculiar to trustees of hospitals, let me point out the objects of a hospital.

First, the care and cure of the sick and injured; secondly, the education of medical men and medical students; and, thirdly, the promotion of knowledge, which, in turn, will inure all over the world to the more speedy and certain cure of the sick and injured, and so be of the greatest benefit to humanity.

In order to accomplish these three purposes, it is necessary that the hospital shall have sufficient funds to purchase ground, erect buildings and provide a thorough material equipment. It is a great pleasure to me, as to you also, to note that throughout the length and breadth of the land the medical and surgical staff never tax the always inadequate resources of hospitals for any remuneration. They serve without pay, they give ungrudgingly and freely, day and night, to the poor, often for many years, their time and skill, without ever a thought of any money reward. Their reward comes from increased knowledge and skill, and the daily blessing invoked of heaven, often lisped in children's prayers or breathed in mothers' benisons which pass not unheeded by the Recording Angel.

But, as I have pointed out elsewhere, instead of receiving any pay, they give to hospitals. The mere money value of this daily gift of the profession to the poor amounts to an enormous sum. The value of the professional services of the staff of the Jefferson Medical College Hospital, a single hospital in a single city, on a moderate basis of fees, I found was more than half a million dollars annually. The millions upon millions of money given in that most self-sacrificing form—personal service—by the entire profession all over the United States, and I might add with still further pride, all over the world, is simply incalculable. The Gideon Grays and Weellum MacLures are not found only in Scotland or at the countryside. They are even more plentiful in the slums of our great cities, giving of their time, their skill and, what is more, their hearts, their lives, themselves to the service of humanity.

Trustees sometimes seem to take it for granted that their duties are ended when they have done two things: begged or given and safely invested the necessary funds, and then elected the staff. To my mind, their duties do not by any means end at this point. They should see to it that the resources of the hospital are utilized to the utmost in doing the largest good.

Let us see now how the objects of a hospital, as I have stated them, can be realized. The first object is the care and cure of the patients. But the cure of any individual patient is not the "be all and the end all" of a hospital. His cure must be a means of larger vision to the doctor, who will thus be better fitted to care for future similar cases. Even his death, if he cannot be cured, should minister to the increasing knowledge and skill of the doctor so that he may be able to snatch future victory from present defeat.

The second—the training of doctors and students—is frequently carried out, but sometimes even objected to. There are three classes of doctors who are trained by a hospital: First, the staff of the hospital itself. I have lived through the period of the establishment of hospitals in many of the smaller cities and towns, and in some cases even villages in this country, for it was a rare thing in my early professional life for any except the larger cities to have hospitals. The moment that a hospital is established with its medical and surgical staff, that moment a new era has dawned on the *community* in which the hospital is established. More careful methods are introduced, greater cleanliness is observed, hygienic conditions are bettered, laboratory methods are inevitably introduced in time. Even if the old-timers, who graduated years before our modern laboratory methods were adopted, do not care for them or cannot use them, the young fellows who come fresh from our medical schools and serve as residents, and even the nurses graduated from our training schools, finally shame the older ones into better ways and greater exactness, not only in the hospital, but in their private work as well.

As a consequence of the establishment of these hospitals and the added skill and training of the local physicians and surgeons, the character of the consultations of the physicians and surgeons of our great medical centers has been greatly modified. The really simple cases, such as hydrocele and small tumors (and even large ones), clubfoot, harelip, etc., which used to be sent to city consultants, are now successfully operated on by the local surgeons, and only the more difficult, serious or complicated cases are sent to the cities. This is a great advantage to the patient, whose good is the first consideration, and to the local medical men; and, though seemingly a serious loss to the city consultant, it is in the end an advantage, as he must prove his better mettle in the higher scientific fields and be, as well as seem to be, a better man.

Moreover, the trustees of every hospital should see to it that a good library and laboratory are provided. Insensibly the staff will read more and more. A single restless progressive spirit, even though it be a young interne, calling attention to this case and to that, in one journal or another, will compel the rest of the staff to read in spite of themselves. It is absolutely clear that a laboratory with modern equipment for bacteriological, pathological and chemical research in its examination of tumors, of the urine, the sputum, the feces, the blood, the pus and other fluids from wounds, etc., is a necessity in every hospital. Even many of our smaller hospitals are equipped with microscope and reagents, if not with a complete bacteriological outfit, which nowadays is inexpensive and imperative. All of this raises the intellectual and professional standard of the staff. I venture to say that no town of 20,000 people can afford to be without its hospital for the sake of its *own citizens*, utterly irrespective of the good it does to the poor who are treated in its wards. It must be established in the interest of the *well-to-do citizens* and their families, so that they may secure better equipped doctors for themselves as well as for the patients in their hospital. Self-interest, therefore, will compel every community to establish its hospital, even if charitable motives had no influence.

Again, the trustees of all hospitals of any size should establish a training-school for nurses. Only those who, like myself, have lived in the period before such training schools were established, can appreciate the vast improvement effected in a hospital by this change. To replace the former ignorant, untrained attendants by "trained nurses whose jaunty caps and pretty uniforms and often winsome faces almost make one half wish to be sick, and when one is sick, half loath to be well," is not only a boon to the patients but to the doctors as well. The intelligent, well-trained nurse, who is on the alert to observe every important change of symptoms and who will keep accurate bedside notes, is the doctor's right hand. Not a few patients who would otherwise lose heart and hope are, one may say, lured back to health and happiness by the tactful attentions and restful but efficient care of such a nurse. The community of the well-to-do also are benefited, because the hospital provides them with skilled nurses in their homes when they are so unfortunate as to be compelled to remain there instead of going to the hospital.

The old repugnance to entering a hospital when sick or when an operation is demanded is rapidly fading away. The immense advantages of a good hospital over the most luxurious home are now acknowledged on all hands. The poorest patient in a hospital is better cared for, his case more carefully investigated by bacteriological, chemical and clinical methods in a hospital, than are the well-to-do in their own homes. Indeed, wise surgeons, except in cases of emergency, now very properly refuse to do operations in homes instead of in hospitals. In many instances lives that would be lost in homes are saved in hospitals, where the many and complex modern appliances for every surgical emergency are provided.

The hospital in direct or indirect connection with medical schools, however, do a far larger work than merely the training of its own staff of doctors. They train three other classes of doctors: First, the undergraduates who are aspiring to the degree; secondly, graduate physicians who spend a certain amount of time in the hospitals either as internes or as temporary students refurbishing their professional knowledge; and, thirdly, experts in certain branches of medicine and surgery.

The undergraduates are taught first in the general clinics, where to some extent they learn both by didactic instruction and by seeing the patients, hearing their histories, and witnessing the institution of proper treatment by prescription, by regimen, or, if necessary, by surgical operation. This is of great value, particularly in the more important cases, and especially, for I speak now as a surgeon, in important operations. It is often objected that students see nothing in large clinics. To some extent this holds good; but no student can look on at an operation when the jugular vein or the lateral sinus is torn, the pleural cavity opened, the bowel lacerated, or other of the great emergencies of surgery occur, and fail to be impressed by the coolness of the operator, the carefully explained methods adopted for remedying the mischief, and the various devices used to save life, all of which hereafter will be used by him when similar emergencies may occur.

Yet far more important than the public clinics are the smaller clinics held with classes of ten to twenty men each, when under an experienced teacher the absolute work of the clinic is divided among the various students in turn, watching the pulse and the respiration, giving an anesthetic, assisting actively at operations, percussing the chest, palpating the abdomen, determining inequalities of the surface or the varying density of underlying organs. Here is the real forum in which our modern medical student acquires his skill. In many cases visits in the ward itself are made, and to a small group around the bedside the physician or surgeon will point out the phenomena to be recorded, the need for the examination of the blood, the results of bacteriological cultures, the facts discovered by the microscope, or the chemical reagent. By the Socratic method, also, he will reveal to the student the imperfection of his knowledge, call out—e-ducate—his powers of observation, of reasoning; stimulate his thought, and give him an impetus which will last throughout life. Who that has "walked the hospitals" with a Skoda, a Trousseau, a Nélaton, a DaCosta, or a Mitchell can ever forget their teaching?

It is sometimes objected by those who are not familiar with the actual facts, and especially by trustees, that this method of actual bedside instruction does harm to the sick. I speak after an experience of nearly forty years as a surgeon to a half dozen hospitals and can confidently say that I have never known a *single patient* injured or his chances of recovery lessened by such teaching. Of course, the physician or surgeon uses common sense. He would not allow a number of men to palpate the abdomen of a patient with peritonitis, or move an acutely inflamed joint, nor would the physician allow a patient with pneumonia to have the chest unduly exposed, or a typhoid fever patient disturbed if his condition was such that it would be inadvisable. But such cases are the exception. In fact, many of you are familiar with patients who have responded to repeated percussion by members of such a class by prompt recovery, attributed by the patient to the supposed medication of percussion. Moreover, it is by this actual practice only that the student acquires the necessary skill in the use of modern instruments of precision, such as the stethoscope, the laryngoscope, the esthesiometer, the sphygmomanometer, the various specula. Here he learns when to make blood counts, how to take histories, arrive at the actual facts by skilful cross-questioning, note the varying symptoms and physical signs of a case, determine the need for laboratory investigations, all under the guidance of skilled observers, who will point out his errors, encourage his queries and stimulate his thought.

Moreover, trustees may overlook one important advantage of a teaching hospital. Who will be least slovenly and careless in his duties, he who prescribes in the solitude of the sick chamber, and operates with two or three assistants only, or he whose every movement is eagerly watched by hundreds of eyes, alert to detect every false step, the omission of an important clinical laboratory investigation, the neglect of the careful examination of the back as well as the front of the chest, the failure to detect any important physical sign or symptom? Who will be most certain to keep up with the progress of medical science, he who works alone with no one to discover his ignorance; or he who is surrounded by a lot of bright young fellows who have read the last *Lancet*, or the newest *Annals of Surgery*, and can trip him up if he is not abreast of the times? I always feel at the Jefferson Hospital as if I were on the run with a pack of lively dogs at my heels. I cannot afford to have the youngsters familiar with operations, means of investigations or newer methods of treatment of which I am ignorant.

I must perforce study, read, catalogue and remember, or give place to others who will. Students are the best whip and spur I know.

Of the value of training graduates in postgraduate work I need scarcely speak, to this audience at least. The doctor who graduated five, ten or fifteen years ago comes to our great centers of medical education and renews his youth at the fountain of knowledge. He learns the use of all the new instruments, sees new methods of operation, new methods of treatment, new means of diagnosis, and goes home an enormously better equipped man.

The trustees should see that the staff does not become fossilized by following the same ancient local methods from year to year, but should encourage them to visit other hospitals, see other men operate, hear other men discourse on the latest methods of investigation, and then import into their own hospitals all the good found elsewhere. I learn a deal by such frequent visits to the clinics of my brother surgeons, and if one who has grown gray in the service can thus learn, surely the younger men can do so. When we are too old to learn, we are too old to remain on a hospital staff.

I do not know anything which has more impressed upon me the enormously rapid progress which surgery is making than a recent experience. I was absent from this country for almost a year and a half. In that time circumstances were such that I saw almost no medical journals and but few doctors. I have been home now eight months and even with incessant work I have not yet caught up, so rapid has been the progress of surgery in this short time. Had I been absent for five years, verily I should have been a "back number," and never could have caught up at all.

In his very excellent presidential address before the Association of American Physicians in 1901, Professor Welch made a plea for hospitals to afford "the requisite opportunities to young men who aim at the higher careers in clinical medicine and surgery." He called attention to the fact that in our bacteriological, pathological and anatomical laboratories the opportunities, though still too few, were reasonably good, and in a few places exceptionally good, for the training of young men for positions as teachers of anatomy, pathology and bacteriology. Any young man in these departments who by good hard work makes for himself a name is fairly sure, before long, of being called to some important post as a professor, director of a laboratory, or some similar position. But the facilities for work in clinical medicine and clinical surgery are far more restricted, since opportunities for both the exercise of their clinical skill are less frequently open to them and the possibility of combined physiological, pathological, bacteriological and antomical research along with their clinical work are but scantily provided for. This plea is reinforced by a recent paper of Sir Michael Foster (*Nineteenth Century*, January, 1901, p. 57). These special graduates, bright young men, determined to devote themselves to one or another department of medicine or surgery, are the men who bring honor to the school at which they obtain their training, and are invaluable to the community. They are future Jenners, Pasteurs, Virchows, Listers, DaCostas and Grosses, and our hospitals should provide for these exceptional men exceptional facilities.

The third object of a hospital is the promotion of knowledge, and so, fourthly, the good of humanity. Physicians and surgeons engaged only in private practice do not generally keep notes of their cases, and rarely publish important contributions to knowledge. I find in 100 books taken consecutively in my library that 85 were written by hospital men and only 15 by authors not connected with any hospital so far as was indicated on the title page.

In order that proper investigations may go on, trustees should enforce a permanent record of all the cases treated in the hospital, properly indexed, from which the staff may derive their data for papers and books. Each large hospital should have its pathological resident as well as the clinical residents in the various wards, so that post mortem records shall be well kept, pathological, bacteriological and chemical investigations of various secretions or blood counts, etc., shall be properly made and permanently recorded in such a manner as to be accessible.

It is too often the case that trustees, as I have said, regard their duties and responsibilities at an end when they have taken care of the funds and elected the staff. They may say that after all this is their real duty, and that all that I have advocated is medical and surgical, and the responsibility for it should devolve on the staff and not on the trustees. I do not take so narrow a view of the duties of trustees. When they have elected a physician or surgeon, if he neglects his duty, it is their business to displace him and fill his place with another man who will attend to his duty, and the duties that I have indicated pertaining to the increase of knowledge as well as of its diffusion are quite as much within their province as it is to see that the funds are invested to the best advantage. The intellectual funds as well as the invested funds must bring in good dividends.

If trustees and staff work together for such a purpose and in such a manner, they will create an ideal hospital which will do more good to the patients than any other type of hospital. It will attract the best physicians and surgeons in every community, will acquire the best reputation, not only local, but it well may be national, and do the most for the good of science and the benefit of humanity.

It may be said that this is an unduly strenuous view of the duties of trustees, that in our father's day and in our own earlier lives no such conditions existed or were contemplated. "I need hardly ask a body like this," said President Roosevelt in addressing the Methodists assembled in council, "to remember that the greatness of the fathers becomes to the children a shameful thing if they use it only as an excuse for inaction instead of as a spur to effort for noble aims. . . . The instruments with which, and the surroundings in which, we work have changed immeasurably from what they were in the days when the rough backwoods preachers ministered to the moral and spiritual needs of the rough backwoods congregations. But, if we are to succeed, the spirit in which we do our work must be the same as the spirit in which they did theirs."

Moreover, we must remember that "the world-field into which all nations are coming in free competition by the historical movement to which all narrower policies must sooner or later yield, will be commanded by those races which, in addition to native energy and sagacity, bring the resources of scientific investigation and of thorough education." The international race for the leadership of the world is just as strenuous and intense in medicine as it is in commerce. If we are going to join the race and win the prize, there must be the highest development of American education at the top. The best men must be pushed to the front, and ample opportunities for growth, for investigation and for original research must be provided. Never has there been so large an opportunity for the man of large ideas, complete education and indomitable energy and purpose as there is to-day. The world is waiting, looking, longing for him and will cry "Make room" for him when he is found.

In the hands of the trustees of our colleges and hospitals are the money and the opportunity for developing such men. If the right spirit pervades both trustees and medical faculties and hospital staffs, then it will be but a short time before America will lead the world in medicine as well as she now does in commerce.

Will the profession rise to the level of their great opportunity? Yea, verily they will! Never yet have they been wanting when the emergency arose; not only the emergency of labor, but also the emergency of danger.

In Russia the common soldier counts for little Yet in Vladikavkaz (where the Dariel Pass—the old Portæ Caspiæ of Herodotus—leading from the Caucasus joins the railroad from Baku on the Caspian to Moscow) is a monument to a common soldier. At the last battle in which the Russians won the victory over Schamyl which gave them undisputed sway over the Caucasus, this soldier blew up a mine and won the day at the cost of his own life. It was ordered that his name should never be erased from the list of his company. At every roll-call when his name is reached, the solemn answer is given, "Died in the service of his country."

In our hospitals lurk the deadly breath of diphtheria, the fatal virus of bubonic plague, of cholera, of yellow fever, of typhoid fever, and the ever-present danger of blood poisoning. I have known of brother physicians who have died victims to each one of these scourges. Yet who has ever known one of our guild to shrink when danger smote him on the right hand and the left and death barred the way? As brave as the Russian soldier, ready to risk life, and, if need be, to lose it, these martyrs to duty shall never have their names stricken off the honor list, and at the last roll-call the solemn reply shall be, "Died in the service of humanity."

Original Articles.

TUMORS OF THE BREAST.

CLINICAL LECTURE DELIVERED AT THE LONDON HOSPITAL.

By JONATHAN HUTCHINSON, JR., F. R. C. S.,
of London, England.

(Specially reported for The Philadelphia Medical Journal.)

Gentlemen:

Before discussing the question of tumors of the breast I would refer for a moment to Paget's eczema, which is in certain cases a precursor of malignant tumor. Sir James Paget's description was based on fifteen cases and was published in 1874. It is short, but, as regards the clinical features of the disease, it is perfect. You will recall the chief points in Paget's eczema. The absence of ordinary eczematous crust, the sharp definition of the patch, its vivid red color with islands of pearl-white and its extreme intractability to treatment. Since Paget first described the disease, a prolonged controversy has arisen as to its parasitic nature, and, being one who took part in the early investigations, I wish to state the final conclusion. I had the opportunity of examining many cases, and happened to be the first to point out the method by which some of the most apparent and conclusive appearances of the presence of bodies allied to the coccidia or sporozoa were obtained. I refer to the treatment of a scraping from the surface with liquor potassæ in opposition to staining of sections. It is undoubtedly true that by this and other methods remarkable resemblance to parasitic bodies can be demonstrated in Paget's disease in the surface epithelium. No selective stain has, however, been discovered which will pick out these supposed parasites as is the case in the true coccidia of the liver, etc. They have never been shown to have an independent existence apart from the epithelium, and true sporing has never been observed. After working at some hundreds of sections and other specimens I feel certain that the supposed parasites in Paget's eczema are only the results of epithelial degeneration. The parasitic theory being abandoned, one asks, is there another point upon which our knowledge has been advanced since Paget first described the disease? We may note that, whereas he stated every case had ended within two years in the development of cancer in the breast affected, it has since been shown that the typical eczema or dermatitis may exist for eight or ten or more years before this consequence results (as in one case under my observation).

As regards treatment, supposing the nipple is affected, excision of the breast is the only safe course, since experience with all kinds of caustics and local applications has been disappointing. If one has to excise the nipple and surrounding skin, obviously the patient is better without the breast, which can be of no use and which may become cancerous.

With regard to *cysts in the breast*, 80% of these, that is four out of five, are true retention cysts, and their favorite locality is near the nipple and main ducts. In the remaining 20% the cysts are multiple, due to fibrous degeneration of the organ, and their favorite site is in the periphery or circumference of the breast. The former class is met with in comparatively early periods of life, as a rule, though they may occur at any age. The degeneration cysts are rarely seen before forty to forty-five, when the mammary gland is ceasing to have any function.

First, with regard to retention cysts, which are by far the commonest form, they are of special interest because of the frequency with which they are mistaken for carcinoma. Their contents are almost invariably of a milky nature, and the majority of the cases is cured by a single tapping. These three facts are well worth remembering. To illustrate the first by a typical case, I saw a few days ago a middle-aged woman who had been assured by three surgeons in succession that a tumor near the nipple was a cancer, and that the whole breast should be removed without delay. The introduction of a trocar and cannula let out the milky fluid, which I now show you, and the tumor disappeared. In this case such a mistake ought never to have been made, because the elasticity of the cyst could be readily demonstrated, whereas a carcinoma never gives this elasticity or fluctuation. The position in the breast is usually sufficient to excite suspicion, for carcinoma in two out of three cases starts in the upper and outer quadrant of the breast, the single retention cysts which simulate it are by far the most common in the neighborhood of the nipple. I have mentioned the importance of elasticity on careful palpation. The absence of adhesions to the skin is another valuable sign, but one must admit, however, that in a few cases, in which the breast is large, the cyst deeply placed and away from the nipple, it is absolutely impossible without exploratory puncture or incision to be certain that it is not a solid tumor. And the importance of such exploration needs no emphasis. I will frankly admit that I have once excised a breast in the full belief that it contained a malignant tumor, but which turned out to be only a cyst, and in spite of the teaching of some I believe strongly that before doing excision the surgeon should invariably make a cut into the substance of any suspected cancer of the breast. It is true that in nine cases out of ten he will be simply incising a scirrhous growth, and it has been urged that this is unsafe because of the risk of infection with cancer cells of the surrounding tissue. I believe this objection is quite fantastic. Of course, the knife that has entered the tumor should be at once laid aside, the edges of the incision clamped together by volsella forceps, then there can be no real risk involved. This precautionary rule will save the surgeon now and then from making the error to which I have pleaded guilty. With regard to the treatment of these retention cysts, supposing they re-fill after puncture, it is then possible that there is an intracystic growth, and in such a case certainly the whole cyst should be excised. With regard to excision of adenomata and cysts from the breast, of which I have had over fifty cases in the hospital, a practical point may be urged that in sewing up the incision the stitches must be carried down to the bottom of the wound on either side, or else a blood cavity will be very apt to form and delay healing, as well as alarm the patient.

To return to the rare involution cysts met with, especially in the periphery of the breast, I happen to have had an opportunity of examining their pathology in several cases. It is admitted that they start in the terminal acini or ducts and are due to the constriction of the wall by the increasing fibrous tissue. The changes the lining epithelium undergoes readily suggest a termination in cancer, but I believe with Bull and others that there is no proof of such transformation. The matter is of practical importance; many such breasts are excised with the fear that cancer will supervene, but there is an important argument against such excision, namely, that when one breast has become the seat of fibrous degeneration and cyst formation, the other gland will probably follow suit. Few women would submit to the successive removal of both breasts unless there was really good reason for believing that grave danger was thereby avoided. I would repeat that there is no evidence that carcinoma especially selects the breasts that are the seat of multiple cysts, and that, unless the patient is very anxious about the condition, it is better to leave them alone. With regard to adenomata I propose to say nothing, for the main facts are known to every one of you. Here is a drawing of interest, showing the supervention of scirrhus in and around a small adenoma which had existed for thirty years. Curiously, the patient's daughter was also operated upon for adenoma of the breast. The patient was under the care of my father, and the specimen is in the College of Surgeons' Museum.

Dr. Cullingworth has, among others, reported a case of the same coincidence, namely, scirrhus with adenoma, but the total number of cases recorded is really very small and cannot be held to adduce argument in favor of excision of an adenoma *per se.* In the case I have mentioned the microscope showed that the scirrhous growth had started, not in the adenoma, but around it, and the columns of cells were invading the degenerated adenoma. I would just refer to one rare but interesting form of sarcoma of the breast, namely, the cystic sarcoma, to lay stress on its comparatively low malignancy, especially if operation be carried out. I have seen a tumor of this kind attain a size which was much larger than that of the patient's head, without causing any secondary deposits in the lymphatic glands or elsewhere, and excision to be permanently successful. The mistake is sometimes made of diagnosing these cystic sarcomata as abscesses of the breast, though how it can be done one can hardly see. One patient came up to the hospital with a cystic sarcoma. On three successive occasions her doctor had operated and inserted drainage tubes into different parts of the tumor, believing it to be an abscess. It should be noted that sometimes toward the axilla there is an extramammary gland probably without any nipple or else a rudimentary one, and it may give rise to a retention cyst, an adenoma or a scirrhus. Then there is another form, mentioned by Testut, in which there are rudimentary or accessory mammary structures near the nipple, between it and the main ducts.

As regards those cysts which I have mentioned as forming 80% of the total—retention cysts—they are generally situated near the nipple. What is the most important means in diagnosing them, and what are they generally mistaken for? Undoubtedly the answer to the latter question is cancer. Let me urge upon you carefully to examine these cysts, and not to give a positive diagnosis of cancer in cases of retention cysts. As regards the most important sign in diagnosis apart from their occurrence, usually at a comparatively early date, and their position—near the nipple—it is the elasticity you get on careful palpation. On grasping such a cyst between the fingers and thumb and pulling it toward the skin, with which it is rarely in connection, and pressing in the center, you will get true elasticity, something you practically never get in scirrhus and only very occasionally in adenoma. However, with regard to breasts which are very large, pendulous and loaded with fat, if a cyst occurs in the center of them, it is impossible to diagnose it from a solid tumor. As regards the treatment of these simple cysts, it is a remarkable fact that tapping usually cures them, but, if it does not remove an intracystic growth, then excision of the cyst should be carried out by a longitudinal incision radiating from the nipple.

We come now to the most important subject of carcinoma. I find I have done just 100 complete removals of the breast for malignant disease in the hospital. This is a point of some little interest, because it makes the calculation of percentages so easy. I have had fifty cases of adenoma and cysts which have been operated upon, which will give you an idea of the relative frequency of these different classes of tumors so far as operation is concerned. With regard to carcinoma, the question arises what are the most reliable symptoms in diagnosis and what are the least? Undoubtedly the least reliable, that is the most valueless, sign to go upon in diagnosing a tumor of the breast is the degree of cachexia shown by the patient. I say this because some practitioners even have a fixed idea that a doubtful tumor must be carcinomatous because the patient is so cachectic, or they will tell you that a tumor cannot be carcinomatous because the patient is not cachectic.

In deciding upon the nature of a tumor in the breast, let me impress upon you that cachexia of the patient is no guide at all. The most important sign, apart from the consistence of the tumor, which is of a stony hardness, is the adherence to the skin in the early stages, and this should be most carefully looked for. Later on in the course of the disease the skin is involved and finally gives way, and a foul ulcer is produced if the case is not surgically interfered with. You will remember that the breast is suspended to the skin normally by bands of fibrous tissue. These probably will not interfere with the skin in any method of examination unless there is a tumor present, but, supposing a scirrhus is to form for some reason or other, retraction or dimpling of the skin is very frequently present and is the most important sign. The way to demonstrate this condition of the skin is to get a wide grasp, raise the breast-skin slightly and notice the puckering or dimpling which occurs if any adhesions are present. Retraction of the nipple is not a very constant feature and, therefore, not a safe one to go upon in forming a diagnosis. In one out of three cases of scirrhus of the breast, that is, cases coming up for operation, the nipple is not retracted. Of course, if the disease has existed for a long time, there will probably be retraction of the nipple. However, in a large proportion of tumors of the breast which are not scirrhous, the nipple may happen to be retracted, so that you see, if you trust to the retraction of the nipple to help you with your diagnosis of a scirrhus of the breast, that you will not be on very sure ground, and you must not allow the absence of retraction of the nipple to bias you at all in diagnosing a scirrhus situated a few inches from the nipple. Pain is almost as valueless as cachexia as a diagnostic sign. Then, as regards enlargement of the axillary glands, let us take first those in an axilla which contains a large amount of fat; in such a case it is a very difficult matter to detect the enlargement, especially in the early stages. The glands just under the pectoral, right against the side of the chest, are those earliest involved, and the rapid involvement of these you can judge from the fact that, out of four operations for scirrhus, in three you will find, microscopically or macroscopically, deposits in these glands; so, if you can feel these appreciably enlarged, you may know that in all probability they contain deposits of scirrhus.

Now a few points as regards excision of the breast, which seem to me of some importance. The first is that, in order to obtain primary union whenever possible, you do not carry your incision through the middle of the axilla. The well-known lozenge-shaped incision passing downward and inward may be modified in all sorts of ways, and one must always remove the skin freely. Make the incision not through the center of the axilla, but up over the pectoralis major. In other words, your incision will be right away from the area of the large sebaceous glands. If the scirrhus goes anywhere near the pectoralis major, remove the lower half of that muscle; whether or not the pectoralis minor should be removed is a matter on which there is some difference of opinion, but access to the summit of the axilla is perhaps more free if it be excised. Avoid drainage tubes. Experience in this hospital shows that the cases in which they are inserted do not heal so well on the whole as those in which the drainage tube is omitted. Never tie the arm to the chest, but always bandage with the arm away from the side. This is to avoid subsequent stiffness, and remember to use elastic webbing bandage, in some cases it is of very material aid. As regards the clearing out of the glands which are adherent to the axillary vein, I am sure that it is worth while spending a great deal of time in dissecting them out rather than cutting the vein boldly and tying it some inches higher up. For, if you tie the axillary vein, you may have persistent edema of the arm.

Now, as to the risk to the patient of a complete operation. In a complete operation we include removal of the breast, of the skin freely, the pectoralis major, the deep fascia down to the ribs and the clearing of the axilla, beginning with the region of the axillary vein and going up to the clavicle. Of the 100 cases to which I have referred, I lost three. That will give you an idea of the mortality-rate of the operation. But at the same time I am quite sure that one case has not been recorded among the deaths from my hundred operations, so that the total number of fatal results would be four. I should like now briefly to refer to these four cases.

One patient was seventy-two years of age, and perhaps it would have been wiser not to have operated upon her at all, in view of her great age. She had secondary hemorrhage and died on the sixth day with the wound just beginning to heal. There were found on post mortem examination secondary deposits in the liver. The second patient was forty-five years of age, and she died with delirium. She had to be taken to the padded room and died on the fourth day after the operation. This case occurred a good many years ago, and at the present moment I cannot say whether it was septic delirium or not. There is no record of the wound having suppurated before the delirium came on. I should think it was a case of traumatic delirium which one meets with in various conditions. The third patient had been kept fasting too long before the operation. Owing to the operation-list being a very heavy one, her case was unavoidably put off till seven or eight in the evening, and the patient had not had any food since about ten or eleven o'clock. This, I think, had a great deal to do with her death from shock and exhaustion. The mortality of 4% following removal of the breast agrees as closely as possible with the statistics of Mr. Butlin, at Saint Bartholomew's, and Mr. Barker, of University College Hospital, and we may, therefore, look upon it as the usual mortality-rate. It is noteworthy that of these four cases all occurred in my first thirty operations, in my last seventy operations I have not had one fatal result.

Now, as to the percentage of cases which suppurate. I cannot here give very exact figures. You may have to take away the skin so widely and freely that it is impossible to bring the two edges together, and you have to leave the remainder of the wound to granulate. Some people may count those cases as cases of suppuration, but this is hardly fair. Again, the records depend on the dresser. A conscientious dresser will say, if he sees the smallest quantity of exudation, that there is suppuration going on. In another case a dresser, in the hope of pleasing his chief, will say the wound is uniting by first intention when pus is freely present. So far as I can ascertain, seventy-five out of the hundred cases healed without suppuration. The percentage is largely dependent on the care of the nurses, dressers and house-surgeons, and is, therefore, one which steadily improves year by year.

I may be asked, why should the axilla be cleared in every case ? If so, the answer to this has already been given, since in three out of four cases you will find secondary deposits in the axillary glands, although nothing can be felt beforehand.

Now as regards the secondary deposits of scirrhus elsewhere than in the lymphatic glands. I have lately had under my care a most remarkable case. The woman was operated upon by Sir F. Treves, eight years ago; five years later I removed a small local recurrent growth. The woman was kept free from recurrence for three years; then she became rapidly covered with tumors all over the body. There was a secondary deposit on the top of the skull, in the subcutaneous tissue of the trunk and both lower limbs, in the other breast, in the other axilla, down the arms and in the peritoneum. I did oophorectomy and found deposits in the pelvis and in apparently every organ in the abdomen, and there were hundreds in the peritoneum itself. In fact, she was studded with scirrhus throughout, and yet, although she was very weak, she was not in what would be called a cachectic condition. If a patient dies from the results of scirrhus of the breast, you will find that secondary deposits are present in the liver in 50% of the cases; in the pleura and lungs in 25% to 30% (it is hard to distinguish when the growths commence in the pleura and when in the lungs). Then in the other breast, the pericardium, the peritoneum, the bones and the subcutaneous tissue in about 15% altogether. These conclusions are based on the work of several pathologists. The only frequent noncancerous condition which you find in patients dying from cancer of the breast is pleurisy. No doubt, the percentage of cases in which there is recurrence in the bones has been underestimated, because in the post mortem room there is, as a rule, no careful examination of the bones, and so the number is probably much higher than that given. The drawings I show you demonstrate how you may find the secondary deposits here and there in the cancellous tissue of many bones, such as the upper third of the humerus, the femur, the vertebræ and ribs, without their giving rise to any local signs except, perhaps, spontaneous fracture. There is another case I will mention, and it is that of a private patient in whom, three years after excision of the breast for scirrhus carcinoma, a supposed sebaceous cyst formed on the top of the head in the occipital region. It was supposed at first to be a sebaceous cyst, but after excision it proved to be a scirrhus deposit. Some months later other tumors appeared.

With regard to the value of oophorectomy in the treatment of cancer, the evidence is that in a few cases it retards the growth, and that is about the best that can be said for it. As to the results of complete excision of the breast and contents of the axilla for scirrhus, it may be stated that in 40% of such cases there will be no recurrence within three years, but there is a great difference between that statement and saying that 40% of the cases are permanent cures. *There is no safe "time limit" of cure.* The late Mr. James Adams removed the left breast from a woman for cancer in this hospital in 1876, and in 1886 she came up with a recurrence in the scar, that is ten years interval after the first operation. This recurrent growth was removed by Sir F. Treves. Again in 1894, that is, eighteen years after the first operation and eight years after the second, she came up with scirrhus in the opposite breast and axilla, which I operated upon, so that you see such a case quite negatives the idea of a safe time limit. In 1890 I operated in private practice upon a woman with a large carcinoma of the breast and many enlarged glands in the axilla. It was a bad case, but fortunately she remained free for ten years, and I then certainly regarded the case as a permanent cure. She has now a deposit just at the root of the neck which we have decided is inoperable and which, I should say, in the course of another year will prove fatal. In this hospital I operated upon a patient on whom the late Professor Billroth had operated twelve years before, having excised part of the breast. It must have been at first a very small tumor and possibly an adenoma; he had excised a good deal of the breast, but I have little doubt that it was carcinoma; that is, twelve years intervened before the remains of the breast and the axilla were infected. This brings us to the question: Is there such a thing as permanent cure? In 1870, thirty years ago, my father removed a scirrhous breast from a patient we can now trace, and she is now perfectly well. Others, I have no doubt, could be given with as long a history of freedom. The average age of commencement of scirrhus is forty-eight years, while that for adenoma is thirty years, but many exceptions to this rule occur, and one of the most striking I know is that of a girl, twenty-one years of age, in whom, in 1894, I removed a small scirrhus from the breast. It was proved microscopically to be a scirrhus, and, curiously enough, in the following year I had a case of cancer of the tongue which was also proved microscopically in a girl, only twenty years of age.

So much for cancer as a disease of old age. One word now as to the call for operation in cases of recurrence. I think that the more experience one has of these cases, the more one is encouraged to operate. Even when the deposits recur in what would apparently seem a most hopeless form with multiple nodules scattered round about the scar, one occasionally gets a cure from persisting in excision. I certainly have a more favorable view of operation for recurrence than I had a few years ago. Many a case of scirrhus of the breast comes to the hospital, and the patient tells you that she has had it a year or so; she has not neglected it, her doctor has "looked after it," ordering medicines and local applications. Now, I wish to make no reflections, but it is a humiliating fact that scirrhus cases are "looked after" too long; the only safe thing in a doubtful case is the harmless exploratory incision, a measure which is often delayed with unfortunate consequences to the patient.

A CASE OF FEMORAL THROMBOSIS IN ACUTE CROUPOUS PNEUMONIA.*

By D. J. MILTON MILLER, M. D.,
of Philadelphia.

Although from the increased fibrinosis always present in croupous pneumonia one would expect to find venous thrombosis to be not uncommon, it is, in reality, a rare event. In a hospital experience of 18 years, in which I have seen several hundred cases of pneumonia, the case now reported is the first which I have observed, although it is quite possible that minor degrees of the affection may have escaped notice. The subject receives but scant mention in most of the standard text-books and works on the practice of medicine. With the exception of Anders, who refers to DaCosta's cases in his fourth edition only, and Osler, who says that it may occur in protracted cases, the condition is not referred to by most of the authors that I have consulted. Very few cases have been reported. DaCosta[1], in 1898, published an excellent clinical paper on the subject, in which he reported 3 cases and collected from the literature six others.

In 1899, W. H. Welch[2] increased the number to fourteen. A little later Sears and Larrabee[3] found ten more instances in 949 pneumonias occurring in the Boston City Hospital, and W. R. Steiner[4] three cases in a series of 500 pneumonias observed in the Johns Hopkins Hospital. The last-mentioned author has published these three cases, together with 38 collected from the literature, in a valuable and exhaustive paper shortly to appear in the next volume of the *Johns Hopkins Hospital Reports,* an abstract of which was published in a recent number of the *Johns Hopkins Bulletin.* To these 41 cases I can add three, which A. H. Smith[5] found among 488 pneumonias in the Presbyterian Hospital, New York, and my own case, making the whole number reported up to the present time forty-five. (While preparing this paper Dr. Steiner wrote to me that he had come across three additional cases, all of the upper extremity; this would raise the number of reported cases to forty-eight[6].)

In the abstract of Steiner's paper above referred to, I have gathered the following interesting facts in reference to this unusual sequel of pneumonia: First, this condition, *i. e.*, venous thrombosis, occurs as a sequel and not as an integral part of the primary malady. Second, it is more common in women than in men. Third, the lower extremities are almost always the ones involved; in only 3 of the cases were the upper limbs affected. Fourth, the left femoral is the vein usually involved, occurring alone in six cases, and in both legs in four; the internal saphenous, external and common iliac and popliteal being invaded alone, or in association with one or both femorals, in the other cases. In those reports, in which the extremities, but not the veins affected, were mentioned, Steiner found the left leg was involved only in 16 cases, the right in 10, and both in 7. Nine of the patients died, and in 5 death was due to pulmonary embolism. The prognosis, therefore, is favorable.

At the opening of this paper the statement was made that owing to the increased fibrinosis in croupous pneumonia it is strange that venous thrombosis does not occur more frequently. In making this statement I but expressed an old and common idea, *i. e.*, that the fibrinous condition of the blood increases its coagulability. According to Welch, however, "there is no definite and constant relation between the amount of fibrin obtainable from the blood and the occurrence of thrombosis; venous thrombosis is less common in pneumonia and acute rheumatism, in which the fibrin-content of the blood is high, than in enteric fever and cachectic states, in which the same content is normal or low."

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*Read before the Section of Medicine, College of Physicians, March 9, 1902.

1. Philadelphia Medical Journal, 1898, II, p. 519.

2. Allbutt's System of Medicine, N. Y. and London, 1899, vi. p. 155.

3. Medical and Surgical Reports, Boston City Hospital, 1901, 12th. series, p. 17.

4. Johns Hopkins Bulletin Vol. xiii, p. 140.

5. Twentieth Century Practice, N. Y. 1899, xvi, p. 169.

6. At the meeting at which this paper was read Dr. D. L. Edsall took exception to the statement that venous thrombosis was rare in pneumonia, saying that he had seen two cases himself and had heard of several others on inquiry among his friends. Now, although the frequency of an affection cannot always be judged from the number of reported cases, the fact that cases of venous thrombosis are so seldom met with in the vast literature of croupous pneumonia, is surely as indication of its infrequency in that disease.

A possible explanation of the infrequency of thrombosis in pneumonia is the short duration of that disease, there not being sufficient time for the operation of the accepted causes of thrombosis, viz., slowing and irregularity of the circulation, changes in the composition of the blood, its contact with diseased surfaces and the action of bacteria.

Much evidence has accumulated of late to show that the thromboses of the infectious diseases, as well as other thromboses, are due to bacteria or their toxins, not, as a rule, from the specific bacteria of the original disease, but from the streptococci and other pyogenic organisms. To this cause DaCosta attributes the thrombosis of pneumonia. As Welch remarks, the presence of bacteria in these cases cannot always be accidental or secondary; "they occur in such numbers, and associated with such lesions, that they must have multiplied in the thrombus and vascular wall."

The fact that micro-organisms have not been demonstrated in some cases is no proof that they were not present; this may have been due to imperfect technique or to the death of the bacteria, or the thrombosis may have been brought about by the action of toxins. Welch has observed in various infective diseases an endangeitis, which he believes is of toxic origin[7]. Certainly, impaired circulation and changes in the intima and blood do not alone afford a satisfactory explanation of the causation of the thromboses of the infective diseases, while the theory of their bacterial origin does seem to offer an acceptable solution of the problem—a problem which only further investigation will clear up.

In my case, cultures taken from a branch of the internal saphenous vein near the ankle, on the third day, remained sterile, and in one of Steiner's cases cultures from the thrombus made 48 hours before death, and others made after death, were also negative. Steiner believed this case was "an example of so-called marantic thrombus rather than one of infective origin, especially as it occurred in an old varicose vein."

The thrombosis of pneumonia presents the same general characteristics as the similar, but more familiar, condition in enteric fever, and its symptoms need not detain us here. DaCosta calls attention to the frequency of pain in, and tenderness of. the calves as a primary symptom. This was so very marked in my case that the resident first thought that the condition was one of neuritis. Another nervous phenomenon sometimes seen, and present in the case herein reported, is a sensation of numbness or "pins and needles," due, possibly, to a mild associated neuritis.

The treatment does not differ from that of the thromboses found in other affections, viz., rest, elevation and soothing applications. In view of the fact that death in 62.5% of the fatal cases was due to pulmonary embolism, care should be exercised in manipulating the affected limb and veins, whether for diagnostic or therapeutic purposes, and the patient should not be permitted to walk until 6 weeks from the commencement of the attack.

With these preliminary and not very original remarks, the history of the patient whose case forms the subject of this paper is now briefly presented:

Lawrence H., aet. 44, a bricklayer and habitual user of alcohol, was admitted to the hospital on January 31, 1903, on the fourth day of an attack of acute croupous pneumonia. The physical examination on admission revealed consolidation of the upper and middle lobes of the right lung, a temperature of 101°, a pulse of 90 and a respiration-rate of 34. With the exception of an accentuated pulmonic second sound, the cardiac signs were normal. The urine showed a distinct albumin reaction, but no sugar or casts. The leukocytes numbered 21,000. The sputum contained pneumococci, but no tubercle bacilli. The course of the disease was typical, the temperature ranging between 102° and 103°, the pulse from 110 to 116 and the respiration from 34 to 36. There was considerable delirium, requiring mechanical restraint. On the tenth day a fresh outbreak of pleurisy occurred, as revealed by increased pain and the appearance of friction rales over a limited area in the postaxillary region: this was promptly relieved by the application of dry cups. Otherwise there was nothing of note to record, the temperature falling by lysis and reaching normal on the sixteenth day, with corresponding decline of the general and local symptoms. After 36 hours of normal temperature, on the eighteenth day of the pneumonia (February 14), the patient complained bitterly of pain in his left calf, which was found on examination to be exquisitely tender to pressure and 3 cc. larger than the right. There was tenderness over the femoral and upper part of the internal saphenous veins, in the popliteal space and in the calf. All the superficial veins of the affected leg were enlarged, and there was slight edema over the lower third of the tibia and about the ankle. Coincident with the swelling of the leg the temperature rose to 101-2/5°, and the leukocytes, which had numbered on February 6 (tenth day) 8,900, amounted to 3.500. A blood culture[8] taken from a branch of the internal saphenous over the instep on the third day of the thrombosis proved negative. By February 21 all the symptoms had considerably ameliorated, and the temperature, which had fluctuated between 100° and 101°, became normal. Seven days later it was noted that the left leg and its superficial veins were still enlarged, but there was no tenderness over the course of the popliteal and femoral veins. At his own request, the patient was discharged on the thirty-third day of the thrombosis, although the affected limb was still enlarged and somewhat stiff.

TETANUS.

A STUDY OF FIFTY-SEVEN CASES FROM THE RECORDS OF THE PENNSYLVANIA HOSPITAL.*

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Physician to the Phillips Institute of Tuberculosis.

The following study of tetanus is based upon fifty-seven cases, collected from the records of the Pennsylvania Hospital, and includes all the cases of this disease which were treated in the wards of the hospital between January, 1874, and January, 1903.

The curious tendency of the disease to occur in certain years and seasons has been commented upon by many writers. In the accompanying table will be noted a marked variation in the frequency of occurrence in different years, when one would suppose that telluric as well as atmospheric conditions could hardly have been very different.

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[7] Cultures made before and after death may fail to reveal bacteria, and yet they may be demonstrated in stained sections from the thrombus; this was the case in an example of thrombosis of the right jugular. subclavian and axillary veins in cardiac disease, which I reported to this section 2 years ago.

[8] In 100 cc. of glucose bouillon.

Year	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1874	. .	. .	. .	. .	1	2	1	1	. .	1	1	. .	7
1875	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	1	. .	1
1876	. .	.	. .	. .	1	1	. .	1	. .	. .	. .	. .	3
1879	. .	. .	. .	. .	. .	. .	2	1	. .	1	. .	. .	4
1880	. .	. .	. .	. .	. .	. .	3	. .	. .	. .	1	1	5
1881	. .	. .	. .	. .	1	. .	. .	. .	. .	. .	. .	. .	1
1882	. .	. .	. .	. .	. .	. .	. .	. .	. .	1	. .	2	3
1883	. .	. .	. .	. .	. .	. .	. .	. .	1	. .	. .	. .	1
1884	1	. .	. .	. .	. .	1	. .	. .	1	. .	. .	. .	3
1885	. .	. .	. .	. .	. .	. .	. .	. .	2	. .	. .	. .	2
1886	. .	. .	. .	. .	1	. .	. .	. .	. .	. .	. .	. .	1
1893	. .	. .	.	. .	. .	. .	. .	. .	. .	1	. .	. .	1
1894	1	. .	. .	. .	1	. .	1	. .	. .	1	. .	. .	4
1896	. .	. .	. .	. .	. .	. .	. .	. .	. .	1	. .	. .	1
1897	. .	. .	. .	. .	. .	. .	1	. .	. .	. .	. .	. .	1
1898	. .	. .	. .	. .	. .	. .	. .	. .	1	. .	1	. .	2
1899	. .	. .	. .	. .	. .	. .	. .	2	. .	. .	. .	. .	2
1900	. .	. .	. .	. .	1	. .	4	. .	1	1	. .	. .	7
1901	. .	. .	. .	2	. .	. .	1	1	. .	2	. .	. .	6
1902	. .	. .	1	. .	. .	. .	1	. .	. .	. .	. .	. .	2
Total	2	0	1	2	6	4	14	6	6	9	4	3	57
Mortality	50%	0	0	50%	100%	75%	85%	94%	94%	100%	75%	66%	85%

For the curious absence of tetanus between the years of 1886 and 1893 there seems to be hardly any explanation. The environment of the patients and the district from which they were drawn underwent but little change from the preceding to the subsequent years during which the disease was prevalent.

The tendency of modern belief regarding tetanus is, of course, in view of its specific and infectious nature, to disregard climate, temperature and season, explaining its occurrence or absence rather by the susceptibility of the individual and the character of the infectious material introduced into the system. But when we consider the wide distribution of the tetanus bacillus—the fact that it is commonly present in the excrement of horses and human beings, and hence in stables, garden-earth and the dust of streets; that it is often found in the floors of houses, in the wood splinters of doors and furniture[1], in cobwebs, in dirt accumulated under finger-nails (Babes[11]), and in soil to a depth of 30 cm., etc.—it is interesting to speculate upon the cause of its varied virulence in wounds of apparently similar character and environment.

In this connection it is well to remember that tetanus spores are hardy and long-lived and that in given localities, in certain streets, etc., they are habitually present, though they may not be found in neighboring places.

The popular belief that wounds which freely suppurate do not beget tetanus, is born out by Marchesi's[3] experiments, in which it was found that the tetanus bacillus, when injected into animals together with its cohabitant micro-organisms, often produces no tetanic symptoms; but that, if a 5% solution of carbolic acid was added—which appears to kill most other organisms—tetanus developed. A further explanation is yielded by the researches of Vaillard, Vincent and Rouget[4], which have shown that spores of tetanus are able to grow in the organism only when some negatively chemotactic substance is introduced into the body together with them, their destruction by phagocytes being in this way avoided. These facts probably explain many apparently contradictory evidences collected in the past regarding the prevalence of tetanus during different conditions of temperature, season, humidity, climate, etc.

That temperature may play a rôle, however, would seem indicated from the fact that frogs can be successfully inoculated only when their body temperature has been increased; and also by more frequent occurrence of tetanus during the warm than during the cold months of the year. If, as stated by Wunderlich[5], a warm climate is more favorable to the development of tetanus, it would seem that the virulence of the disease should in like manner be increased by it. Packard and Willson[6] have, however, pointed out the fact that in Italy the course of the disease is milder and more susceptible to treatment than in northern latitudes.

In the present series of cases, as will be seen, tetanus has been more frequent during the warm months; the largest number of cases having occurred in July, this being due to the increased number of pistol-shot wounds of which the "glorious Fourth" is always productive. In this instance again it seems strange that no cases were seen at the hospital for a period of seven years.

Mortality.

Of fifty-seven cases of tetanus treated at the Pennsylvania Hospital during the last twenty-nine years, 48 proved fatal, rendering a general mortality of 84.2%. This, of course, includes all varieties of cases under different modes of therapeusis. According to the site of the wound, the fatalities were as follows:

Locality	No. of cases	Recoveries	Deaths	Mortality
Head and neck	4	0	4	100%
Lower extremity	19	2	17	89.5%
Upper extremity	20	6	14	70%
Trunk	1	1	0	0%
Mixed injuries	7	7	0	0%
"Idiopathic"	7	1	0	86%

The foregoing table (except in case of wounds of the trunk, of which there was but one) accords entirely with the tabulated results of tetanus as it occurred during the war of the Rebellion[7]. Instances in which no history of injury could be obtained have been classified after the manner of older teaching as "idiopathic," as they could not be satisfactorily placed under any other heading. In these cases the tonsils, the gastro-intestinal and respiratory mucous membranes as well as fissures about the finger-nails must be kept in mind as possible portals of infection, remembering at the same time that susceptibility greatly varies, not only in different but even in the same individual, from time to time.

MORTALITY ACCORDING TO AGE.

Years	1-10	10-20	20-30	30-40	40-50	50-60	60-70
No. of cases . .	5	14	15	14	7	2	1
Mortality . . .	100%	71%	73%	71%	71%	100%	100%

MOST FATAL DAY (41 CASES).

Day	1	2	3	4	5	6	7	8	9	10	11	12	Later
No. Died . .	5	4	3	2	1	4	3	2	1	1	4	1	10

From the aforegoing table it will be seen that death, while more common in the first four days after the onset of symptoms, occurs with almost equal frequency up to the eleventh day, evidence contradictory to Yandell's[12] statement that, if a patient live 5 days, there is good hope of recovery.

The latest day upon which death occurred after onset of symptoms was the forty-eighth.

Mortality in Relation to Incubation.

The belief which has long prevailed, and has usually been borne out by statistics, that the longer the period of incubation, the better would be the chance of recovery, has not been corroborated in this series of cases, which show the following facts:

Days incubation	1	4	5	6	7	8	9	10	12	14	16	18	30	Unknown
No. cases	1	2	1	9	8	4	6	5	1	3	1	1	2	14
Mortality	0%	100%	100%	67%	100%	100%	83%	20%	100%	66%	100%	100%	50%	95%

From this table it would appear that cases with a ten days' incubation are the least fatal; but, of course, absolutely accurate conclusions cannot be drawn from such a small number of cases. The experiments of Courmont and Doyen[8] seem to show that the symptoms are not due to the direct action of the toxin of tetanus, but rather to a substance elaborated in the body by a process of fermentation. The same investigators also found that tetanus toxin introduced into a vein was capable of producing symptoms after a given time, but that no increase in the strength of dosage was capable of hastening the onset of symptoms[9].

THE INFLUENCE OF SEX.

	Recoveries	Deaths	Mortality
Males 50	8	42	84%
Females 8	2	6	75%

MORTALITY IN RELATION TO THE CHARACTER OF THE WOUND.

	No. cases	Mortality
Punctured wounds	14	92%
Laceration or contusion	16	87.5%
Incised wounds	1	100%
Gunshot wounds	5	80%
Burns	11	63.5%
Vaccination	1	100%
Bee-sting	1	100%
Miscarriage	1	0%
Carious tooth	1	0%

Of the fourteen cases of punctured wounds above tabulated, twelve were caused by rusty nails.

The Urine.

The condition of the urine was noted in only seventeen cases, but it is interesting from the fact that the average specific gravity was 1.026. Of 13 cases with a specific gravity above 1.020, 77% died. No definite relation could be established between the severity of the attack or the ultimate outcome from urine analysis. Albumin was noted in only one case, but, as examinations were usually made but once, and that at time of admission, it is quite possible that albuminuria may have existed later in the course of the disease, a fact which the severity of the infection would render not improbable, especially inasmuch as Charrin[10] has demonstrated toxin elimination through the kidneys. It is, of course, possible that the high specific gravity is due to the fact that tetanus patients imbibe but small quantities of liquid owing both to fixation of the jaw and dysphagia. Flushing the system with water is a factor of treatment which has perhaps received too little attention.

Symptoms.

The *first symptoms* of the disease were usually pain and stiffness in the back or the neck. *Fever* was present in all cases in which the temperature was recorded, and ranged from 99° to 110° F. Nearly all fatal cases showed a steadily increasing fever as the end was approached, and in quite a number the temperature rose several degrees after death had taken place. In eleven patients *death* occurred in convulsions, in 12 instances from asthenia without convulsions. *Delirium*, which is said to be a common symptom in alcoholic subjects, was recorded eight times. The *occupations* of individuals attacked were too diverse for classifictaion; laborers, ironworkers and stevedores were commonly subjects of the disease, the latter doubtless because tetanus bacilli are frequently encountered on the shores of rivers.

Treatment.

The number of remedies which have from time to time been vaunted in the treatment of this dread disease, only to be abandoned in despair, comprises a large part of the pharmacopeia. Needless to say, most of these have had their day at the Pennsylvania Hospital as elsewhere. In the earlier years drugs were used, the administration of which is now, and was probably then, recognized as purely symptomatic and palliative. Local treatment, which was in all cases carried out, consisted in the cleansing or cauterization of the wound. In one case amputation of the infected finger was performed with a subsequent fatal termination. The results of amputation, especially advocated by Rose, have generally been unsatisfactory, although apparently based upon good reasoning, for Babes[13] has shown that, in tail-infected cats, aputation of that member will often cause the disappearance of tetanic symptoms.

Internal treatment has in my series of cases included nearly all drugs of the hypnotic, sedative, analgetic and depressomotor groups; chloral, opium, bromides and physostigma having been most frequently used. Unguentum Crédé was employed successfully in one instance, together with antitoxin.

	No. cases	Recoveries	Deaths	Mortality
Symptomatic	47	7	41	87%
Carbolic acid	7	1	6	85%
Antitoxin	3	1	2	66%

Seven of the patients were treated by the Baccelli method—carbolic acid given hypodermically to the limits of tolerance—with a mortality of 85%, one case having received as high as 30 grains per diem, without untoward urinary symptoms.

Antitoxin was employed in three patients—two with antitetanic and one with antistreptococcic serum—injected subcutaneously; the one treated by the latter method ending fatally.

The Baccelli treatment, endorsed (as second best) by Babes and advocated especially by the Italian school, has in this series of cases proved almost as valueless as purely symptomatic medication. Antitoxin has yielded much better results, but even this has shown a much higher mortality than has been reported by European physicians, though it must, of course, be borne in mind that many unsuccessful cases have probably never been published.

In the light of recent investigations several facts should be remembered in the treatment of tetanus:

(1) That tetanus toxin is found mainly in the nervous tissues; that, once united with these, antitoxin is powerless in its action on already affected cells.

(2) That antitoxin is harmless, but deteriorates rapidly; therefore, it should be procured freshly, and aminiistered in continuous and large doses with the hope of immunizing the intact nerve-cells.

(3) That all cases of wounds in which there is a possibility of tetanic infection, should receive prophylactic injections of antitoxin.

(4) That local treatment is of great importance, hence the infected area should be excised; when this is impossible, extensive disinfection, preferably with carbolic acid, should be carried out; furthermore, that, as Behring has shown, antitoxin is of benefit locally as well as systemically.

(5) That every effort should be made to maintain the nutrition of the patient, for Castronuovo has demonstrated that antitoxin is of no value in tetanic animals which have been starved.[14]

In conclusion, I wish to express my indebtedness to the visiting staff of the Pennsylvania Hospital, through whose courtesy I have obtained access to the hospital records, and to Dr. Henry C. Earnshaw for assistance in the compilation of statistics.

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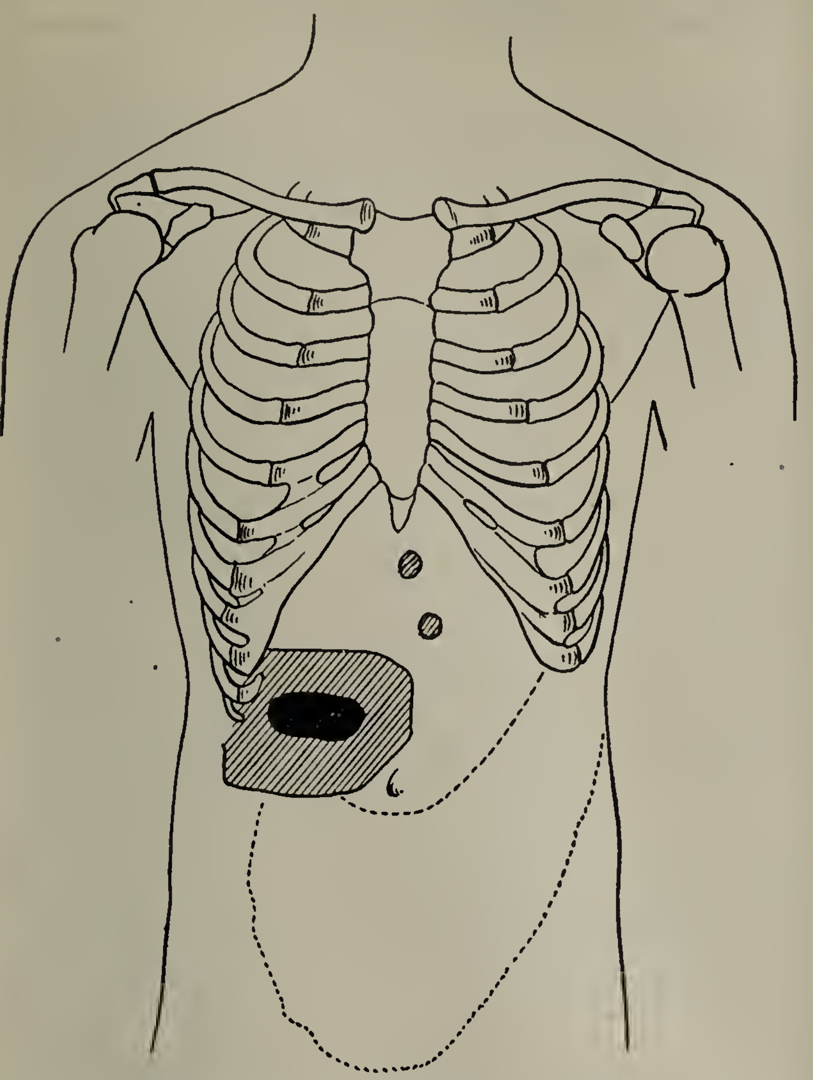
1. Chantemesse et Widal, quoted Courmont and Doyen. Le Tetanos, Paris, 1899.
2. Heyse, Deut. med. Woch., 1893, No. 14.
3. Marchesi, quoted by Babes.
4. Vaillard, Vincent et Rouget. Ann. Pasteur Instit., 1891, 92 and 93.
5. Wunderlich, Handbuch der Path. und Therap., 1844.
6. Packard and Willson, Amer. Jour. of Med. Sc., Dec. 1902.
7. Surgic. Hist. of the Rebellion, 3rd Surg. Vol. p. 818.
8. Comptes rend. de la Soc. de Biolog. 1893, 1898.
9. Rev. de Med., Jan. 10, 1894.
10. Quoted by v. Leyden and Blumenthal, Nothnagel's Encycloped., Bd. V. Th. II, 1900.
11. Babes 20th. Cent. Pract. of Med., Vol. XVII.
12. Yandell, quoted by Rodman, Internat. Clinics. Vol. I, 12th. Series.
13. Babes, Annales de l'Institut de Bacteriologie, Bucharest, 1892.
14. Quoted by Packard and Willson, Amer. Jour. Med. Sc., Dec. 1902.

GASTRIC CARCINOMA ASSOCIATED WITH HYPERCHLORHYDRIA AND WITH ATTACKS OF STUPOR.

By NORMAN B. GWYN, M. D.,
of Philadelphia.
Instructor in Medicine in the University of Pennsylvania.

The association of two rather unusual conditions has induced me to report this case which otherwise presents merely the distressing features of a gastric carcinoma.

C. M., 45 years old, male, bookkeeper, an excessively active, nervous man, was seen during March, 1902, complaining of distress in the stomach 2 to 3 hours after eating, flatulence, belching and constipation. The trouble had already existed in a marked degree for 4 months, and he had been for 6 weeks in a sanatorium, where rest, milk and soft diet had but temporarily improved his condition. He was slowly losing weight and strength, his appetite, however, had remained fair, but any proteid food seemed to cause intense irritation, and comfort could only be obtained by the simplest foods. Physically, the patient appeared as a thin, neurotic individual, decidedly anemic. No mass was to be felt in the epigastrium, extreme dilatation and gastroptosis, as pictured, were readily made out through the thin abdominal walls and with the aid of the stomach tube. The gastric contents, 1¼ hours after the Ewald test-meal showed no great retention, as judged by the amount, a total acidity of 70, a free hydrochloric amount of 55, no lactic acid, no bacilli. Mucus was present in considerable quantities. With the exception of the anemia the case appeared to be merely an extreme neurosis with gastric ptosis, dilatation and hyperacidity. In spite of careful dieting and nursing, the patient did not progress, and the continued gastric pain and epigastric tenderness made us suspicious of more serious trouble. There was never any suspicion of hemorrhage from the stomach or bowel. At the first observation an occasional thickening could be felt in the epigastrium and right hypochondium; this was of about one finger's thickness, contractile, and it was at first supposed to be merely a spasmodic contraction of the pylorus. In connection with the other unfavorable symptoms one could not help fearing that serious malignant trouble might be developing. The gastric irritation persisted, and the first, and so far the only, instance of vomiting (7 months from onset) showed an inoffensive brownish fluid with a total acidity of 40 and free HCl of 25 (3 hours after a simple meal, but one containing proteid); the patient was slowly losing ground. One month later we were permitted to pass a stomach tube and three hours after a glass of milk found 200 cc. of brownish fluid with a total acidity of 60, free HCl of 40. Blood or hematin could not be demonstrated in the coffeeground-like precipitate. No bacilli or suspicious cells were present. The stimulus of the tube brought to view a large tumor, 8 by 5 cm., the contractions of which could be readily seen and felt, and the peristalsis of the stomach ending in the tumor mass was clearly evident. For several weeks the mass could be readily felt at all times and often readily grasped. Following this positive evi-



Dotted lines—Gastric area showing dilatation.
Dark Area—Site of original tumor.
Shaded Area—Present extended condition of mass. Small mestastatic growth in liver.

dence of tumor the patient slowly declined; a constant pain in the region of the lower thoracic vertebræ and at the costal margin developed, and at the same time the mass seemed more deeply seated and less readily felt, except on deeper palpation, as if adherent to the spinal column and structures beneath. An increasing gastric distension also helped to obscure the field. During the Fall and Winter small nodules developed just below the xiphoid cartilage, seemingly subcutaneous. The pain in the abdomen was now colicky, particularly after the ingestion of food, and was very severe. Edema of the feet and moderate ascites had developed, and the patient was losing ground, although very slowly. The blood condition then was: Hemoglobin 40%, red bloodcorpuscles 2,618,000, white bloodcorpuscles 6,000, comparing very favorably with that shortly after the patient was first seen—hemoglobin 50%, red bloodcorpuscles 2,468,000, white bloodcorpuscles 4,000, nor did he lose in flesh as rapidly as we might expect from the constant pain, lack of nourishment and presence of probable gastric tumor. There was distinct indicanuria.

In addition to these more or less ordinary symptoms of gastric neoplasm, the patient showed an unusual condition of intense stupor on 4 occasions within the last 6 months. When in these attacks, which lasted 24 to 48 hours, he lay perfectly quiet, rousing only when spoken to or shaken, noticing nothing, asking for nothing; pupils were dilated, but reacted readily, other superficial reflexes were normal and there were no paralyses. Any response to questions while in this state was made slowly and not always pertinently. We were inclined at first to attribute these occurrences to the use of narcotics, but were able to observe the 3 last attacks during periods of freedom from pain and consequent abstinence from morphine. The state of the pupils, pulse and respiration was also not in accord with morphinism; uremic poisoning could readily be excluded; no acid intoxication or metabolic abnormality could be demonstrated by the urine, Dr. Edsall going carefully over this ground for us.

The mere persistence of free HCl in gastric carcinoma is not unusual, but an acidity as high as in this case, almost 21 months after onset, is distinctly out of the ordinary; that we were dealing with a malignant disease rather than with some hypertrophic scarring process seems probable, from the size and growth of the tumor, the extension of the pain, the cachexia and the apparent metastasis recently appearing. It might be noted that on two occasions vigorous antisyphilitic treatment had been used.

The origin of the stupor is obscure, it may be simply allied to the "coma dyspepticum" of Ewald, spoken of in severe gastric conditions, doubtless a toxemia of some sort; the "coma carcinomatosum" of many writers belongs to the class of terminal comas, which are more often of nephritic or infectious origin. Advanced anemia is responsible for the symptoms of some cases.

Osler and McCrae report cases of more or less early coma in gastric carcinoma, in one case an advanced nephritis was considered as possibly responsible, in the other instance no positive cause could be determined.

An obstinate condition of constipation must be mentioned as a possible cause, but, although associated with difficulty, there has been a more or less sufficient evacuation every one to two days. A marked fecal impaction was discovered and relieved some weeks before any stuporous symptoms were noted.

As a rider to this brief paper it must be added that, after the persistence of symptoms for two months while under our care, the questions of malignancy and exploratory or other operation were discussed, the patient and family, however, refusing persistently any operative procedure.

A partial autopsy was obtained on this patient, death occurring on March 18. The stomach was adherent to the abdominal wall, post mortem it did not reach below the umbilicus, the pylorus was free and not obstructed in any way, (there had been no signs of obstruction). Five centimeters from the pylorus, in the anterior wall of the stomach, there was a mass, the size of a goose egg, remarkably firm. Its upper border involved the lesser curvature and was adherent to the left lobe of the liver; between the adhesions was a hazelnut-sized abscess. The liver was studded with varying-sized nodules on its surface and in its substance; the pancreas was uninvolved. The retroperitoneal glands were markedly enlarged and firm. The omentum was studded with fine metastases. No appearance as of an old ulcer was to be seen on opening the stomach. The tissue removed showed the tumor to have been a typical adenocarcinoma.

FOREIGN BODIES IN THE BLADDER.

By SWITHIN CHANDLER, M. D.,
of Philadelphia.

Two cases have come under my notice that I believe are worth reporting, because they are rather rare. One was that of a man, the other that of a young girl.

The case of the man was as follows: Age 58 years, white, reported good habits. One evening in June, 1890, while using a large combination glass penholder (such as fakirs sell in the streets) as a means of self-gratification, he met with this accident. Having placed the blunt end in the meatus, he drew and withdrew said glass instrument, but while doing so it slipped from his fingers and entered beneath the glans penis. In his endeavors to extricate the same, he pushed it into the bladder. Then, becoming frightened, he sent for aid. I found the end of the glass in the bladder with the pen point projecting at the middle of the membranous portion of the urethra. After many little ways to extract the glass had failed, with the valuable assistance of Drs. H. W. Briggs and G. W. K. Forrest, of Wilmington, Delaware, the patient was etherized and the instrument removed.

The case of the girl is as follows: Age 18 years, white. At one time, for a cystitis, she had her bladder washed and upon recovery was instructed by the physician how to continue the treatment if the bladder should again become irritable. From this means she seemingly learned her unfortunate habit. Placing the glass catheter part way in the meatus, enough to steady that introduced end, she, by a side to side movement, was able to perform the act of self-abuse. But glass is not steel, and at one time it broke, and the broken end slipped into the bladder. Fearing to state her condition, she allowed the glass to remain in the bladder for seven months, at the end of which time she was brought to me. The uterus was thought to be the cause of an uncontrollable cystitis. Using the Nitze instrument, I soon saw lying in the bladder a foreign body, which proved to be the broken catheter. The maiden confessed its source. With little difficulty the glass was removed.

Thus, youth and middle age, female and male, performed in this novel and almost identical manner, to their undoing, and gave me knowledge of two most curious experiences.

THE GLASGOW MEDICAL JOURNAL.

March, 1903. (Vol. LIX., No. 3.)

1. The Significance of Pain in the Ear.
   JAMES GALBRAITH CONNAL.
2. On Obscure Pyemia; With the Description of a Case Which Originated From a Gonorrheal Urethritis.
   E. P. BAUMANN.
3. Clinical Cases. W. WESTWOOD FYFE.

1.—Connal says that **pain in the ear** may be due to morbid processes going on in the ear, or in parts immediately surrounding it In this class, which includes the inflammatory affections, the pain seldom confines itself to the ear, but, starting from the ear, radiates over the side of the head. The pain may arise from disease in parts not directly connected with the ear; in other words, it may be a reflected pain caused by disease of the teeth, tonsils, larynx, etc. The author mentions those diseases which are characterized by pain: (1) Otitis media; (2) furunculosis or boils in the external auditory canal; (3) keratosis obturans; (4) malignant disease of the ear; (5) foreign bodies; (6) traumatic rupture of the tympanic membrane; (7) eczema in the external auditory canal; (8) mastoid periostitis, and (9) chronic suppuration of the middle ear. The most frequent causes of reflected pain are: (1) Dental caries; (2) tonsillar and peritonsillar abscess, ulceration of the tonsil; (3) ulcers in the pharyngeal wall and in the nasopharynx; (4) affections of the base of the tongue; (5) affections of the epiglottis and larynx and (6) neuralgia of the mastoid. [T. M. T.]

2.—Baumann gives Leube's conclusions from the study of a number of cases of pyemia: (1) The spleen is always enlarged. (2) Leukocytosis occurs in all cases. (3) The temperature is always raised, with a tendency to intermitting, exacerbations generally assuming the aspect of rigors. In the most acute cases, which terminate in a few days, the pyrexia was, however, usually sustained and showed only slight remissions, the effect of medicinal agents. The disease always begins with a rigor, and in some cases this may be the only rigor noted throughout the course of the illness. (4) The respiratory frequency is always increased. (5) On the skin there are often eruptions of hemorrhagic spots with yellow pustular centers, strikingly similar to the minute foci of suppuration found post mortem in many organs (6) Involvement of the joints, on which much stress is commonly laid, was in Leube's cases far less frequent than alteration in the skin. The urine invariably contains albumin; in several cases the albuminuria was so marked that, when tube casts were present, uremia was thought of. (8) The nervous system participated markedly in the morbid process. (9) Retinal extravasations were occasionally present. [T. M. T.]

Health Reports.

Health Reports: The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon-General, U. S. Public Health and Marine-Hospital Service, during the week ending May 9, 1903:

SMALLPOX—United States.

			C.	D.
ALABAMA:	Mobile.	April 25-May 2.	4	
CALIFORNIA:	San Francisco.	April 19-26	8	
DISTRICT OF COLUMBIA:	Washington.	April 25-May 2.	1	
ILLINOIS:	Belleville.	April 24-May 1	15	
	Chicago.	April 25-May 2	15	2
	Galesburg.	April 25-May 2.	4	
	Joliet.	Dec. 29-Mar. 2.	30	2
INDIANA:	Elwood.	April 26-May 3.	7	
	Indianapolis.	April 27-May 2.	5	2
	Kokomo	April 27-May 2.	1	
IOWA:	Des Moines	April 27-May 4.	2	
	Dubuque.	April 26-May 2.	1	
KENTUCKY:	Lexington.	April 26-May 2.	1	
	Louisville.	April 1.30.	55	4
LOUISIANA:	New Orleans.	April 18-May 2	14 (2 imported).	
MAINE:	Biddeford.	April 26-May 2.	1	
	Franklin County.	May 7.	20	
	Rumford Falls	May 3.	1	
MARYLAND:	Baltimore	April 26-May 2.	2	
MASSACHUSETTS:	Fall River	April 26-May 2.	2	
MICHIGAN:	Detroit.	April 26-May 2	12	
	Flint.	April 26-May 2.	1	
	Grand Rapids.	April 26-May 2.	2	
	Port Huron	April 26-May 2.	2	
MINNESOTA;	Winona.	April 26-May 2..		1
NEBRASKA:	Omaha.	April 26-May 2.	1	
	South Omaha.	April 1-30.	7	
NEW HAMPSHIRE	Manchester.	April 25-May 2	11	
	Nashua.	April 25-May 2.	3	
NEW YORK:	Buffalo.	April 25-May 2.	1	
	Elmira.	April 25-May 2.	1 (imported)	
OHIO:	Cincinnati	April 24-May 1.	5	
	Cleveland	April 25-May 2.	1	
	Dayton.	April 25-May 2.	3	2
PENNSYLVANIA:	Carbondale.	April 23-30.	1	
	Dunmore.	April 1-30.	5	
	McKeesport.	April 25-May 2.	6	
	Philadelphia.	April 25-May 2	16	4
	Pittsburg	April 11-18.	24	7
		April 25-May 2..		5
	Pottsville.	April 1-30.	2	
SOUTH CAROLINA	Charleston.	April 25-May 2.	4	
TENNESSEE:	Memphis.	April 25-May 2.	2	
UTAH:	Salt Lake City	April 25-May 2	11	
WISCONSIN:	Green Bay.	April 26-May 3.	1	
	Milwaukee.	April 25-May 2.	3	

SMALLPOX—Foreign.

AUSTRIA:	Prague.	April 4-18.	8	
BELGIUM:	Brussels.	April 11-18.		5
CANADA:	Halifax.	April 25-May 2.	1	
	Owen Sound	April 29 present		
	Quebec.	April 25-May 2.	1	
CHINA:	Hong Kong.	Mar. 14-21.	1	1
COLUMBIA:	Barranquilla.	April 19-26.		1
FRANCE:	Marseilles	Mar. 11-31.		32
GREAT BRITAIN:	Birmingham.	April 11-18.	50	
	Bristol.	April 11-18.	2	
	Dublin.	April 4-18.	34	2
	Dundee.	April 11-18.	2	
	Leeds.	April 18-25.	19	
	Leith.	April 4-11.	1	
	Liverpool.	April 11-18..	94	7
	London.	April 4-11.	5	
	Manchester.	April 11-18.	5	1
	New Castle-on-Tyne.	April 11-18.	4	
	Nottingham.	April 11-18	2	
	Sheffield.	April 4-18.	6	
	South Shields.	April 11-18.	2	
INDIA:	Bombay.	Mar. 31-April 7.		89
NETHERLANDS:	Amsterdam.	April 18-25.		1
	Rotterdam.	April 18-25.	1	
RUSSIA:	St. Petersburg.	Mar. 28-April 11	43	7
	Warsaw.	Mar. 28-April 4.		3

YELLOW FEVER.

COLOMBIA:	Panama.	April 23-30.	2	1
ECUADOR:	Guayaquil.	April 4-11.		2
MEXICO;	Tampico.	May 4.		1
	Vera Cruz.	April 25-May 2.	9	3

CHOLERA—Insular.

PHILIPPINES:	Manila.	Mar. 14-21.	4	3
	Provinces.	Mar. 14-21.	203	130
	Not previously reported.		421	231

PLAGUE.

CHINA:	Hongkong	Mar. 14-21.	28	28
INDIA:	Bombay.	Mar. 31-April 7..		1827
	Karachi.	Mar. 22-29.	192	152

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See Advertising Page 8

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The Recent Congress in Washington.—It is generally conceded that the recent meeting of the Congress of American Physicians and Surgeons in Washington was one of exceptional importance and success. As the Congress was composed of sixteen special societies, and as each of these societies held its own individual sessions, it is not possible for us to comment in detail in these columns on all the proceedings. It is possible, however, to call attention once more to the great significance of a confederation that brings together every three years the acknowledged leaders in medical thought and activity in America—including in this geographical term the Dominion of Canada. The results cannot be other than educational and inspiring to the highest degree.

We are impressed particularly with the scientific work done before the general session of the Congress itself. The discussion of the Pancreas and Pancreatic Diseases has resulted in the contribution of a series of papers on this subject that must remain classical. It is not too much to say that the distinguished men who contributed these papers have brought the subject fully up to date, and that for the time being little remains to be said. Much, of course, remains to be done before we can claim that the subject of pancreatic pathology has been fully expounded; but this discussion in Washington will have the effect of clearing the ground, and of pointing the way to further advances. Herein lies the utility of such a symposium: the scientific world can take an account of its stock of knowledge, and prepare to expend further capital of scientific research in solving these problems. One such general and exhaustive discussion on some theme of cardinal importance is worth all the cost of this meeting, and worth far more than the miscellaneous and unequal papers that are read before too many of our medical assemblies.

The anticipation that a sort of sensational warfare was to be waged on the much-heralded Lorenz treatment, was not realized. Dr. Lorenz himself did not appear, but the discussion of his method by the orthopedists was temperate, if not altogether confirmatory of his claims; and it was in every way fortunate that this discussion was conducted by men who are authorities, and who are not misled by the glamour of newspaper notoriety.

The Meeting at New Orleans.—We have received the following interesting comments from a visitor at New Orleans In many respects the latest meeting of the American Medical Association, held in New Orleans: May 5 to 8, was the most successful ever held. The actual number of members who registered was 2017, fully half of them being accompanied by one or more persons, thus considerably swelling the crowd. In each section four or five excellent modern papers, dealing with subjects bearing directly upon the physical betterment of mankind, excellent in practicability as well as in theory, were read by prominent men, as a perusal of our report will show. The separate addresses of the section chairmen also showed a decided improvement; new ideas were not accepted without question, procedures only being approved which had proved valuable. Suggestions were made, looking especially toward the prevention of disease. There was also a marked increase in the attendance at the special section meetings, far ahead of that of previous years.

The hospitality of the South is far famed, and New Orleans, in spite of the condition of general uncleanliness, well sustained its reputation for hospitality. There were but few jollifications, such as formerly used to characterize these meetings, but the large entertainments were exceedingly well arranged. The ride down the river on the large sidewheeler *"New South"* was the most typically Southern excursion planned, and, although there were over 2500 persons on board and chairs were somewhat scarce, no one failed to enjoy the refreshments, so well were they served, or the views of Governor Warmuth's sugar plantation, spreading out behind and below the levee, the large white mansion, surrounded by trees of a brilliant green, forming a decided contrast to the copper-colored Mississippi, whirling along in the glistening sunlight. Visitors from the North had seen nothing like that before. The large private receptions given in honor of the visiting physicians, were well attended and thoroughly enjoyed, as was the Fête Champêtre, given in the City Park, where rows of Japanese lanterns strung under the huge live oaks and over the winding lakes gave the impression of fairyland, further enhanced, later, by the fire works. Here, too, though all New Orleans was present, the crowd was very well managed. An unusual attention paid to the visiting medical men was the free service given by the long distance telephone company between the hours of 6 P. M. and 8 A. M. Through this medium physicians from not too great a distance, only those outside of Louisiana, however, were enabled to communicate with their families and friends in a most satisfactory manner, entirely without cost.

As to the city of New Orleans, its faulty sanitation was as evident as the lavish hospitality of its citizens. In spite of its superb residence section, its excellent trolley system, its picturesque parks and quaint cemeteries, where the bodies are buried above ground, the rest of the city, especially the old French quarter, scattered over a vast territory, yet never giving the impression of a large city, shows varying grades of filth. Throughout the older sections the gutter next the sidewalk on one side of the street is still an open sewer. Yet an immense advance has been made during the past 6 years, and when the new sewerage system is completed and the filthiest old houses have been razed, New Orleans will again take its proper place among the first-class American cities. In regard to the honest, heartfelt, open hospitality and truly democratic demonstrations of good will displayed, all who attended this meeting can bear witness. Even the most scientific physicians must admit that a very high standard was reached by several articles read before each of the sections, although that standard was not maintained by more than half of the papers presented. Some old members claimed, as usual, that this meeting "excelled all those previously held." No one not present can form an idea of the value attached to these meetings by the vast majority of the general practitioners of the country. To them this annual congress is a condensed postgraduate school. This is an additional reason why the standard of work done by it should be still further raised. The meeting next year at Atlantic City will offer a splendid opportunity for the Association to surpass itself, if its officers will do their duties.

The New Department of Health and Charities.—The plans and policy of this department of the Philadelphia City Government, so recently inaugurated, are naturally exciting considerable attention. It is the avowed intention of Dr. Martin, the new director, to collect results and statistics of the various boards of health, not only from the principal cities of the United States, but also from those of Europe; to seek to discover what regulations have been proved best by experience; then to discuss these regulations before the advisory board, and perhaps, afterward, to lay such plans before a commission composed of the best-educated men in the medical profession of Philadelphia. By this plan no untested, purely theoretical methods can possibly be adopted, nor does it seem probable that medical innovations will even be discussed. Thus, in the matter of tuberculosis, the department will probably consult Dr. Flick and the directors of the Pennsylvania Society for the Prevention of Tuberculosis, for any suggestions which they may see fit to offer. If it is found that the registration of consumptive cases, such as already exists in several of the larger cities of the civilized world, has proved important in the prevention and treatment of this widespread disease, it seems probable that the city of Philadelphia will adopt it in the near future. The other infectious diseases will probably also be discussed, and their classification, as to which should be reported to the new bureau, will finally be determined upon, in the same manner. In all probability, therefore, the new department will put every method which it may seek to adopt, through a severe test, depending not only upon results achieved elsewhere, but also upon the practicability of the method as regards conditions in Philadelphia. Thus the spirit of the new department will be to have all regulations fully considered and discussed by the best medical men of the city, from all points of view, before their adoption. Only good rules, then, will be recommended, and nothing against which there can be any important objections can be forced upon the medical profession and the people of Philadelphia, if this policy be carried out by the new administration. A new conservatism, quite different from the old Philadelphia conservatism, dependent, as a rule, upon so many extraneous causes and conditions, is to be the motto of the new department.

Theories of Cancer.—In our last number we commented editorially upon the oration of Dr. A. F. Jonas, on Cancer and Immunity, which impressed us as being an adequate résumé of the subject, as well as presenting forcefully the part that the modern theories of immunity may play in solving the difficult problem of etiology. The *Practitioner* for May, 1903, is devoted to the consideration of malignant diseases of the mouth, and editorially discusses the theory of cancer in such a way as to make this comment of particular interest when read in connection with Dr. Jonas' paper. The editor of the *Practitioner* remarks that, in spite of the great amount of work which has been done in searching for the cause of carcinoma, the etiological factor is still shrouded in absolute mystery, and he is led from this to contrast infection and tumor formation. There is but a superficial analogy, he holds, between the conditions existing in cases of disseminated malignant disease and in such diseases as tuberculosis. The parasite of the undoubted infection, having been carried from one part of the body to another, induces a proliferation of the cells of the connective tissue already present there, and forms granulation tissue. The contrast between the true infection and tumor formation in this respect is a marked one. In the secondary cancerous growth the cell masses are identical with the original growth in character, but quite different from the cells of the tissues in which they have settled. This leads us to the conclusion that the secondary cancerous growths are due to fragments of the primary tumor. Apropos of this the writer in the *Practitioner* remarks that we know of no infectious process in which this occurs, in which one cell, the parasite, is carried by the tissue cell to found a new colony by stimulating its bearer to rapid multiplication. The fact that secondary growths of the various forms of carcinomata are comprised of the distinct cells of the parent form (squamous cells from squamous epithelioma, etc.) naturally suggests the query: Are we to suppose a separate parasite for each variety of tumor, or but one infectious agent curiously modified so as to produce at one time cylindrical cell growths, at another time squamous cell growths? In this editorial comment which we have followed, a theory is advanced which it is held will embrace the facts. The necessary condition to produce a tumor is the formation of cells of the body separated in some way from their normal connection with their neighbors. It is suggested that this may be the result of congenital maldevelopment, or may be due to a momentary trauma by which the cells are displaced, or may occur in the course of inflammatory changes. Cells cut off from their organic connection may grow at the expense of the surrounding tissue. Such a mass is functionless and parasitic, and the controlling force to regulate such a growth seems wanting. It is suggested that this may be explained by the absence of the influence of the nervous system, for tumors are devoid of nerves. Speculations of this character, based as these have been upon the negative results of the great amount of research work that has been carried on, are always interesting, and they may serve to guide subsequent investigators into new channels.

The Complications of Ovarian Dermoids.—While in and of themselves dermoid tumors of the pelvis are nonmalignant in that they remain quiescent as long as they are not interfered with by the surrounding organs, there is probably no benign pelvic growth that may, under certain circumstances, become more of a menace to the patient's life. This arises from a peculiar innate tendency to undergo inflammatory changes, which constitutes one of the main characteristics of this form of tumor. Originating in antenatal life, these growths often remain undiscovered until adult age. Then, probably because of the great circulatory changes to which the adult female pelvis is subject, they become manifest because of some complication that has arisen in their life-development. The peculiar oily contents of these cysts are specially prone to decomposition. This accident may be brought about in one of several ways. Thus, though rarely, an intra-uterine pregnancy, rapidly increasing in size, causes the uterus to impinge upon the small pelvic growth which has hitherto had sufficient room for its slow development without producing any inconvenience to the patient. The capsule now becomes bruised and congested or even deeply inflamed. Adhesions are formed between the tumor and the surrounding viscera; pressure is exerted upon the rectum and pelvic veins and nerves, and the patient becomes acutely aware of the occurrence of some abnormal process in the pelvic cavity. Again, in the absence of gestation, the low situation of the tumor may cause more or less interference with the function of the bowel. Marked constipation results; there is a stagnation in the pelvic circulation; a local pelvic toxemia, if we may so call it, is produced, and in the presence of adhesions between the bowel and tumor or because of the close proximity of the two structures, a diapedesis of the intestinal bacteria results. The bacillus coli communis or some other intestinal bacillus, gaining entrance to the inflammable cyst-contents, quickly produces suppuration with disastrous results if operative interference be not instituted. The same event may follow sloughing of the tumor after parturition, the pressure excerted by the fetal body resulting in devitalizating of the tumor. A pelvic exploration, if not carefully performed, may also excite inflammatory action in such a cyst with suppuration. Ahrens, in the *Zentralblatt für Gynaekologie*, May 2, 1903, mentions thrombosis of the femoral vein, perforation-perotinitis and metastatic infarct in the lungs and elsewhere as other complications of this variety of cyst. From this brief résumé it is patent that ovarian dermoids may be associated with complications that are in themselves of much greater gravity than the primary condition which induces them.

Wood Alcohol: A Dangerous Poison—The paper which we recently published in this **Journal** (May 9), by Dr. J. W. Sherer, of Kansas City, on "Toxic Amblyopia from Wood Alcohol," is of far greater importance than its mere title indicates. Dr.

Sherer's patients were made seriously ill, and two of them died, from the effects of wood alcohol used as a means of debauch. It is this aspect of the subject to which we wish to call special attention. Wood alcohol is used in the arts as a solvent, and in this form has sometimes caused dangerous and even fatal symptoms, but its use as an intoxicant is not so common; and the terrible instance of this abuse of it which Dr. Sherer described, demands wide-spread publicity.

Dr. Sherer has so well described the toxic effects of this substance that we need only refer to his paper. The most striking effect of wood alcohol, next to its fatal effect, is the very grave affection of the optic nerves which it causes. Total, and even irremediable, blindness may result from what seems like a rather inadequate dose. The poison fastens upon the optic nerves with a certainty and virulence that are appalling. It seems, as Dr. Sherer points out, to act directly upon the nerve fibers, causing a retrobulbar parenchymatous optic neuritis, and this damaging effect may show itself in an astonishingly short time and with lasting effects. This alone is enough to characterize wood alcohol as one of the most pernicious poisons known to man.

What we wish to point out is the fact that this cheap alcohol offers a temptation to ignorant revellers or unprincipled druggists to substitute it for ordinary alcohol. Dr. Sherer's patients used it for a debauch. Some druggists have used it as a menstruum for drugs. Both uses are criminal. All practising physicians should be familiar with the effects of this poison, but we believe that many of them are not. Therefore we call this special attention to it. That its use should be safe-guarded by stringent laws, is obvious. The mere fact that it has been used as a cheap intoxicant by ignorant pleasure-seekers, or as a vehicle for drugs by unscrupulous druggists, is enough to justify this warning.

The Free Distribution of Poisons.—Of somewhat similar importance is the subject of the free distribution of various poisonous drugs by the proprietary manufacturers of them. It appears to be a growing custom for some of these manufacturers of "headache" remedies and other nostrums to scatter them about with a free hand as an advertising scheme. In New York recently a child came near being seriously poisoned with a preparation containing strychnine, and the *Maryland Medical Journal* has complained that the abuse is prevailing in Baltimore. We can imagine nothing more venal and reprehensible. It is bad enough to have to read in the street cars the advertisements of headache powders that can cure a toper's morning pangs in ten minutes for ten cents, and to know that these nostrums are poisons and therefore capable of great abuse; but to have injurious drugs hawked about the streets and thrown gratis into people's front yards and vestibules, is a defiance of the public welfare that amounts to a challenge of the law. As these so-called remedies are usually put up in as attractive ways as possible, the risk of children and thoughtless persons taking them in excess is very great, and even the privilege of making a profit by preying on the credulity of the public seems in such cases to have gone a step too far.

Philistinism Gone Mad.—A business man of Chicago, named R. T. Crane, has taken a novel way to demonstrate the value of a good education. He has written a book against it! His way is simplicity itself.

Mr. Crane sent a circular letter to a lot of other "business men," requesting their opinions about the advantage of a collegiate education as a preparation for a business career. With his letter itself, or the replies to it, we are not particularly concerned; they could in no way either increase or diminish the claims of higher education. What impresses us more particularly about Mr. Crane and his scheme for disparaging education, is his crass judgment that the question is to be settled by an assessment of the value of a higher education in dollars and cents. The mental poverty of Mr. Crane is so unmistakably shown by the mere inception of such a folly that it is worth while noting as one of the curious Philistine tendencies of the day.

The higher education is not a means for making money, and its friends are in error who attempt to defend it as though it were. Mr. R. T. Crane, "business man and millionaire," is perfectly correct in saying that the "conceited college graduate" is not a necessary factor in most commercial schemes. For says Mr. Crane:

> "There is no branch of railroad work in which there is greater need of men who possess good tact and general ability than in the position of station-agents, and the fact that so few college graduates are found among them I think fully confirms my claim that anything further in the way of school training than can be obtained by the time a boy leaves the grammar grade would be of no advantage whatever to persons in the above or, in fact, almost any other department of railroad work."

The educational world will probably be surprised to learn that a "station-agent" is such an important personage in the scheme of creation that his mental equipment is to serve as a model for the rest of mankind. We should not refer to Mr. Crane and his foolish book at all, if it were not that equally fatuous arguments against the higher education were sometimes heard from the lips of medical men in discussing medical education.

The members of the medical profession at least should recognize that money-getting becomes an unmixed evil if it is set up as a standard by which to measure the progress of a race, a nation, or a man!

Current Comment.

L'INSTRUMENT DE MOLIERE.

By the school of dramatists which had its greatest exponent in that doctor-hater Molière, the apothecary was always represented armed with a huge syringe. This grotesque implement answered the same laughter-inciting purpose as the tin stethoscope sometimes employed in *la grosse comédie.* The clyster is one of the oldest therapeutical institutions. The Egyptians, according to the writers of an article in *La Presse Médicale,* copied the procedure from the ibis, which, natural historians of doubtful authority asserted, sucked up water with its beak for the purpose of injecting it into the rectum with aperient intent. This legend, we are told, is embodied in the Koran. The use of the syringe does not appear to date back much farther than the fifteenth century, but an enema syringe is said to have been found in the ruins of Herculaneum. The modern enema apparatus did not come in until about the middle of last century, and with its advent the public were enabled to administer their own lavements, thus depriving the apothecary of a fruitful source of emolument.

—*Medical Press and Circular.*

Correspondence.

INFORMATION WANTED.

By A. L. BENEDICT, M. D., of Buffalo, N. Y.

To the Editor of the **Philadelphia Medical Journal:**

Will you kindly allow me to present the following proposition through your columns? Without expressing a personal opinion, I should like to collate those of clinicians, sanitarians and pathologists, and would suggest that, to insure their receipt, they be sent to me in the form of private correspondence or references to literature.

"Of all diseases due to parasites of whatever kind, tuberculosis alone clearly illustrates predisposition by general states of the organism of the host, independently of opportunites for infection and of plainly local lesions or cellular states (as in regard to the malignant neoplasms, if these be considered parasitic), which favor colonization of the parasites. Even in the case of tuberculosis these latter factors outweigh purely general conditions of diminution of resistance."

Reviews.

The Johns Hopkins Hospital Reports. Vol. 10, Nos. 6, 7, 8. 9, 1902.

The second portion of Volume X. of the Johns Hopkins Hospital Reports contains four valuable articles, one on the Metabolism in Albuminuria, by Charles P. Emerson; one on Regenerative Changes in the Liver After Acute Yellow Atrophy; One of the Surgical Features of Typhoid Fever, by Thomas McCrae and James F. Mitchell; and one on the Symptoms, Diagnosis and Surgical Treatment of Ureteral Calculus. These articles will be noticed elsewhere, and it will be sufficient to say here that they are interesting, adequately illustrated by charts, and in addition there are four plates accompanying MacCallum's article. An index of the volume is appended.

Johns Hopkins Hospital Reports have done much to enhance the reputation of that institution, and to convince European specialists of the serious character of American medical research. [J. S.]

A Manual of Dissection and Practical Anatomy. Founded on Gray and Gerrish. By William T. Eckley, M. D., Professor of Anatomy in the Medical and Dental Departments of the University of Illinois, the Chicago School of Anatomy and Physiology, the Chicago Clinical School, and the West Side Training School for Nurses, and Corinne B. Eckley, M. D., Demonstrator of Anatomy in the Medical and Dental Departments of the University of Illinois and Chicago School of Anatomy and Physiology, and member of the Association of American Anatomists. Illustrated with 220 engravings, 116 of which are colored. Lea Brothers & Co., Philadelphia and New York. 1903.

This manual is a book of 408 pages which is intended to be used as a guide in the dissecting room. Of course, it is particularly adapted to use in the schools with which its authors are officially connected. It could be used, however, by a student in any school without detriment; but the value of such a work lies in the closeness with which it adheres to the style of teaching and the ideas of its authors. The text follows the text of Gray's Anatomy closely; in fact, the book looks like a miniature Gray, while the illustrations are the same as those used in Gray and Gerrish. The mechanical part of the book is well executed. [J.M.S.]

Manual of Bacteriology. By Robert Muir, M. A., M. D., F. R. C. P., Ed., Professor of Pathology, University of Glasgow, and James Ritchie, M. A., M. D., B. Sc., Reader in Pathology, University of Oxford. American Edition (with additions). Revised and Edited from the Third English Edition by Norman MacLeod Harris, M. B. (Tor.), Associate in Bacteriology, the Johns Hopkins University, Baltimore. With one hundred and seventy illustrations. The Macmillan Company. New York and London. For sale by John Wanamaker, Philadelphia.

This excellent manual is so well known to the bacteriologists as well as many up-to-date physicians who are interested in bacteriology that an extensive review of the book is unnecessary. Like Gray's anatomy, Green's pathology, Parkes' hygiene and other classical text-books which the English write so well, this manual is destined to remain for years to come the favorite of both teacher and student to whose needs it is so admirably adapted. The American edition, under the able editorial supervision of Dr. Harris, brings this admirable book up to date and makes it still more adapted to the wants of American readers. Within the last few years American bacteriologists contributed a great deal to this infant science of bacteriology, especially in the line of technique, and it is well that the more important of their labors should find expression in a book which already represents the sum total of our knowledge of medical bacteriology. The principal alterations and additions were made in chapter 2, treating of the methods of cultivation of bacteria; chapter 3, dealing with the microscopical methods, general bacteriological diagnosis and inoculations of animals; chapter 4, on bacteria in the air, soil and water, and antiseptics; chapter 15, on the typhoid bacillus and allied organisms; and chapter 17, on tetanus. A number of excellent illustrations from American sources have also been introduced. Thus renovated and Americanized, the book leaves nothing to be desired and will no doubt receive a welcome reception. [A. R.]

The Clinical Picture of Infantile Cerebral Paralysis. (In the Russian language). By Michael Breitman. Published by V. S. Ettinger, St. Petersburg.

This is a good-sized pamphlet of 178 pages, devoted to a thorough discussion of the various forms of infantile cerebral paralysis. The author, a well-known neurologist, shows unusual familiarity with the subject, a familiarity evidently gained through a painstaking perusal of the literature and wide personal experience. Besides the extensive review of the literature, a considerable number of case-histories is given to illustrate the author's views. The bibliography includes 1226 titles, of which 83 are Russian. We call attention to this work for the benefit of those especially interested in the subject. [A. B.]

News and Notes.

AMERICAN

PHILADELPHIA AND PENNSYLVANIA.

Dr. John Herr Musser.—Dr. John H. Musser, professor of clinical medicine in the University of Pennsylvania Medical School since the death of the late Dr. Pepper, in 1898, was elected president of the American Medical Association at its meeting in New Orleans 2 weeks ago. Born in Lancaster, Pa., June 22, 1856, Dr. Musser was educated in the Lancaster schools. Coming then to Philadelphia, he was graduated from the University of Pennsylvania Medical School in 1877. He began practice in West Philadelphia, where he soon built up a very large practice. He is a member of the Pathological Society, County Medical Society, Neurological Society, American Climatological Association, Pennsylvania State Medical Society, American Medical Association and Association of American Physicians. He belonged to the West Philadelphia Medical Society, was medical registrar at the University Hospital from 1878 to 1881, became chief of the medical dispensary of the University in 1881, pathologist to the Presbyterian Hospital in 1884, visiting physician to the Philadelphia Hospital in 1885, later instructor in clinical medicine in the University of Pennsylvania, and physician to the University and Presbyterian Hospitals. About 5 years ago he moved from West Philadelphia to his present home, 1927 Chestnut street. He was at one time president of the Philadelphia Pathological Society. Not only has he written a great number of articles on medical subjects during the past 25 years, but he has also published a text-book on medical diagnosis which is well known throughout England and America Beside his large general practice, he has considerable consultation work. He is also a fellow of the College of Physicians of Philadelphia.

Pennsylvania's Hospital Appropriations.—The following appropriation bills which had passed the Senate and House of Representatives of Pennsylvania, were signed by Governor Pennypacker, May 15: University of Pennsylvania, $100,000; University Hospital, $165,000; Harrisburg Hospital, $37,500; Warren State Hospital for Insane, $68,000; Eastern Pennsylvania State Institution for Feeble-minded, $50,000; Williamsport Hospital, $35,000; Phoenixville Hospital, $24,000; Eye, Ear and Throat Hospital, Pittsburg, $43,000; York Hospital, $30,000; Charity Hospital, Pittsburg, $10,000; Easton Hospital, $17,500; Lock Haven Hospital, $15,000; Beffefonte Hospital, $5000; State Hospital for Injured Persons, Ashland, $124,573.47; Cottage State Hospital, Philipsburg, $17,600; Workingmen's Hospital, Berlin, $5000; St. Luke's Hospital, South Bethlehem, $20,000; Chester Hospital, $18,000; St. Joseph's Hospital, Reading, $10,000; Garretson Hospital, Philadelphia, $40,000; Mercy Hospital, Wilkesbarre, $12,000; State Hospital, Mercer, $21,000; Kittanning Hospital, $8000; St. Christopher's Hospital for Children, Philadelphia, $15,000; Washington Hospital, $8000; Gynecean Hospital, Philadelphia, $25,000; Woman's Hospital, Philadelphia, $25,000; Kane Hospital, $11,000; State Hospital, Blossburg, $16,000; West Side Hospital, Scranton, $10,000; Todd Hospital, Carlisle, $3000; Chester County Hospital, $14,000; Pittston Hospital, $16,000; Coatesville Hospital, $10,000; Oil City Hospital, $25,000; Lancaster General Hospital, $30,000; Spencer Hospital, $15,000; Meadville Hospital, $12,500; State Asylum for Chronic Insane, South Mountain, $11,000; Columbia Hospital, $16,000; Nason Hospital, Roaring Springs, $6000; Pottsville Hospital, $47,000; West Philadelphia Hospital for Women, $3000; St. Francis' Hospital, Pittsburg, $800; Adrian Hospital, $18,000; Frederick Douglas Hospital, Pittsburg, $57,000; Bethesda Home, Pittsburg, $5000; Uniontown Hospital, $30,000; Bradford Hospital, $35,000; State Cottage Hospital Connellsville, $25,400.48; Kensington Hospital, $5000; Westmoreland Hospital, Greensburg, $17,000; State Hospital for Injured Persons, Hazleton, $44,500; Jewish Hospital, Philadelphia, $20,000; Maternity Hospital, Philadelphia, $5000; Mt. Pleasant Hospital, $55,000; Pottstown Hospital, $15,000; Robert Packer Hospital, $21,000; St. Vincent's Hospital, Erie, $11,000; Western Pennsylvania Hospital for Insane, Dixmont, $20,000; Western Pennsylvania Institution for the Blind, Pittsburg, $60,000; Samaritan Hospital, Philadelphia, $55,000; St. Joseph's Hospital, Philadelphia, $10,000; Wills Eye Hospital, Philadelphia, $50,000; Pennsylvania Institution for the Blind, $88,400; Western Pennsylvania Hospital for Deaf and Dumb, $133,900; Corry Hospital, $16,000; German Hospital, Philadelphia, $30,000; Wilkesbarre Hospital, $38,000; Beaver County General Hospital, $14,000; Free Hospital for Poor Consumptives, $230,000; Allegheny General Hospital, $80,000; St. Vincent's Hospital, Philadelphia, $2500. The following bills were signed after the amounts appropriated had been reduced: Rush Hospital for Consumptives, Philadelphia, $47,000; Dubois Hospital, $4000; State Hospital for Insane, Norristown, $50,000; Clearfield Hospital, $2000; Hamot Hospital, Erie, $14,000; Philadelphia Orthopedic Hospital, $29,000; Rosalie Foundling Asylum, Pittsburg, $21,000; Taylor Hospital, $10,000; Philadelphia Lying-in-Charity Hospital, $13,500; Mercy Hospital, Pittsburg, $109,500; Western Pennsylvania State Institution for Feeble-Minded, $514,300; State Hospital, Scranton, $195,000; State Lunatic Hospital, Harrisburg, $267,470; Philadelphia Polyclinic, $45,000; Rieneman Hospital, Pittsburg, $17,000; South Side Hospital, Pittsburg, $30,000; Pennsylvania Epileptic Hospital, $8000; Buhl Hospital, Sharon, $16,000; Charity Hospital, Norristown, $20,000; Shenango Valley Hospital, Newcastle, $20,000; Reading Hospital, $20,000; Franklin City Hospital, $18,000; Howard Hospital, $10,000; St. Agnes' Hospital, Philadelphia, $5000; St. Johns' General Hospital, Allegheny, $10,000; Western Pennsylvania Hospital, Pittsburg, $100,000; Titusville Hospital, Titusville, $9000; Pennsylvania Training School, Elwyn, $264,800; Samaritan Hospital, Lebanon, $7250; St. Timothy's Hospital, Roxborough, $25,000; Carbondale Hospital, $20,000; Beaver Valley General Hospital, $20,000; Conemaugh Valley Hospital, Johnstown, $35,000; St. Mary's Hospital, Philadelphia, $8500; McKeesport Hospital, McKeesport, $30,000; North Pennsylvania General Hospital, Austin, $2000; Altoona Hospital, $25,000; Pennsylvania Institution for the Deaf and Dumb, $10,000; Warren Emergency Hospital, Warren, $7000; Butler Hospital, $16,000; Mary M. Packer Hospital, Sunbury, $10,000; Allentown Hospital, $13,500; Ridgeway Hospital, $8000.

Society Meetings Next Week.—The following societies will meet next week at the College of Physicians, Philadelphia, at 8.15 P. M.; Wednesday evening, May 27, Philadelphia County Medical Society, and Thursday evening, May 28, Pathological Society.

Distinguished Visitors in Philadelphia.—At the Medical Club reception at the Hotel Bellevue, May 15, a number of distinguished medical men from Europe and the United States were present. Among these were Dr. Carl A. Ewald, the well-known stomach specialist, of Berlin; Dr. Hans Kehr, of Halberstadt, Dr. Hermann Tillmanns, of Leipsic, Dr. Johann von Mikulicz-Radecki, of Breslau, and Mr. A. G. B. Moyahan, of Leeds, England, all distinguished surgeons; Dr. Adami, of Montreal, the well-known pathologist; Dr. H. Luc, of Paris; Dr. Solly, of Denver, and Dr. George H. Simmons, of Chicago, secretary of the American Medical Association and editor of the *Journal of the American Medical Association*. A dinner was given before the reception at the University Club, in honor of the visiting foreigners. Speeches were made by the visitors and by Dr. John H. Musser, the newly elected president of the American Medical Association. On Saturday, May 16, Professor von Mikulicz-Radecki performed 2 operations at Jefferson Medical College. The same day clinics were held at the University Hospital by Drs. Ewald and Kehr. Dr. Kehr successfully performed an operation for the removal of gall-stones. A luncheon in honor of Drs. Ewald and Kehr was given at 2 o'clock at the Houston Club, by the Medical Alumni Society of the University of Pennsylvania. Dr. Kehr performed 2 difficult operations at the Polyclinic Hospital, Sunday, May 17, before leaving for New York.

Chester Hospital, Chester, Pa.—The president of the board of managers has announced that an anonymous donor would erect a sun parlor, to cost not over $2000. Two resident physicians have been elected, Drs. J. C. Stiteler and H. F. Taylor, both graduates of the University of Pennsylvania.

The Health of Philadelphia.—For the week ending May 16, an increase was noted in all contagious diseases reported, as compared with the previous week. There were 247 cases of typhoid fever with 27 deaths, against 212 cases with 25 deaths in the preceding week; 93 cases of scarlet fever with 3 deaths, against 89 cases with 5 deaths during the previous week; 64 cases of diphtheria with 7 deaths, as compared with 53 cases with 9 deaths in the week before; and 30 cases of smallpox with one death against 26 cases with 2 deaths during the week previous. Of all the cases of smallpox which have occurred during the first 4 months of this year almost two-thirds affected colored persons. This month, however, almost all cases reported were in white persons. Between May 16 and 18 there were reported 77 new cases of typhoid fever, 25 new cases of scarlet fever and 6 new cases of smallpox.

The New Department of Health and Charities.—Dr. Martin, director of the Bureau of Health and Charities, has appointed Dr. A. C. Abbott, professor of hygiene in the University of Pennsylvania, and lecturer on hygiene at Johns Hopkins Medical School, for several years city bacteriologist, chief of the Bureau of Health. He has also appointed, as members of the consulting or advisory board in connection with the health bureau, Drs. S. Weir Mitchell, C. B. Penrose, J. William White, J. H. Musser, H. A. Hare and J. M. Anders. Dr. Abbott's salary will be $6000 a year. Dr. M. H. Biggs, formerly chief resident physician at the University Hospital, has been appointed chief resident physician of the Philadelphia Hospital, succeeding the late Dr. D. E. Hughes.

Child Labor Bill Passed.—Governor Pennypacker on May 13 signed the Quail Child Labor bill, which raises the age limit of children employed in the anthracite and bituminous mines from 14 years to 16 years. He vetoed the other three bills advocated by the United Mine Workers.

Cerebrospinal Meningitis at League Island.—The outbreak of meningitis is now apparently under control. No new cases have been reported for the past five days. In all, 12 cases have occurred, with 5 deaths. Some cases of measles have broken out on the *Minneapolis* at League Island; diphtheria has appeared at Norfolk and Newport, and scarlet fever is reported in New York. On account of the overcrowded condition of the Navy Yards at these places, the Navy Department has suspended recruiting for 10 days. It is said that the enlisted force of the Navy is within 2100 of the maximum allowed by law, 31,000 men.

WESTERN STATES.

Pneumonia in Chicago.—Dr. Banks, U. S. P. H. and M.-H. S., has reported the prevalence of pneumonia in Chicago. He states that the disease has reached almost epidemic proportions. Of the 5341 deaths from all causes during the last 2 months, 1186 deaths, or 22%, were caused by pneumonia. As many as 4 deaths have occurred in one family, and 6 people, who attended a funeral of a friend dead from pneumonia, contracted pneumonia and died. During the week ending May 11, 178 deaths were due to pneumonia, out of a total of 672.

Typhoid Fever at Stanford University, Cal.—Up to May 10, 8 deaths have occurred from typhoid fever during the present epidemic. Several more deaths are still expected, as so many of the students are seriously ill.

Hospital for Contagious Diseases in Milwaukee.—As the Wisconsin Legislature has passed the bill permitting the city of Milwaukee to establish an isolation hospital outside of the city limits, plans are being prepared for a hospital on the cottage system, to be located at least one mile from the city limits. The Health Commissioner has recommended the purchase of 60 acres of land for this purpose. The hospital buildings must be at least 600 feet from the thoroughfares.

SOUTHERN STATES.

American Surgical Association.—At the meeting held in Washington last week, the following officers were elected for the ensuing year: President, Dr. N. P. Dandridge, Cincinnati; vice-president, Dr. Charles A. Powers, Denver; secretary, Dr. Dudley P. Allen, Cleveland; treasurer, Dr. George R. Fowler, Brooklyn; and recorder, Dr. Richard H. Harte, Philadelphia.

American Neurological Association.—At the meeting held in Washington last week, the following officers were elected for the ensuing year: President, Dr. Frank R. Frye, St. Louis; first vice-president, Dr. Hugh T. Patrick, Chicago; second vice-president, Dr. William Spiller, Philadelphia.

Association of American Physicians.—At the meeting held in Washington last week, the following officers were elected for the ensuing year: President, Dr. William T. Councilman, Boston; vice-president, Dr. Edward Trudeau, Saranac Lake, N. Y.; recorder, Dr. Solomon Solis-Cohen, Philadelphia; secretary, Dr. Henry Hun, Albany; treasurer, Dr. J. P. Crozer-Griffith, Philadelphia; councillors, Drs. Victor C. Vaughan, Ann Arbor, Mich., and George M. Kober, Washington, D. C. The next meeting will be held in Washington, D. C., in March, 1904.

American Ophthalmological Society.—At the meeting held in Washington last week, the following officers were elected for the ensuing year: President, Dr. Charles Stedman Bull, New York; first vice-president, Dr. Arthur Mathewson, Brooklyn; corresponding secretary, Dr. J. S. Prout, Brooklyn; recording secretary and treasurer, Dr. S. B. St. John, Hartford, Conn.

American Gastro-Enterological Association.—At the meeting held in Washington last week, the following officers were elected for the ensuing year: President, Dr. S. J. Meltzer, New York; first vice-president, Dr. Fenton B. Turck, Chicago; second vice-president, Dr. William Gerry Morgan, Washington, D. C.; secretary and treasurer, Dr. Charles D. Aaron, Detroit, Mich.

American Pediatric Society.—At the meeting held in Washington last week, the following officers were elected for the ensuing year: President, Dr. Augustus Caillé, New York; first vice-president, Dr. Allen Baines, Toronto, Canada; second vice-president, Dr. E. E. Graham, Philadelphia; secretary, Dr. S. S. Adams, Washington, D. C.; treasurer, Dr. J. Parke West Bellaire, Ohio; recorder-editor, Dr. Walter L. Carr, New York. The next meeting will be held May next, in Detroit.

American Gynecological Association.—At the meeting held last week, in Washington, the following officers were elected for the ensuing year: President, Dr. Edward W. Reynolds, Boston; first vice-president, Dr. J. Whitridge Williams, Baltimore; second vice-president, Dr. E. P. Davis, Philadelphia; secretary, Dr. J. Riddle Goffe, New York; treasurer, Dr. J. Montgomery Baldy, Philadelphia; member of council, Dr. J. E. Janvrin, New York. The next meeting will be held next May in Boston.

American Orthopedic Association.—At the meeting held in Washington last week, the following officers were elected for the ensuing year: President, Dr. Reginald H. Sayre, New York; first vice-president, Dr. Joel E. Goldthwait, Boston; second vice-president, Dr. Gwilym G. Davis, Philadelphia; secretary, Dr. John Ridlon, Chicago; treasurer, Dr. E. G. Brackett, Boston. The next meeting will be held at Atlantic City, N. J., in June.

American Therapeutic Society.—At the meeting held in Washington last week, the following officers were elected for the ensuing year: President, Dr. Howard H. Barker, Washington, D. C.; first vice-president, Dr. J. N. Hall, Denver; second vice-president, Dr. Oliver T. Osborne, New Haven, Conn.; third vice-president, Dr. Carl Beck, New York; secretary, Dr. N. P. Barnes, Washington, D. C.; recorder, Dr. William M. Spriggs, Washington, and treasurer, Dr. John S. McLain, Washington. The meeting next year will be held in New York, in May.

American Climatological Association.—At the meeting held in Washington last week, the following officers were elected for the ensuing year: President, Dr. J. C. Wilson, Philadelphia; secretary-treasurer, Dr. Guy Hinsdale, Philadelphia.

American Association of Pathologists and Bacteriologists.—At the meeting held in Washington last week, the following officers were elected for the ensuing year: President, Dr. Eugene Hodenpyl, New York; vice-president, Dr. Simon Flexner, Philadelphia.

American Dermatological Association.—At the meeting held in Washington last week, the following officers were elected for the ensuing year: President, Dr. Joseph Zeisler, Chicago; vice-president, Dr. M. B. Hartzell, Philadelphia; secretary-treasurer, Dr. C. J. White, Boston. The association will meet next year at Niagara Falls, in May.

The American Association of Genito-Urinary Surgeons.—At the meeting held last week, in Washington, the following officers were elected for the ensuing year: President, Dr. Edwin C. Burnett, St. Louis; vice-president, Dr. T. Tilden Brown, New York.

American Laryngological Association.—At the meeting held in Washington last week, the following officers were elected for the ensuing year: President, Dr. J. H. Hartman, Baltimore; first vice-president, Dr. John H. Lowman, Cleveland. The meeting next year will be at Atlantic City, N. J., in June.

MISCELLANY.

Bubonic Plague in Peru.—In spite of the fact that the Lima newspapers insist that the disease now existing in Lima, Callao and Pisco, Peru, is not bubonic plague, Dr. Biffi maintains that he has found pest bacilli in the bodies of 2 of the men who died first. Dr. Bauer and Dr. Arnaiz believe the condition to have been anthrax. Nevertheless, 18 new cases occurred during 3 days last week. Active measures have been taken to destroy all rats. The rice which arrived by the steamer *Serapis*, which is supposed to have brought the plague from India, has been burned. It is said that the ports of Ancon and Callao have been opened by the Peruvian Government, and that the situation at Pisco is not alarming. Under date of May 16 it was stated that the other 3 patients still under observation were recovering. Their families have been relieved from isolation. The only case now under treatment at Pisco is also improving.

Cholera in Manila.—Under date of May 16 it is stated that the deaths from cholera in Manila average about 8 a day. The authorities are delaying the enforcement of a general quarantine, as they hope the virulence of the disease will soon be modified. The Health Board of Manila is making preparations to inoculate the 50,000 Chinese residents with bubonic plague serum in order to prevent a spread of the plague. During the month of January, 1662 cases of cholera occurred among the provinces, with 1180 deaths, almost 71%. In the city of Manila there were but 4 deaths from cholera during January, 1903, out of 7 cases.

Bubonic Plague in India.—According to a report from Consul General Patterson, at Calcutta, 33,000 persons are dying of bubonic plague per week in India. On account of the opposition of the native population to the enforcement of laws of sanitation, it is difficult to prevent the spread of the disease. In Calcutta the deaths have been confined to the native quarter, and no cases have occurred in the European quarters, where the laws of sanitation are enforced.

Obituary.—Dr. Dwight S. Chamberlain, at Lyons, N. Y., May 11, aged 65 years.—Dr. Rufus Ogden Mason, at Philadelphia, Pa., May 12, aged 73 years.—Dr. George W. Bowman, at Mechanicsburg, Pa., May 11, aged 62 years.—Dr. Max J. Reinhold, at Williamsport, Pa., May 13.—Dr. S. P. Rice, at Memphis, Tenn., May 14.—Dr. Samuel A. Gayley, at Kensington, Md., May 15, aged 80 years.—Dr. A. M. Gortner, at York, Pa., May 16, aged 47 years.—Dr. John Van Harlingin, at Brooklyn, N. Y., May 19, aged 57 years.

FOREIGN.

GREAT BRITAIN.

Guy's Hospital Medical School.—The Gordon lectures on experimental pathology, a course of 12 lectures to be delivered on Thursdays at 4 o'clock, were begun in the physiological theater of Guy's Hospital, London, May 7, by Dr. E. W. Ainley Walker.

St. Mungo's College, Glasgow.—Dr. Robert Jardine has been appointed professor of midwifery.

The Dust of Cities.—As we approach the great centers of population, the quantity of dust held in suspension by the air increases enormously. According to Sir James Crichton Browne, the air of London contains 150,000 proportional parts of dust to Paris' 210,000, while in Argylshire, Scotland, there are only 200. Wind and rain are the great destroyers of dust, and they should be given a large field of action by isolating houses, enlarging streets, placing a limit on the height of buildings, etc.—*La Nature.*

St. Bartholomew's Hospital, London.—An anonymous benefactor has guaranteed a sum of $1,500,000 for the rebuilding and modernizing of St. Bartholomew's Hospital.

CONTINENTAL EUROPE.

A New Treatment for Consumption.—At the last meeting of the Berlin Medical Society, held May 13, Dr. Paul Sommerfeld read a paper upon sanosin in the treatment of consumption. He showed that a number of patients, mostly workingmen, had been cured of consumption, and said they were treated without interference with their work. The use of sanosin prevented coughing, fever and night sweats, and resulted in the patients gaining in weight. Even in severe cases of consumption the progress of the disease has been arrested. The remedy was discovered by Dr. Robert Schneider. It has been stated that Dr. Robert Schneider will introduce sanosin at a new consumption hospital to be opened in Chicago. The cure is not by a serum, but by a vapor, administered by inhalation and generated over a simple alcohol lamp from a powdered mixture of Australian eucalyptus and sulphur.

Bubonic Plague in Russia.—The Berlin *Lokal Anzeiger* of May 11 states that three cases of bubonic plague have been discovered at Libau, Russia. The disease, the paper says, was brought from Siberia by means of infected furs.

Fifteenth International Medical Congress.—This congress, which is to be held in Lisbon, Portugal, April, 1906, will have as president Dr. Costa and as general secretary, Dr. Bambara.

A Curious Disease of German Miners.—A German commission appointed to investigate the tropical worm disease which has attacked 20,000 Westphalian miners reports that only those who rarely see the sunlight are affected. The disease causes inability to labor and is frequently fatal. The government has decided to employ 150 doctors, specially trained, to combat the malady. The sufferers will be isolated. Cleanliness and sunshine are the principal remedies.

Obituary.—Dr. Wassiliew, professor of internal medicine in the University of Dorpat, died at St. Petersburg last month, aged 50 years.—The death is announced of Dr. Eusebio Oehl, professor of physiology in the Medical School of Pavia.—Professor G. Nefveu, of the Marseilles Medical School, died recently.—Dr. Hermann Gutschow, surgeon-general and director of the Medical Department of the Marine-Hospital Corps, died at Berlin, April 24 last.—The death is also announced of Dr. Gustav von Veit at his country residence in Deielsdorf in Pomerania, aged 79 years. From 1863 to 1893 he was professor of gynecology in Bonn.

The Latest Literature.

BRITISH MEDICAL JOURNAL.

May 2, 1903. (No. 2209.)

1. Remarks on the Operative Treatment of Chronic Facial Palsy of Peripheral Origin.
CHARLES A. BALLANCE, HAMILTON A. BALLANCE and PURVES STEWART.
2. Case of Brain Tumor. A. C. DUTT and D. LOWSON.
3. Graves's Disease in Association with Rheumatoid Arthritis. R. LLEWELYN JONES.
4. Neurasthenia; the Wear and Tear of Life.
GUTHRIE RANKIN.
5. Case of Migraine with Ophthalmoplegia.
JAMES W. RUSSELL.
6. Case of Cerebellar Abscess Following Middle Ear Disease, etc. J. GRANT ANDREW.

1.—The authors report 6 cases of **facial palsy treated by anastomosing the spinal accessory with the facial nerve,** and one case treated by anastomosing the facial with the hypoglossal. Their conclusions are as follows: Peripheral facial palsy is remediable by facio-accessory anastomosis, but the extent of recovery appears to be limited to associated movements in conjunction with the shoulder. In most cases the previous deformity disappears when the face is at rest. For reasons stated we would in the future recommend faciohypoglossal anastomosis rather than facio-accessory. The cases suitable for operation are those in which the paralysis has lasted so long that no recovery is to be expected, say facial palsy lasting 6 months without any sign of recovery. In our opinion, the sooner the operation is done after this date, the better. A suppurative causal condition producing an infective neuritis renders the prognosis after operative treatment less favorable than in cases due to trauma. [F. T. S.]

2.—Dutt and Lowson report a case of brain tumor, the patient dying subsequent to operation. [F. T. S.]

3.—Jones publishes a table of 6 cases of rheumatoid arthritis in which there were some signs of exophthalmic goiter. He also publishes a table of 14 cases in which the 4 cardinal symptoms of exophthalmic goiter, namely, enlargement of the thyroid, ocular symptoms, rapid pulse and tremor were present. He thinks that **rheumatoid arthritis and exophthalmic goiter** frequently co-exist. [J. M. S.]

4.—Rankin says that hysteria in women and hypochondriasis in men are the most frequent complications of **neurasthenia.** Insanity, the various forms of cerebral and spinal sclerosis and exophthalmic goiter are less frequent complications. In the treatment of neurasthenia, rest, which may vary from a mere change of scene and surroundings to strict Weir-Mitchell treatment, is of the greatest importance. Electricity is often of value. Bromides are indicated for the control of restlessness, and they may be combined with arsenic and strychnine. If insomnia persists after the administration of the bromides, sulphonal, trional, chloralamid or chloralose may be given at bedtime. Iron is indicated if there is anemia. Ichthyol is given for vasomotor instability. Cod-liver oil, with or without maltine, may be used when the digestion is strong enough. The bowels must be carefully regulated Antifebrin is the best drug for the control of headache. [J.M.S.]

5.—Russell reports a case of **migraine** in a boy, 13 years old, which was associated with **persistent ocular paralysis** on the left side. This was indicated by ptosis, external strabismus, dilation of the pupil and complete loss of reaction to light and accommodation. [J. M. S.]

6.—Andrew reports a case of cerebellar abscess following middle ear disease. An exploratory operation was performed without disclosing the situation of the abscess which, together with a thrombosis of the lateral sinus, was found at autopsy. [F T. S.]

LANCET.

May 2, 1903.

1. An Address on Man's Cranial Form, together with Some Remarks on the Attitude of the Medical Profession toward Anthropology.
ARTHUR THOMSON.
2. An Analysis of a Further Series of 250 Consecutive Operations for Primary Cataract, Performed in the Government Ophthalmic Hospital, Madras.
R. H. ELLIOT.
3. The Relation of Meconium to the Fetal Appendix.
ALEXANDER LOW.
4. A Case of Acute Yellow Atrophy of the Liver.
W. FERRIS and W. H. CLAYTON-GREENE.
5. The Dietetic Factor in Health-Resort Treatment.
ARTHUR P. LUFF.
6. Congenital Displacement of the Hip. NOBLE SMITH.
7. On a Case of Toxemia of Obscure Origin.
LEONARD WILLIAMS.
8. A Case of Tubercular Peritonitis; Spontaneous Recovery. HENRY F. BELLAMY.
9. The Relation Between Acetonuria and Acidemia in Cases of Gastric Ulcer. F. GOLLA.

1.—Thompson contributes an article **on man's cranial form.** He groups the influences at work which determine the cranial form under two heads: (1) Those operative from within and (2) those operative from without. He lays considerable stress on the part played by the masticatory apparatus in determining the shape of the skull. He asserts that there seems to be a correlation between the coronoid index and the cephalic index. He has observed that a higher coronoid index is more usually associated with dolichocephaly, while the lower coronoid indices are met with in skulls of the brachycephalic type. He points out that the sides of the cranial vault to which the temporal muscles are attached are the parts of the cranium which are most intersected by sutures and less able to withstand long-continued pressure, and, therefore, are more susceptible to the influence of prolonged stress. He then discusses at some length the effect of internal factors. He concludes that the shape of man's head in his higher developments is the outcome of those physical and intellectual environments which have led, on the one hand, to the reduction in size of his jaws and, on the other, to the increased volume of his brain, and, further, that these attributes are perpetuated by the influence of heredity and modified by cross-breeding and the laws of natural and sexual selection. [F. J. K.]

2.—Elliot presents an analysis of a further series of 250 consecutive operations for primary cataract, performed in the Government Ophthalmic Hospital at Madras, between the dates November 30, 1901, and February 1, 1902.
[J. H. G.]

3.—Low states that in the course of a systematic examination of the fetal abdominal viscera he has frequently noticed the **presence of meconium in the appendix.** He finds that the meconium begins to distend the lower half of the small intestine about the middle of the fourth month, and continues to do so to a variable extent to the end of fetal life. It begins to distend the rectum about the beginning of the fifth month, thereafter tending to accumulate in the cecum and then gradually distending the whole of the large intestine, so that after the seventh month dark-green meconium distends the large intestine in its whole length. Meconium was found present in the appendix as early as the middle of the fourth month, and thereafter in nearly every case examined it was present in the appendix till the end of fetal life. [W. A. N. D.]

4.—Ferris and Clayton-Greene report **a case of acute yellow atrophy of the liver,** which occurred in an unmarried woman, 23 years of age. On May 23, 1900, she was admitted into the Greenwich Infirmary, suffering from jaundice. The jaundice first showed itself on May 25, at which time she was seized with pain in the abdomen. On admission the patient was well nourished, well developed, deeply jaundiced, the pupils were dilated; the pulse was 96 and the tongue coated. The abdomen was not distended. Liver dulness on a level with the sixth rib in the vertical nipple line was one inch in width. There was a soft blowing systolic murmur in the pulmonary area. The urine had an acid reaction, its color being dark brown; its specific gravity 1016; it did not contain albumin or sugar. Gmelin's test gave a positive reaction for bile pigment. Leucin crystals were present in the urine. There was marked tenderness in the right hypochondrium. On May 30 the patient became restless, the pulse-rate rose to 112, the temperature was 99°, and on the following day she had two convulsive attacks followed by a rise in the temperature to 102°. Unconsciousness developed, the respirations became labored and stertorous, and death was preceded by coma. At autopsy it was found that the liver capsule was thrown into folds and that the greater part of the liver substance was entirely destroyed, being replaced by granular material. Sections stained by Marchi's method revealed most extensive fatty degeneration of the liver. The authors are inclined to the theory that acute yellow atrophy of the liver results from a toxemia. This toxemia has its source, in all probablity, in the intestinal tract. [F. J. K.]

5.—Luff contributes an article **on the dietetic factor in health-resort treatment.** He holds the view that the majority of cases at health-resorts requiring dietetic treatment are those of gout, obesity, glycosuria and rheumatoid arthritis. He confines his remarks to the dietetic treatment of gout and rheumatoid arthritis, and he believes that it is absolutely erroneous to exclude from the dietary of the gouty such articles as meat, fish and tea. The diet should, however, be simple, and at least one meat meal a day should be taken. Articles of diet favoring intestinal fermentation and putrefaction should be carefully avoided. He attaches great importance to the reduction of starchy articles of food, although not to the total exclusion of these; a fair proportion of vegetable food may be taken with two meals each day. Regarding alcohol, when necessary, the patient can decide better regarding the form in which it is to be taken than the medical man. He points out that champagne is a wine which is seldom suited for the gouty. In some cases of chronic gout it may become necessary to reduce the dietary of the patient to two articles, namely meat and water. He asserts that the dietary in cases of rheumatoid arthritis should be as liberal as the digestive organs allow, and that any food agreeing with the patient should be partaken of. [F. J. K.]

6.—Smith presents an illustrated article on congenital displacement of the hip, and concludes that in all cases and at all ages some good may be expected from treatment; that, if the displaced head of the femur has formed a firm bearing against the pelvis and the difficulties of walking are slight, then treatment should be directed to counteract lordosis by mechanical support, to freeing adverse contractions, such as those of the adductors, and to equalizing the length of the legs when only one side is involved; and that, if the head is freely movable up and down, some measures must be adopted to prevent an increase of deformity, and the least that can be done is to recommend recumbency or the use of some apparatus to keep the weight off the affected limb. Until the age of 7 all congenital dislocations can be reduced, and in single displacements the time-limit may be extended to 9 years. These limits, however, are not absolute, as much older patients may occasionally be successfully treated. The permanence of the result obtained depends upon the condition of the joints. Smith expresses his thorough approval of the Lorenz method, and prefers it to the open method. He presents a number of queries which have been put to him regarding the treatment by the Lorenz method and replies to each. His article is illustrated by a number of cuts. [J. H. G.]

7.—Williams discusses **a case of toxemia of obscure origin** which occurred in a woman, 22 years of age. She complained of dyspeptic symptoms in July, 1902. The dyspepsia was accompanied with some anemia which yielded rapidly to treatment. On September 20 the patient had what was believed to be a rigor. On September 24 she had a severe chill, followed by fever, after which the patient remained in excellent health until October 9. There was another rigor on October 10, one on October 11 and one on October 12. There were no sweats. Malaria was excluded. An examination of the patient revealed a tender mass in the right hypochondriac region, the nature of which was not clear. Exploratory operation failed to reveal anything abnormal in the abdomen. The subsequent history of the case was uneventful, and the patient made a good recovery. The author points out that the operation, though it failed to discover any focus of disease in the abdomen, was, nevertheless, conspicuously successful in arresting the disease. [F. J. K.]

8.—Bellamy reports **a case of tubercular peritonitis with spontaneous recovery** which occurred in a child, 8 years of age. [F. J. K.]

9.—Golla discusses **the relation between acetonuria and acidemia in cases of gastric ulcer.** He points out that in a series of cases the relation between fat metabolism and acetonuria was most strikingly demonstrated by the relation of the excretion of ammonia to the obesity of the patient. The author inclines to the belief that in the early stages of inanition the metabolism runs riot at the expense of the surplus fat. In some cases he found a degree of toxemia quite as great as that which has been found in diabetic coma. Examination of venous blood drawn from a basilic vein showed that the volume of CO_2 obtained tallied with the results obtained from normal persons, and it therefore appears to demonstrate that, even with very marked acentonuria, the alkalinity of the blood is by no means impaired. [F. J. K.]

MEDICAL NEWS.

May 16, 1903. (Vol. 82. No. 20.)

1. The Duties and Responsibilities of Trustees of Public Medical Institutions. W. W. KEEN.
2. Fracture at the Base of the Skull.—Neurological and Medicolegal Considerations. PEARCE BAILEY.
3. Notes on Bloodpressure in Man. S. S. GOLDWATER.
4. Some Recent Advances in Medical Therapeutics. THOMAS E. SATTERWAITHE.

1.—See **Philadelphia Medical Journal,** May 16, 1903.

2.—Bailey states that fracture at the base is an entirely unimportant cause of mental states which make commitment necessary or which render the patients incapable of earning their living. Fractures at the base can hardly be compared to those of the vault with the direct involvement of the cortex in the latter. [T. M. T.]

3.—To be abstracted when concluded.

4.—Satterwaithe believes that we should look upon the subject of pharmacology in the same light as we do on physiology and pathology, and pursue the study of it as a pure science; determine by careful and systematic laboratory experimentation the changes in the physiological action of the various organs of the higher vertebrates produced by a drug before an attempt is made to employ it for clinical purposes. [T. M. T.]

MEDICAL RECORD.

May 16, 1903.

1. Uremia and its Treatment. W. H. THOMSON.
2. A Study of the Rectum, with Reference to the Causative Factors of Obstipation (with Demonstrations). LOUIS J. HIRSCHMAN.
3. Is the Gall-Bladder as Useless as it is Dangerous? WOODS HUTCHINSON.
4. Ocular Symptomatology in Dagnosis. HENRY B. HOLLEN.

1.—Thomson discusses the **nature and treatment of uremia.** In uremia he believes that we have among others one special poison which may be a product of the kidney itself, and which possesses very similar properties to those of the internal secretion of the adjoining glands—the adrenals. Suprarenal extract acts as a very powerful vasoconstrictor, and thus greatly raises the arterial pressure. Among the uremic poisons, he holds, there is one that does precisely the same thing, so that its properties are indistinguishable from those of the suprarenal extract. The treatment of uremia due to various conditions is outlined, and the importance of a proper diet emphasized. In the management of cases of general dropsy with abundant albuminuria Thomson has noticed the kidneys begin to carry off the water when milk and a fluid diet are given up, and solid food, including even meat, given instead, with a restriction of liquids. As to diaphoresis, the subcutaneous infiltration makes the skin tense and glossy and thus closes the sweat-ducts. A thorough oiling of the skin, therefore, before using our diaphoretic measures, makes them more effective. [T. L. C.]

2.—Hirschman defines **obstipation** as difficult defecation due to mechanical obstruction; which obstruction resides in the rectal wall or in some organ which impinges upon the rectal wall. **Obstipation,** in contradistinction to **constipation,** is a purely mechanical condition. Constipation, he states, is usually caused by a dietetic error or some closely allied condition or to atony of the muscular coats of the intestines, thereby weakening their propelling power. In many cases of obstipation rectal examination shows the condition to be due to hard, fibrous, enlarged rectal valves, section of which gave complete relief. He describes the technique of the operation. [T. L. C.]

3.—Hutchinson states that our theory of the value of the gall-bladder has been rudely shattered in the last few years, in the serious doubt which has been cast upon the value of the bile as a secretion. The doubts as to the function of the gall-bladder are strongly supported upon the side of clinical experience. We have the striking fact of the high-disease liability of the organ, which tends to show its comparative absence of function and consequent lack of vitality. Hutchinson states, speaking of our own species, that the principal secretions of the gall-bladder are mucus and gall-stones. [T. L. C.]

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

May 14, 1903. (Vol. CXLVIII, No. 20.)

1. The Duties and Responsibilities of Trustees of Public Medical Institutions. W. W. KEEN.
2. Social Conditions in America in Their Relation to Medical Progress and Disease. J. M. ANDERS.
3. Differential Diagnosis in Disease of the Gall-Bladder and Ducts. GEORGE EMERSON BREWER.

1.—See **Philadelphia Medical Journal,** May 16, 1903.

2.—See editorial, **Philadelphia Medical Journal,** May 9, 1903.

3.—Brewer gives the following important facts: (1) In common duct stone the calculus is found in 67% of the cases in the duodenal extremity, in 15% in the hepatic extremity, and in 18% in the middle portion of the duct. (2) One-half of all cases of common duct obstruction only are due to stone. (3) In 70% of the cases of obstruction located in the neck of the gall-bladder the pain is referred to the right subscapular region, in 10% to the left subscapular region; and in 20% to the precordia, sternum, right subclavicular region or neck. (4) The temperature-chart in biliary infection is characterized by angularity rather than by curves, and by more or less prolonged periods of complete intermission. (5) Jaundice is absent in from 80 to 90% of all operative cases of gall-bladder or duct disease. (6) Jaundice preceded by colic is practically always due to stone; jaundice without pain is practically always due to inflammation or new growths of the ducts, or to outside pressure. (7) The bile in all cases of cholelithiasis should be regarded and treated as an infected secretion. (8) During the presence of calculous jaundice, the sudden occurrence of acute epigastric pain, muscular rigidity, nausea, vomiting and collapse, without leukocytosis, strongly suggests acute pancreatitis occasioned by the presence of a stone in the diverticulum of Vater. [T. M. T.]

NEW YORK MEDICAL JOURNAL.

May 9, 1903.

1. Medical Education in the United States. FRANK BILLINGS.
2. Social Conditions in America in their Relation to Medical Progress and Disease. J. M. ANDERS.
3. Cancer and Immunity. A. F. JONAS.
4. Report of a Case of Pulsating Empyema Necessitatis, With Three Strongly Pulsating Tumors. FREDERICK P. HENRY.
5. A Case of Epidural Abscess of Otitic Origin—Operation—Recovery. J. GUTTMAN.
6. Astigmatism Cured by Corneal Trauma. PERCY FRIDENBERG.

1.—See **Philadelphia Medical Journal,** May 9, 1903.

2.—See editorial, **Philadelphia Medical Journal,** May 16, 1903.

3.—See editorial, **Philadelphia Medical Journal,** May 16, 1903.

4.—Henry reports the case-history of a woman, 30 years of age, who developed an **empyema necessitatis** of the left side. **Three strongly pulsating tumors were present,** one in the mammary region, another in the eighth interspace, parallel with the anterior axillary border, and a third, the largest of the three, in the left postero-inferior region. All 3 of these tumors possessed a decided expansile pulsation. Palpation revealed the fact that the tumors contained both air and fluid. The author thinks the case began as an empyema and did not follow a previous pneumonia. As regards the time of pulsation, he thinks that this did not begin until perforation of a bronchus took place with the consequent admittance of air into the pleural cavity. Paracentesis thoracis was performed, and the patient made a slow but progressive recovery. In reviewing the literature, the author has found but one similar case recorded. [P. B. B.]

5.—Guttman reports the case-history of a girl, 15 years of age, who developed an **epidural abscess as a sequel to an attack of otitis media.** The patient was operated upon by the usual Schwarze method. The bony walls of the antrum were removed and the dura exposed, when a large quantity of pus made its escape. The parts were then thoroughly cleansed, drainage instituted, and the patient made a good recovery. The author then mentions the following complications which may be caused by purulent otitis media: Epidural abscess, meningitis, sinus thrombosis and abscess of the brain. [P. B. B.]

6.—Fridenberg reports the history of a man, aged 26 years, who sustained an injury of his left eye. This consisted in a linear wound extending across the cornea, a little below the center of the pupil. The depth of the penetration was slight and the edges were in perfect apposition. Previous to the reception of this injury the patient was slightly **astigmatic** in this eye, but subsequent to the **trauma the astigmatism completely disappeared.** The mechanism of this spontaneous cure is exactly similar to that which produces astigmatism after cataract extraction, namely: The flattening of the corneal curve from scar contraction. In conclusion, the author becomes somewhat prophetic, and says that the operation of graduated superficial keratotomy for astigmatism may be employed in the dim future. [P. B. B.]

May 16, 1903.

1. The Duties and Responsibilities of Trustees of Public Medical Institutions. W. W. KEEN.
2. Cancer and Immunity. A. F. JONAS.
3. The Relation of Cholelithiasis to Acute Pancreatitis. JOSEPH WIENER, JR.
4. An Unusually Long (Twenty Weeks) Case of Relapsing Typhoid Fever. W. L. STOWELL.

1.—See **Philadelphia Medical Journal,** May 16, 1903.

2.—See editorial, **Philadelphia Medical Journal,** May 16, 1903.

3.—Wiener contributes a paper on the **relation of choleli-**

thiasis to acute pancreatitis. The writer first reviews the literature of this subject and then speaks of the anatomical relations of the common bile- and pancreatic ducts. The close relationship that these canals bear to one another is, in the author's opinion, the prime factor in the causation of inflammatory processes in the pancreas. In the majority of cases it has been found that gall-stones become impacted in the common duct, or in the ampulla of Vater. This obstructs the biliary flow which travels to the pancreas through the duct of Wirsung and acts as the irritative agent. From the study of these cases the author is fully convinced that there is almost a constant causal relationship between the 2 conditions. In speaking of symptoms, he says that there is none pathognomonic of the condition. As regards treatment, early operation seems the only proper course to pursue. The article concludes with a case-history of a patient successfully operated upon. [P. B. B.]

4.—Stowell reports a case of typhoid fever occurring in a woman, 30 years of age. The disease was of **unusually long duration (20 weeks)**, and was characterized by **repeated relapses or re-infections.** The circulation from the beginning was bad, and, of the agents employed to maintain this, sparteine proved undoubtedly the best. General stimulants were also used throughout the course of the disease. The writer seems to favor the use of intestinal antiseptics; naphthalin being, in his judgment, the best. [P. B. B.]

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

May 16, 1903.

1. A Plea for Exploratory Operations. JAMES E. MOORE.
2. Illustrations of Mixed Infections in Pulmonary Phthisis, With Notes on Comparative Treatments. PAUL PAQUIN.
3. A New United States Pharmacopeia. JOSEPH P. REMINGTON.
4. A Case of Funnel Pelvis with Cesarean Section. CHARLES B. REED.
5. Theories of the Transmission of Hereditary Syphilis. ALFRED SCHALEK.
6. The Treatment of Leprosy. A. H. OHMANN-DUMESNIL.
7. Anatomical and Physiological Correspondence of Child and Adult. W. T. ECKLEY.

2.—Paquin presents illustrations of **mixed infection in pulmonary tuberculosis.** The article contains a number of illustrations of microscopic fields of unmixed and mixed infections of various kinds. The author also refers to the clinical data of many cases and contributes notes on the comparative treatments. [F. J. K.]

3.—Remington presents an article on **the new United States Pharmacopeia.** He takes this opportunity to inform the profession that the work of revising the United States pharmacopeia is progressing favorably, but, on account of the death of the distinguished chairman of the Committee, Dr. Charles Rice, revision was necessarily retarded. This article describes the methods employed to revise the pharmacopeia. He also points out that the idea of establishing an international pharmacopeia, which shall be an authority in all civilized countries of the world, has practically been abandoned. He believes that the new pharmocopeia, when it appears, will be abreast of the times and be recognized as fully worthy to stand with any of its predecessors, and will be recognized throughout the length and breadth of the land as authoritative. [F. J. K.]

4.—Reed reports a case of **funnel pelvis** in a girl, 19 years of age, upon whom a **Cesarean section** was performed. Both mother and child survived the operation. The etiology of this form of pelvis is obscure, and its frequency is not great. The proper treatment for labor at term in the presence of this complication is that which was adopted by the writer. Craniotomy should be performed should the fetus be dead. [W. A. N. D.]

5.—Schalek discusses **the theories of the transmission of hereditary syphilis.** After discussing the methods of transmission at some length, the following conclusions are suggested: (1) The father's sperm-cell may contain the syphilitic virus and convey it to the child without participation of the mother. (2) The maternal generative cell may contain the virus and result directly in a diseased fetus. (3) The placental circulation permits the passage of the infectious matter either way, from mother to child or vice versa. (4) Several or all of these factors may combine, and the more of them that are present, the less probable the escape of the chld. (5) The probabilities of the transmission of syphilis through the mother are greater because of more ways of possible influence on the fetus. [F. J. K.]

6.—Ohmann-Dumesnil presents an article on **the treatment of leprosy,** but, before entering into a discussion of its treatment, he gives a short review of some of the views which have been held in regard to the manner in which the disease is acquired. Passing on to the treatment he points out that the oldest agent employed, which even to-day enjoys a reputation far superior to all others on account of the very good effects which have followed its use, is chaulmoogra oil. While this remedy has many strong advocates, he holds that too much importance has been given to the same. The method of treatment suggested by P. G. Unna, of Hamburg, which is based on the principle of administering substances which are greedy for oxygen and in this way deprive the bacillus of leprosy of oxygen, has not been satisfactory and has never cured. He asserts that the solution of the problem of the true treatment of leprosy is surrounded with great difficulties and, up to the present time, a cure for leprosy has not been discovered. The method which holds out the best promises of success is that based on serum therapy. [F. J. K.]

7.—See **Philadelphia Medical Journal,** May 16, 1903, page 820.

AMERICAN MEDICINE.

May 16, 1903.

1. The Surgical Treatment of Pruritis Vulvæ, with the Report of a Case Cured by Resection of the Genitocrural, Ilio-inguinal, Inferior Pudendal and Superficial Perineal Nerves. BARTON COOKE HIRST.
2. Congenital Dislocation of the Hip; Report of a Bloodless Reposition, Followed by Death, with an Analysis of Twenty-three Cases in Process of Treatment. H. AUGUSTUS WILSON, J. TORRANCE RUGH, and W. M. L. COPLIN.
3. Heart Showing Chronic Tuberculosis of the Pericardium, with Involvement of the Myocardium. A. G. ELLIS.
4. Sarcoma of the Thumb: Report of Two Cases. WILLIAM B. TRIMBLE and GEO. REESE SATTERLEE.
5. Serious Infection Following Puncture, Laceration, or Contusion of the Finger or Toe. THOS H. MANLEY.
6. The Uses and Abuses of the Urethral Sound. J. HENRY DOWD.

2.—Will be abstracted when concluded.

3.—Ellis presents the notes of the case of a negro, aged 24, who presented signs of pulmonary tuberculosis. At autopsy the mediastinal tissues were found to be studded with various-sized grayish or yellow nodules, some of which had caseous centers. The heart and mediastinal tissues formed practically one nodular mass. Both pleuræ were universally adherent. The pericardium was also adherent. The external surface of the pericardium was studded with nodules which in places, especially over the left ventricle, extended into the heart muscle itself. [T. L. C.]

4.—Trimble and Satterlee report 2 cases of **sarcoma of the thumb.** The diagnosis was made chiefly by exclusion. On first inspection it seemed probable that the trouble might be either the ravages of syphilis or tuberculosis, or a malignant growth. The first was excluded by the therapeutic test, the second by the history of the patient and by close observation of the clinical appearance of the condition. This left the diagnosis one of malignant growth, which was afterward confirmed by the microscope. The result of the microscopical examination proved one case to be a giant-celled sarcoma, which is said to be the least malignant form, and the other a melanosarcoma, probably the most malignant kind. [T. L. C.]

MUENCHENER MEDICINISCHE WOCHENSCHRIFT.

March 10, 1903. (No. 10.)

1. Tetany of Gastric and Intestinal Origin. W. FLEINER.
2. The Movability of the Portion of the Right Lobe of the Liver Separated by a Constriction. PENSOLDT.
3. How May Extirpation of the Rectum be Performed Aseptically and Without Hemorrhage? F. WENZEL.
4. Indications for Operative Interference in Carcinoma of the Rectum. O. WITZEL.
5. A Case of Interstitial Gravidity Cured by Operation. M. von HOLST.
6. Contribution to Ovariotomy During Pregnancy. W. THOMASS.
7. Comparative Investigations upon the Disinfecting Power of Old and New Preparations of Mercury and Phenol. F. HAMMER.
8. The Relations Between Epilepsy and Migraine. W. STROHMAYER.
9. Varieties in the Distribution of the Inferior Vena Cava. S. OBERNDORFER.
10. Contribution to the Symptomatology of Carcinoma of the Prostate. H. DOERFLER.
11. Casuistry of Tumors of the Prostate in Children. L. LEVY.
12. A Severe Case of Traumatic Tetanus. HERRMANN.

1.—Fleiner, after premising that a diminution in the weight of the body and in the daily quantity of urine when the patient is at rest and taking adequate diet is a positive indication for gastro-enterostomy providing the other symptoms of pyloric obstruction are present, quotes a case of **gastric tetany** reported by Morgagni. He then adds to the 6 cases he has already described 2 additional ones. The first was that of a woman, 56 years of age, who had had several typical attacks of gall-stone disease, one of which was associated with jaundice and fever. During this attack the patient vomited 2 gall-stones, one of which was as large as the terminal joint of the little finger. The patient improved, then grew worse again, vomited constantly, the vomitus being mixed with bile, and when the stomach was washed considerable quantities of fluid were always found retained in it. The daily quantity of urine was small; the stomach contents gave a definite acid reaction. A diagnosis was made of obstruction at the exit of the stomach with occasionally spastic contraction of the pylorus. The patient subsequently developed typical symmetrical spasms in the arms, legs, abdomen and face. Chvostek's and Trousseau's symptoms were present. The patient was completely cured by gastro-enterostomy. The other patient, a man of 34, had been under treatment for 12 years with symptoms of gastric dilatation and obstruction of the pylorus. From time to time there was spasm of the pylorus and hypersecretion. Gastro-enterostomy was repeatedly refused. The patient had already had one attack of tonic cramps in all the limbs 2½ years previously. When examined all the characteristic symptoms of the latent stage of tetany were present, and finally a distinct attack occurred. Gastro-enterostomy was performed, but the patient died a few days later of cardiac failure due to fatty degeneration of the heart muscle. The clinical picture of this condition varies considerably. The cramps may be limited to the muscles of the extremities, or involve all those of the body. They are usually symmetrical; there is some reason to suppose that voluntary innervation has some influence upon its development. The condition is certainly not due to a reflex from the gastro-intestinal tract. There is as yet no satisfactory proof that it is an auto-intoxication. In all cases apparently there is stenosis of the pylorus followed by hypersecretion, and, as a result, profuse vomiting. There is some evidence that there is inspissation of the blood. The pulse becomes smaller and weaker, and it is possible that the blood pressure is diminished. When the tonic cramps occur, the patient must be given nothing by the mouth, and particularly no alcohol. As much liquid as possible can be introduced into the blood, either hypodermically or through the rectum. Later, when the stomach becomes tolerant, smaller quantities of Vichy water may be given from time to time. Treatment is operative. Of Fleiner's 8 patients, 6 were operated upon, 3 dying and 3 recovering. Two were not operated upon, one died and the other recovered spontaneously. The mortality, therefore, is about 50%. It would probably be greatly diminished if operation were done promptly. [J. S.]

2.—Penzoldt describes 3 cases of contracted right lobe of the liver. All were women, aged 31, 35 and 50 years; all complained of greater or less discomfort when stooping during work. All presented the common symptom of a groove in the upper portion of the abdomen and below it a tumor-like mass of the consistency of the liver. This tumor-like mass was quite movable. The treatment consists in careful pressing and perhaps an abdominal support. [J. S.]

3.—Wenzel believes that whenever we are obliged to open the intestinal lumen it is practically impossible to speak of asepsis in the absolute sense. **Operations upon the rectum** on account of the inaccessibility of the parts are usually bloody. Efforts have been made to overcome these defects in operations upon carcinoma of the rectum, by performing them in 2 or 3 stages. The hemorrhage may be to a large extent controlled by preliminary ligation of the hemorrhoidal arteries. If this is done, practically only oozing occurs. Asepsis can be partially attained by performing an amputation of the rectum instead of a resection. The disadvantages of the removal of the sphincter is more theoretical than real, as in the majority of cases, when the sensitive surface of the rectum is removed, the reflex action is lost. It is important to remove the fascia recti propria, in order to diminish as much as possible the likelihood of recurrence. The important details of the operation are as follows: The patient is prepared for 8 or 10 days; the intestinal tract thoroughly cleared and operation performed under morphine or ether narcosis. A catheter is introduced into the bladder and is allowed to remain several days after the operation. The anal opening is then closed with silverwire sutures, the patient is placed on the left side with the left leg stretched and the right leg flexed at the knee and hip, the parts again thoroughly cleansed and then the operation performed in 5 parts as follows: (1) Extirpation of the os coccyx and separation of the presacral attachment of the rectum. (2) The mobilization of the amputated part of the rectum and the opening of the peritoneum. (3) Separation of the anal portion with ligation of the inferior hemorrhoidal arteries. (4) Ligation of the middle and superhemorrhoidal artery and separation as far as the sigmoid flexure. (5) Extirpation of the rectum and the formation of a gluteal anus. Each of these is described in detail. [J. S.]

4.—Witzel describes the advantages of **resection of the rectum** as compared with those of gluteal proctostomosis. With resection a functionating anus is rarely obtained, especially in men. On the other hand, not infrequently the gluteal anus functionates fairly well. Altogether he has operated upon 17 patients by this method, none of whom has died as a result of the operation, either on account of hemorrhage or sepsis. He believes that, when the carcinoma is small, an extensive operation should be performed; when it is large, as slight an operation as possible is advised, that is, merely palliative interference. If the tumor has extended beyond the fasica propria recti, permanent results cannot be expected. Cases that are not suitable for operation are those in which the sacrum has been invaded or in which there are adhesions to the prostate and bladder. He does not believe in resection of a part of the bladder when this organ is involved. Evidence of metastasis to the lymph-glands in the mesorectum is an indication against a radical operation. Not infrequently cases apparently suitable for radical measures will, during the operation, be found to be more complicated than was supposed. By Witzel's method, however, the operation may be interrupted at any stage without injury to the patient. He mentions 3 patients in whom this occurred; one, a man of 30, with tumor invading the promontory of the sacrum, another in whom the cancer was found invading the lower portion of the sigmoid flexure, and a third, a man of 69, with fatty degeneration of the heart, in whom unexpected operative difficulties developed. It was necessary to do a laparotomy before the rectum could be finally amputated. The patient died later as a result of increase of the cardiac symptoms. Witzel believes that, in cases in which it is especially important that no mistakes should be made, a preliminary exploratory laparotomy should be performed. In those cases in which a radical operation cannot be performed, the symptomatic treatment should be employed until the signs of stricture develop, when an artificial anus can be made in a healthy portion of the intestine. [J. S.]

5.—Holst reports the following case: A woman, 37 years of age, in the course of 10 years had 6 children. In the sixth month of the seventh pregnancy she suddenly felt severe pain and fainted. She was carried to the hospital and presented the symptoms of acute anemia. On the left side of the uterus a resistance about the size of a fist could be felt. Laparotomy was performed, a large quantity of clotted blood found in the peritoneal cavity, and a small fetus discovered in the midst of the clots, united by the cord to the placenta which was situated in the left wall of the fundus. The left adnexæ were resected, the cavity in the wall of the uterus obliterated, and the patient made a satisfactory recovery. Later she reappeared in the seventh month of pregnancy, and complained of pain in the region between the umbilicus and the symphysis. On this occasion it was observed that the examination through the abdominal wall was remarkably easy, and it was possible even to feel the toes of the child. This led to the suspicion of an abdominal pregnancy, and, therefore, an exploratory laparotomy was performed which showed a normal uterus with the exception that the walls were rather thin. An adhesion between the omentum and the uterus was separated, the patient making a satisfactory recovery and returning to her house. At the normal time the child was born without complication. He gives the principal symptoms of **interstitial pregnancy as follows:** (1) The round ligament of the side in which the pregnancy occurs must arise from the lateral half of the sac, and not between the sac and the uterus. (2) The uterus must have a well-rounded fundus. (3) The nonpregnant side of the uterus must incline toward the pregnant side. (4) Both ovaries must be free. (5) The uterine cavity must be free. (6) Abdominal pregnancy must be excluded. Most of these symptoms were present in his own case. Altogether 22 cases of interstitial pregnancy have been published. Operations have been performed upon 12 of these patients, and 9 have been saved. [J. S.]

6.—Thomas reports the case of a woman, 31 years of age, who had suffered from pain in the lower portion of the abdomen for many years. Laparotomy had been previously performed and an inoperable cyst found. She had had one miscarriage and 4 normal children. The tumor was found in the left lower portion of the abdomen, and there was evidence of pregnancy. Laparotomy was performed, the tumor removed with difficulty and found to be a unilocular cystoma. The patient aborted 2 days later. She was profoundly collapsed, but gradually recovered and was discharged cured. The lessons to be learned from this case are: (1) That there were no strict indications for the operation. (2) That, until the operation was performed, there was not the least sign of threatening abortion. (3) That the patient had had 4 normal children while the tumor was present, all of whom were healthy and well. (4) That the abortion occurred 2 days after the operation. (5) That the operation had been exceedingly difficult. (6) That, as a result of the abortion, the patient was in a state of the utmost danger. **Ovariotomy during pregnancy is not** a harmless measure. [J. S.]

7.—Hammer has tested a number of cultures of bacteria with corrosive sublimate solution, various mercurial derivatives and with carbolic acid solution and various phenol derivatives. He found that the sublimate is vastly more efficient than sublimin or oxycanate of mercury. Carbolic acid has a little less efficiency than cresol. He believes that both are probably antiseptic for bacteria. [J. S.]

8.—Strohmayer calls attention to the following points of similarity between **migraine and epilepsy.** Both appear to have as their basis a persistent change in the brain. Both are characterized by attacks that have a tendency to periodicity. Both have prodromata or auræ which are somewhat similar: In epilepsy the motor region of the brain is more affected and in migraine the sensory region. Both terminate in a state of exhaustion, and with the post-epileptic hemiplegia we may compare the migraine ophthalmoplegique. Cases of patients have been reported in whom states of dullness have occurred as equivalent for the migraine attacks, similar to those that occur as equivalent in epilepsy. Sometimes epilepsy has ceased and migraine has taken its place, although prolonged observation may suggest that this substitution did not actually occur. It is important that migraine never leads to mental deterioration. Both have as their basis a neuropathic predisposition with degenerative inheritance. Strohmayer has carefully studied the material in Binswanger's clinic and found that migraine and epilepsy often co-exist. There were, however, no cases in which it appeared that one disease had passed into another. He reports a case of a man of 36, who had migraine between the ages of 12 and 18. At the age of 18 years he began to have nocturnal epileptic attacks, which lasted for about 3 years. At the age of 34, after severe exertion, he had an attack of migraine. At the age of 36 he began to have light attacks of migraine quite frequently. Another case was that of a man of 49 who had migraine from the age of 20. The attacks occurred every 4 to 6 weeks. At the age of 42 he had an attack of epilepsy. The migraine ceased during this epileptic attack, but returned 7 years later and was associated with a state of confusion lasting 3 minutes. These attacks recurred quite frequently. The third patient, a boy of 15 years, had had convulsions when one year old. At the age of 11 he had epileptic attacks. These were cured by a diet and bromine salts, and then he began to have typical attacks of migraine. The author reports several other cases of a similar nature and discusses the diagnosis, particularly in reference to the true nature of some of the supposed attacks of migraine. [J. S.]

9.—Oberndorfer reports the following **anomalies in the inferior vena cava:** (1) Persistence of the left inferior cardinal vein with displacement of the left kidney. The kidney was displaced downward; the vein came off at the usual situation and, after sending a small branch to the adrenal body, continued down as a large trunk to the upper end of the kidney which it entered. Two other branches from the inferior vena cava also entered the substance of the kidney. (2) A case of bifurcation of the inferior vena cava. The 2 branches represented the posterior cardinal veins. [J. S.]

10.—Doerfler reports the case of a man, 62 years of age, who had suffered for years from gastric trouble and suddenly developed pain and fever. He had an attack resembling perityphlitis, which gradually subsided. From the beginning of the attack the urine showed a slight reaction of albumin. Examination of the prostate showed it somewhat enlarged, and 2 nodules higher up. Whenever the patient attempted to get up, he had fever and collapsed. Sometimes there were symptoms of biliary colic, sometimes not. The diagnosis remained very obscure. There might have been an abscess in the neighborhood of the kidney, malignant tumor of the prostate with metatases to the gall-bladder, empyema of the gall-blader, or an intermittent hydronephrosis. Laparotomy was performed, the gall-bladder was found normal, and there was a chronic perityphlitis. The right kidney was somewhat lower than normal. It was fixed by a lumbar incision. The patient gradually grew worse and died 4 days after operation. At the autopsy **a tumor**, the size of a fist, was found arising from **the prostate gland**, involving the right ureter. This was found to be **a medullary carcinoma** which had already given metastasis to the mucous membrane of the ureter. The symptoms were probably due to an intermittent pyelitis. [J. S.]

11.—Levy reports the following case: A boy, 4 years of age, complained of pain in the abdomen and difficulty in urination. Two days later 2 liters of urine were removed by catheter. It was necessary to repeat catheterization several times, and finally he was taken to the hospital. Catheterization was then impossible, and incision into the distended bladder was practised. Several days later a more extensive operation was performed, and a myxosarcoma was found just to the left of the urethra, in the bladder. This rapidly increased in size, ruptured through the peritoneum and extended into the pelvis. The child died with the symptoms of cachexia. Microscopical examination confirmed the diagnosis. A comparatively large number of **prostatic tumors occur in children**. These cases are characterized by a very rapid course. The earliest symptom is usually difficulty in micturition, although occasionally this is not present. The diagnosis is usually not difficult. [J. S.]

12.—Hermann reports a case of **traumatic tetanus** in a boy, 10 years of age, who fell from a height and ran a piece of wood into his foot. On the fifth or sixth day the patient began to have difficulty in swallowing, which persisted in spite of operation and the injection of tetanus antitoxin. The patient devloped general tetanic spasms, but finally gradually recovered. The spasms lasted for about 7 weeks. There were 3 features of the case: The severity of the symptoms in the left leg which was the one injured; the tolerance to narcotics—chloral, bromine and morphine—and the uselessness of the tetanus antitoxin. [J. S.]

RUSSKY VRATCH.

February 1, 1903. (Vol. 11, No. 5.)

1. On the Teaching of Anatomy. V. N. TONKOFF.
2. The Psychological Conditions of Development of Hypnosis. PH. E. RIBAKOFF.
3. On the Question of Affection of the Eyes Caused by the Larvæ of Wohlfahrt's Fly. A. V. LOTIN.
4. The Medical Report of the St. Petersburg Maternity Hospitals for 1901. E. L. PUSCHKINA.

2.—Ribakoff discusses **the nature of the hypnotic state**, presenting the following conclusions: (1) Hypnotic sleep is a peculiar psychical condition characterized by the inhibition of the will and by heightened susceptibility to suggestion. (2) For the development of the hypnotic state mere influences of a physical nature (passes, fixation, etc.) are insufficient. (3) Simple fatigue of attention does not lead to the development of hypnosis. (4) Concentration of thought and attention on one subject does not by itself bring about hypnosis. (5) A corresponding emotion is a necessary and constant factor in the development of hypnosis. (6) This emotion possesses an entirely peculiar character and belongs to the group of phenomena of a complex type; it comes nearer in its nature to the emotion by outside influence. (7) The existence of such an emotion is proved (a) by the change in the pulse and respiration during hypnosis, (b) by the subjective sensations of the hypnotized and (c) by the manifestation of fatigue which follows hypnosis. (8) All other conditions aid in the development of hypnosis only in so far as they help to bring about the corresponding emotion. (9) The existence of the thought of hypnosis is not essential for the development of the hypnotic state (for instance, it is absent in natural hypnosis). (10) The thought of sleep during artificial hypnosis plays the rôle of a signal for the development of the emotional condition. (11) The thought of sleep, accepted by the person hypnotized as something real, casts a peculiar impression on the external picture of artificial hypnosis. (12) The external surroundings, the methods of inducing hypnosis and the personality of the hypnotizer play the rôle only of conditions which facilitate the appearing of the hypnotic emotion. [A. R.]

3.—Lotin reports a case of **acute conjunctivitis caused by the larvæ of the fly first described by Wohlfahrt** (Wohlfahrtia magnifica Schineri). The larvæ found lodgement on and became imbedded in the conjunctiva of the inner portion of the right eye, setting up the symptoms of irritation and appearing as minute gray points. The removal of the parasite followed by an antiseptic wash brought about complete relief. A full description of the larvæ is given, and reference is made to the literature on the subject. [A. R.]

4.—Will be abstracted when concluded.

THE JOURNAL OF TUBERCULOSIS.

April, 1903. (Vol. V., No. 2.)

1. Pulmonary Tuberculosis. AUFRECHT.
2. The Mode of Infection in Tuberculosis and Measures for Its Prevention. F. M. POTTENGER.
3. Origin and Growth of Sanatoria for Tuberculosis in Massachusetts. V. Y. BOWDITCH.
4. Auxiliaries in the Treatment of Consumptives. OTTO JUETTNER.
5. Report of Three Hundred and Nine Cases of Pulmonary Tuberculosis, With Remarks on Classification and Treatment Employed. KARL VON RUCK.
6. A Contribution to the Symptomatology and Pathogenesis of Caseous Pneumonia. TH. G. JANOWSKY and W. K. WYSSOKOWICZ.
7. On the Measure of Exercise in the Treatment of Pulmonary Tuberculosis. PENZOLDT.
8. Tuberculous Growths of the Larynx. LUDWIG NEUFELDT.

1.—In this article Aufrecht deals with the pathogenesis of tuberculosis. He states that he disagrees with the theory that the tubercle bacillus is inhaled and reaches the smaller bronchi or alveoli, there to produce its effect on histologically normal tissue. He has not seen a single case in which such a theory could be entertained. He points out that statistics showing a high mortality among nurses in charge of phthisical patients are often unsound, because the nurses were not subjected to a careful physical examination at the beginning of their work. At a Magdeburg hospital containing 263 nurses who had been in attendance on phthisical patients for from 3 months to 27 years, not one had tuberculosis. He finds that in the formation of the cheesy tubercle the first change is a degeneration and thickening of the walls of a small end-artery, due to the action of the tubercle bacillus, with consequent thrombosis and infarct formation. This is followed by caseous degeneration of the portion deprived of blood and inflammatory tissue formation at its periphery. Cheesy tubercles in the spleen and kidney show exactly the same histological structure, being, of course, independent of air passages. He says that the gray miliary tubercle never passes into the cheesy tubercle but is formed along an afferent vessel which is not an end-artery and the occlusion of which need not lead to necrosis. Diffuse tuberculous pneumonia sets in with the formation of caseous foci between which the pneumonic infiltration occurs subsequently. He gives the route of the bacillus from the outside world to the arteries as, first into the tonsils, then to the cervical, bronchial and mediastinal glands and then into the arteries. He finds by microscopical sections that bacilli can pass into a normal vessel from an adherent tuberculous gland. He calls attention to the numerous cases of primary glandular tuberculosis which are unaccompanied with lung involvement. The illustrations for this article will be published in the next number. [R. P. E.]

2.—Pottenger sketches the conditions under which the tubercle bacillus thrives, and says that without lowered resistance the human being would be infected only very rarely. He regards the question of the intercommunicability of human and bovine tuberculosis as still unsettled, and thinks that stringent protective measures against tuberculous cattle should still be insisted on. He thinks that the normal anatomical conditions of the lung would make the direct inhalation of the bacilli into the air-cells or the finer bronchi almost impossible, and concludes that the lymphatics are the chief ports of entry, whether the invasion comes from the upper air passages or the intestinal tract. They are either deposited in lymphglands or emptied into the pulmonary circulation by the thoracic duct. He advises registration of phthisical patients, disinfection of houses occupied by them, laws against promiscuous spitting and antiseptic cuspidors in public places. [R. P. E.]

3.—Bowditch outlines the histories of the Sharon, Rutland and East Bridgewater Sanatoria. The treatment at them consists in the following measures: Fresh air practically all the time, three regular meals a day and a lunch of milk, with or without an egg, between meals, regulation of exercise and as little medicine as possible. Creosote is sometimes given, but never in large doses. Alcohol is forbidden, except in very rare cases. At Sharon the percentage of "arrested" cases has increased from 33% in 1891 to 54% in 1902, because of more careful selection of cases and better treatment. He thinks that for properly selected cases the West offers more chance of cure than the East. [R. P. E.]

4.—Juettner advises slow, deep breathing, massage of the chest muscles, the application of high-frequncy currents and hydrotherapy. The technique of thoracic massage is given in detail. He has very little confidence in the direct inhalation of oxygen or ozone in chronic tuberculosis, except as a breathing exercise and for a psychical effect. By the application of high-frequency currents dyspnea is relieved, there is a feeling of buoyancy and ease, the skin becomes hyperemic, and the smell of ozone is perceptible in the exhaled breath. The effect lasts for hours. Concentrated chemical light-rays (Finsen), applied locally, have given good results in two cases of tuberculosis of the apex under his care. The light is applied for one hour daily. He thinks Röntgen rays are practically valueless in lung consumption. [R. P. E.]

5.—These cases varied in degree from comparatively mild ones to those in which recovery was considered doubtful. Von Ruck calls attention to the fact that fibroid and other changes will persist after cure, which makes a diagnosis impossible without the use of the tuberculin test. Negative results with tuberculin do not ensure against relapses. Of the 309 cases considered, 162 apparently recovered, 69 were arrested, 49 improved, and 29 became worse or died; 298 had bacilli in the sputum on admission or later, which disappeared in 177 cases. Other complications were: Night-sweats, on admission 132, on discharge 11. Tuberculosis of the larynx, 182 cases by inspection, 84 others by local reaction to tuberculin. All but 32 were cured or improved. Tuberculosis of cervical, axillary or inguinal glands 22. Tuberculosis of the testicle 3. Diazo reaction in 47; persisted in 16. Pneumonia occurred in 14, hemorrhage in 13, meningitis in one. Tubercular diarrhea 22, persisted in 4. Diabetes in 3, of whom 2 died; the other lost his sugar and improved. In treatment dietetic and hygienic measures are most important, but unnecessary exposure in inclement weather is not advised. He uses some form of the culture products of the tubercle bacillus in almost all cases and with uniformly better results. In 1339 cases he has not observed any unfavorable effect in a single instance. Of these 1339 cases 42.6% recovered, 40.3% improved. Of 816 cases treated without culture products 12.1% recovered and 31% improved. For marked tuberculosis of the upper air-passages and ear he gives thorough cleansing and lactic acid, menthol, orthoform, etc., locally. In intestinal tuberculosis iodomuth or xeroform with bismuth subnitrate; for fever, absolute rest; for pneumonia, creosotal and flaxseed poultices. [R. P. E.]

6.—A case is described in detail which gave a typical picture of lobar pneumonia, including the presence of Fränkel's bacillus, rusty sputum, bronchial breathing, etc. The only signs against it were marked cyanosis and a duration of 3 weeks before admission. The tubercle bacillus was never found in the sputum. The autopsy revealed a pulmonary tuberculosis followed by a cheesy localized pneumonia. It was an undoubted case of mixed infection of tubercle bacilli and Fränkel's diplococci. [R. P. E.]

7.—See **Philadelphia Medical Journal**, February 28, 1903, page 379.

8.—See **Philadelphia Medical Journal**, February 14, 1903, page 282.

AMERICAN JOURNAL OF OBSTETRICS.

March, 1903.

1. Report of Three Cases of Rupture of the Uterus During Labor; and a Consideration of the Treatment Based on Ten Cases. JOSEPH B. De LEE.
2. The Treatment of Placenta Prævia. CHAUNCEY D. PALMER.
3. The Relation Between Uterine and Gastric Diseases. TUSZKAI ODON.
4. Puerperal Eclampsia; With Report of Nineteen Cases. H. G. PARTRIDGE.
5. Carcinoma of the Large Intestines, With Special Reference to von Mikulicz's Method of Resection. M. STAMM.
6. A Review of Some of the Older Writings on Maternal Nursing. SAMUEL McC. HAMILL.
7. Celiotomy During Pregnancy. J. H. CARSTENS.

1.—De Lee states that **rupture of the uterus during labor** is not as rare an accident as is generally believed. He has seen 9 cases of rupture of the uterus *sub partu*, and one other occurred in his service during his absence. He reports 3 cases in full and gives a summary of the remaining 7. The accident occurs almost always at the patient's home and is a complication that should be treated where it occurs. [W. A. N. D.]

2.—Palmer regards the management of **placenta prævia** as a serious business. There is no fixed treatment applicable to all cases of placenta prævia. It is true that there is no safety to the mother until delivery has been effected by natural or artificial means. The chief dangers to the mother are loss of blood and septic infection. If the loss of blood is slight, nothing more need be done than to irrigate the vaginal canal with a copious quantity of hot sterilized water. If labor pains are commencing, the firm application of a clean, abdominal bandage will stimulate further these contractions and aid to press the presenting portion of the fetus more thoroughly against the dilating cervical canal and lower segment of the uterine wall. If the hemorrhage be constant and excessive, a vaginal tamponade is required. An early rupture of the membranes helps the descent of the child and stimulates the uterus to an increasing activity. He does not believe in the use of version if it can be avoided. [W. A. N. D.]

3.—Odön, in a scientific article, discusses the **relation existing between uterine and gastric diseases.** His attention has been directed to the close anatomical connection between the nerve-paths of the uterus and the stomach. He believes that a genital examination should be made of every woman complaining of digestive disturbances, because a connection between the two affections is very common. In these patients the gastric troubles commence regularly with the sensation of pressure after meals; later there is continuous pain, usually cardialgia. Soon there is gradually increasing anorexia; sometimes there is persistent backache; tasteless or often sour eructations, and nausea and vomiting are not infrequently associated. He describes the anatomy of the nerve supply of the 2 organs in full. Another mode of reciprocal action of these organs must be sought in changes of the common statical relations of both organs. Dislocations of the stomach cause uterine displacement through reciprocal action of the statical mechanical forces; whereas primary displacements of the uterus produce secondary gastroneurosis or actual gastric disease, the reciprocal action in these cases being brought about through nerve reflexes. The blood-path plays a rôle of only tertiary rank in regard to this reciprocal acaction. [W. A. N. D.]

4.—Partridge states that **puerperal eclampsia** has a mortality of from 10% to 35%, that it occurs about once in every hundred labors, and must be considered as one of the most terrifying complications of labor. He gives a review of the theories advanced in explanation of the eti ology of the disease. The theory which is most generally accepted is that the disease is due to the action of the toxins elaborated in the organism by metabolism, and either produced in excess and not sufficiently destroyed, or retained through deficient action of the kidneys, skin and other emunctories. The marked changes in the liver in these cases would tend to show that it is with this organ that the greatest fault lies. It shows more pronounced changes than any of the other organs. The nature of the toxins is not known. He reviews the treatment of the condition and reports 19 cases which have occurred in 694 labors. [W. A. N. D.]

5.—According to Stamm, **malignant growths** are more frequently found in the larger than in the smaller **bowel**, and also more frequently in males than in females. They seem to appear generally between the ages of 40 and 60 years, but have been observed in any age, even in early childhood. The cylindro-epithelial forms of cancer are the type most generally found, whereas the medullary carcinoma is quite rare, and more so even the gelatinous form. Metastasis sets in rather late in cancer of the bowel. Medullary cancer has more a predilection for the regional lymphatic glands, and the scirrhus more for the liver. The symptoms develop slowly, and obstinate constipation appears to be the most prominent one. Bloody discharges are quite an important symptom. The diagnosis of such cancerous tumors is not easy as a rule. As regards treatment, radical removal of the malignant growth is essential. Stamm reports a case of this disease treated by von Mikulicz's method of resection. This method gives thus far 9 permanent cures out of 24 cases, of 37.5%. [W. A. N. D.]

6.—Hamill gives a review of some of the **older writings on maternal nursing**, which is both interesting and amusing. [W. A. N. D.]

7.—Carstens reports a series of **abdominal sections performed upon pregnant women.** These cases include operations for appendicitis, myomectomies for fibroids, the correction of hernia, ovariotomy, abdominal and vaginal hysterectomy and phantom tumor. He states that all acute diseases requiring prompt operation can be operated upon just as well as if no pregnancy existed. [W. A. N. D.]

DEUTSCHE ZEITSCHRIFT FUER NERVENHEILKUNDE.

Band 22. Hefte 5-6.

20. The Symptomatology and Diagnosis of Tumors of the Frontal Lobe. MUELLER.
21. The Influence of Sensory and Motor Disturbances Upon the Ability to Localize. SCHITTENHELM.
22. Contribution to the Knowledge of Hereditary Diseases. JENDRASSIK.
23. Book Reviews.

20.—Müller contributes a long and valuable article upon **the symptomatology of tumors of the frontal lobe,** based upon a study of 164 cases which he has collected from the literature. The paper is itself really a classified abstract of this material, and it is impossible to reproduce all the details. It will be sufficient to indicate the headings under which this classification is made: **1. General structure of the body. 2. Nutrition. 3. The skin and temperature. 4. The changes in the skull. 5. Epilepsy and hysteria. 6. Focal epilepsy,** of which he collects 16 cases and adds others in which contractures were present. **7. Sensory epilepsy;** automatic movements of the extremities, and ambulatory phenomena. **8. Frontal ataxia. 9. Paralyses of the extremities of the opposite side. 10. Paroxysms, stupor or sleep. 11. Contractures of the limbs and tremors of the extremities. 12. Headache. 10. Aphasia, and marked variations in the frequency of the pulse. 14. Vomiting. 15. The changes in the eye and disturbance of vision. 16. Disturbance of the cranial nerves. 17. The alterations of the reflexes. 18. The changes in the spinal cord. 19. The disturbances of the bladder, rectum, the activity of the intestines and of the sexual functions. 20. Alterations in the urine. 21. The course of the disease, peculiarities of the initial symptoms, and the variability of the progress of the clinical symptoms of frontal tumors.** The paper cannot strictly be said to be finished, as several of these headings—notably that on frontal ataxia, and that upon the course of the symptoms—will be considered later. [J. S.]

21.—Schittenhelm has examined a number of cases with reference to the **disturbance of the sense of localization,** in order to determine, if possible, whether it depends more upon the integrity of the motor or of the sensory functions. Altogether his material included 17 cases of various conditions, some purely motor, some sensory and some various combinations of both. He found that practically no disturbance occurred in those cases in which only the motor functions were affected, particularly in the early stages of the disturbance. On the other hand, when there were sensory alterations, the sense of localization was more or less impaired up to complete abolition. He, therefore, concludes that the sense of localization depends exclusively upon the sensory nerves. [J. S.]

22.—Jendrassik contributes a valuable article upon **hereditary diseases,** reporting 15 observations in various families, including altogether 26 cases. These embraced various forms of the condition. His general conclusions are that heredity is a specific cause of disease, producing clinical pictures that are different from those produced by other causes. It may occur in families or sporadically, and is characterized by the fact that the syndromes do not develop in typical, sharply defined pictures, but present the most heterogeneous symptoms in infinite combinations. Not only the nervous system, but also the muscles, connective tissue, the bones and even the internal organs may be involved. The symptoms may vary considerably in different members of the same family, but in general it may be said that peculiar unusual combinations of symptoms, with marked, slowly progressive development, correspond very probably to hereditary degeneration. Consanguinity of the parents increases the tendency to this disease. J. S.]

ZENTRALBLATT FUER INNERE MEDICIN.

February 14, 1903.

1. On the Diagnosis of Hour-Glass Stomach. G. ROSENFELD.
2. Concerning Milky Ascites. T. CHRISTEN.

1.—Rosenfeld reviews the various methods that have been suggested for the diagnosis of hour-glass stomach, and reports a case in which he used the method previously described by him, which consists in the introduction of a stomach-tube containing in its interior some substance impassable to the X-rays. In this instance the substance used was a metal spiral; and he found that the stomach could be observed with the fluoroscope down to a certain point, **that below this there was a bright area, and that still further down there was such a collection of fluid as may usually be seen at the lower border of the stomach. The tube could not be passed into the gastric contents.** The author believed that the conditions indicated that an hour-glass stomach was present. The patient also complained of **gurgling noises, associated with colicky pains,** which are likewise an indication of hour-glass stomach. The width of the connection between the 2 parts of the stomach could be surmised from the fact that a soft rubber stomach-tube could be passed into the stomach contents, a portion of which could be obtained for testing. The patient died of tuberculosis, and the post mortem examination showed that the diagnosis had been correct. [D. L. E.]

2.—Mosse has stated that he believes that the milky appearance of certain ascitic fluids is due to lecithin, basing this opinion upon the fact that he found a large amount of lecithin in the milky fluid and discovered that certain quantities of lecithin were sufficient to make water appear milky. Christen believes, however, that these **facts do not indicate that lecithin causes the milky appearance of the fluid;** for an ascitic fluid may contain substances that make lecithin more soluble in this fluid than in water. He also criticises Mosse's figures, and thinks that they indicate that the fluid contained only 0.02 grams of lecithin in a liter of fluid, instead of 0.2 grams. Christen has examined 3 ascitic fluids, one of which was milky and contained 0.077 grams of lecithin per liter. In a slightly cloudy, but not milky, fluid, he found 0.316 grams per liter. In a clear ascitic fluid, he found no lecithin. He believes that these facts **positively demonstrate that lecithin does not, of itself, produce the milky apearance of the fluid.** [D. L. E.]

Society Reports.

FIFTY-FOURTH ANNUAL MEETING OF THE AMERICAN MEDICAL ASSOCIATION,

At New Orleans, May 5, 6, 7 and 8, 1903.

(Continued from page 823.)

SECTION ON MATERIA MEDICA, PHARMACY AND THERAPEUTICS.

TUESDAY AFTERNOON, MAY 5.

In his address, the chairman, Dr. S. Solis-Cohen, of Philadelphia, paid a high tribute to **therapeutics**, reviewing its history from an early period, mentioning what a hard fight there had been to bring it once more to the front. Now, however, both surgery and pathology rest upon it as a foundation. He dwelt on the great aid therapeutics had been to the profession in helping suffering humanity. From now on therapeutics is to lead, not to follow, as has been the case heretofore.

Dr. Frankford Woodbury, of Philadelphia, made a report for the committee on dosage of liquid medicine. Dr. W. J. Robinson, of New York, made a report for the committee on nerve nostrums and drug addictions, both of which reports were accepted. The committees were discharged.

Dr. M. V. Tyrode, of Boston, read a paper entitled, **the reations between the pharmacological actions of drugs and their therapeutic indications.** The use of drugs has been based on past experience. He gave the history of materia medica, dwelling on how different drugs were considered and classed from their taste or smell. German alchemists first introduced metallic compounds, having treated syphilis with mercury with favorable results. Quinine and ipecac were imported from India and Brazil and were soon used extensively. He dwelt on the great number of remedies of varied action, which had been introduced into materia medica, following with the history of homeopathy in its relationship to allopathy. He considered the practice of obtaining information from observation a good but dangerous one. The crude preparation of drugs causes varying results. Chemistry, when placed on a solid foundation, made great strides, along with experimental pharmacy. He then reviewed Pasteur's experiments. The direct action of drugs on the cause of disease is very limited. They are strong in that they help a depleted function, and depress functions which are in excess. He stated how very apparent was the degeneration of drugs and mentioned examples. Dr. Butler, of Alma., Mich., was particularly interested in the reference to drug degeneration.

WEDNESDAY MORNING, MAY 6.

Dr. L. H. Branson, of Iowa City, Iowa, opened the session with a paper on **mercury.** She gave the history of several cases in which excessive doses of mercury had been used. Small doses now predominate. The different preparations of mercury were then reviewed. In each case the dosage depends upon the age, condition and ailment. She mentioned the smallest dose which has caused death and the largest dose taken without ill effect. The hypodermic method of administering mercury she considered dangerous. The treatment of mercurial poisoning was then referred to. Mercury is valuable as a purge, antiseptic, germicide and disinfectant. She spoke of the various forms which were valuable in certain diseases. Toxic symptoms may be caused by the external as well as the internal use of mercury, on account of its cumulative effect, after being stored up in the system. She mentioned the different tests for determining its presence in the system. Its incompatibility is remarkable. She spoke highly of medical therapeutics and graded physicians by the drugs they used. Dr. Robinson said that he had found the formation of the teeth markedly affected by mercury. Dr. Solis-Cohen believed in one dose that would do the work. He did not believe in maximum and minimum doses. Dr. Tompkins very fully discussed the idiosyncrasy of mercury exhibited by certain persons. Dr. Osborne believed that alteratives were the drugs that modify secretions. He compared the symptoms of tertiary syphilis to symptoms connected with atrophy of the thyroid gland. This gland was undoubtedly stimulated by mercury. The dose should depend on the effect to be produced.

Dr. A. R. Elliott, of Chicago, read a paper on **the limitation of the antidiabetic diet,** giving the history of this treatment. No drug is as yet known which will cure diabetes. Too much attention has been paid heretofore to the sugar, and too little attention to the patient. Cases may be severe or mild. The diet will greatly control the sugar excreted. Treatment should endeavor to add to the body energy as well as to keep up the weight. Carbohydrates must be thrown out and something else substituted. Proteids, in connection with oils and fats, do very well. It is much safer and more advisable to modify a case by mixed diet, as patients are never able to stand strict dietetic treatment for more than a few months at a time. He considers that too little attention is paid to the subject by medical colleges. Dr. Butler agreed with the author, especially upon the lack of knowledge on the subject. Dr. A. L. Croftan, of Chicago, discussed the paper thoroughly, relating instances and personal experiences. Dr. Osborne believed the dietetic treatment too severe. Diabetes is very often a condition and not a disease. Care must be taken in reducing both sugar and fat. Dr. H. A. Moody, of Mobile, Ala., had never seen a case develop before puberty, while in elderly persons it was quite common. Dr. Solis-Cohen considers dietetic treatment very important. One case will do well with sugar, while another will not. Dr. R. N. Webster, of Chicago, said that many cases thought to be diabetes were, in his estimation, pancreatitis caused by typhoid fever. Dr. Elliott had never seen a case in the negro. He believed less attention should be paid to the sugar, and more attention to the subject in general, by teachers in the medical colleges

WEDNESDAY AFTERNOON, MAY 6.

Dr. T. D. Crothers, of Hartford, Conn., demonstrated **the pathological effects of alcohol.** Instruments of precision have opened a new field for the study of this subject. A most careful examination must be made of the subject on whom the experiments are to be made. All the senses are greatly affected after the administration of alcohol. He took up each sense and described the changes which occurred. The effect on the muscular system is most marked, while the brain, lungs and heart are also affected. The physiological and pathological conditions are easily recognized.

Dr. O. T. Osborne, of New Haven, Conn., discussed **the legitimate therapeutic uses of alcohol.** After describing the dose of alcohol and the symptoms produced, he said that its action does not warrant so free a use of the drug. He gave reasons for its local application, such as an alcohol vapor bath. He then discussed its action on the heart. Proper doses have a beneficial effect, while overdoses are dangerous. Nitroglycerine has given just as good results as alcohol in the asthenic fevers. The value of alcohol as an hypnotic and stimulant was dwelt on. Dr. J. H. Musser, of Philadelphia, considered the drug dangerous, and was gradually eliminating it. Its best use is in streptococcus infection and in typhoid fever. It is better used as a food than as a stimulating agent. Dr. J. A. Storck, of New Orleans, asked about its effect as an antidote in carbolic acid poisoning. Dr. C. S. N. Hallberg, of Chicago, gives sulphates as the chemical antidote for carbolic acid, but considers that alcohol had an effect not obtained by any other remedies. In closing, Dr. Crothers considered that it could not be stated definitely whether alcohol was a tonic or not.

Dr. J. H. Musser, of Philadelphia, read a paper on **the therapeutic value of spinal puncture for cerebral symptoms in typhoid fever.** He gave the symptoms of alcoholic meningitis and reported cases relieved by spinal puncture. He also noted symptoms which the French call meningismus. He had had 4 cases, 3 of the patients recovering. Dr. Osborne asked what he considered the proper time for spinal puncture. Dr. Robinson did not approve of this treatment, agreeing with the Germans that spinal puncture was valuable so far as diagnosis was concerned, but never therapeutically. Dr. Musser said he used the puncture when the symptoms known as meningismus appeared, also when the case demanded leeching.

Dr. J. A. Storck, of New Orleans, followed with a paper on **intestinal antiseptics, their use and limitations.** He discussed the general series of intestinal antiseptics, giving a full history of their use. He compared carbolic acid with creosote; dysentery and enteritis were dwelt on, with the treatment with salicylic acid. Flushing the colon with a tannic acid solution is best. As a germicide, the peroxide series holds an important place. Higher in the intestine the sodium series comes first. With tubercular ulceration, nonabsorbable antiseptics are best. For dysentery he considers quinine with calomel the best antiseptic that can be found. Dr. Butler preferred guaiacol benzoate and had found acetozone very good. Dr. Osborne put salol first. The kidneys must be considered when using an antiseptic, one which is nonirritating and nontoxic being preferred. Dr. B. C. Keister, of Roanoke, Va., has used zinc carbonate with very good results. Dr. Solis-Cohen considered the sulphur group first, and the first of this class was ichthyol. Dr. Robinson compared beechwood creosote, coal-tar creosote and carbolic acid.

THURSDAY MORNING, MAY 7.

Dr. W. S. Hall, of Chicago, opened the session with a paper on **the absorption of iron from the alimentary canal.** He spoke of the quantitative experiments made for iron in the animal kingdom. Proof was given that iron was absorbed from the alimentary canal, together with experiments in the examination of excretions. Full-grown animals have less iron proportionally in their bodies than half-grown ones. The subject was not concluded.

Dr. N. S. Davis, Jr., of Chicago, discussed **exercise as a mode of treatment in heart disease.** He gave the history of systematic exercises, massage, Swedish movements, mountain climbing, resistance exercises, etc. The heart was compared with the voluntary muscles. Muscular effort must be very slight, but it is necessary to use many muscles, thus regulating the amount of blood drawn into the muscles. As the muscles are strengthened, the heart is strengthened. Resistance exercises and massage head the list. He reviewed the affections of the heart, and gave the exercises best adapted to each. The aortic valvular diseases do not respond as readily as do those of the mitral valve. Dr. Solis-Cohen thought that the weakened function should be helped as much as possible and maintained in good condition. Dr. Tompkins considered that anyone with heart trouble should have iron in some form, and that such a person should be warned as to the exercises which he should avoid. Dr. Davis realized that persons with heart trouble should be warned about exercising.

An article on **dry superheated air in therapeutics** was read by Dr. C. E. Skinner, of New Haven, Conn. All agents should be thoroughly understood before being put into use. He reviewed the physiological function of the heart. He then discussed the effect of dry hot air on the pulse and temperature, stating the different changes taking place in the body after the application of heat. The functions of all organs are increased. He then gave a list of the diseases benefited by heat, reporting a case of septicemia cured by this treatment. Dr. Tompkins asked if infection was liable to be spread by this treatment. Dr. Skinner, in closing, said that he had never seen a case of infection. When the infection was spreading, it generally was localized by this treatment. While no glands were involved, the formation of pus was hastened.

THURSDAY AFTERNOON, MAY 7.

Dr. W. B. Hill, of Milwaukee, read a paper on **the limitations and use of aconite and veratrum viride.** He valued aconite as an antipyretic. Both drugs have been used for a long time. For beneficial results it is most necessary to bear in mind that the patient's energy must be stimulated and not taxed by depleting drugs. In former years bloodletting was restored to, but finally gave place to aconite and veratrum viride, which in turn have been supplanted by other temperature reducers. The different indications for the use of both drugs were discussed, with a comparison of the doses causing different effects. He severely criticized practitioners who give these remedies solely for the reduction of temperature. When used for such an action he considered them very dangerous. A cold bath or an ice-pack is far safer and gives better results. Dr. Moody agreed as to the general use of the drugs being a very undesirable method, but thought that in some cases they were extremely valuable. He gave instances in which they had saved the patients. He did not consider the action of veratrum viride and aconite identical. Dr. Weaver, of Asheville, N. C., considered that entirely too little attention was paid to the heart. In all cases we should consider the heart before prescribing drugs which have a definite action upon that organ. Both aconite and veratrum viride, depressors of the heart, were considered dangerous. Their use should be very limited. Dr. Robinson discussed both drugs from a chemical, pharmacological and therapeutical standpoint. Dr. Tompkins said that he had found both drugs very useful, though he knew of cases in which they had done much harm. They could not be classified as identical in action. In closing, Dr. Hill said he did not wish to classify the drugs as identical, but considered that they had much the same action in many cases. He did not wish to discuss all the uses of the drug. He discussed the use of a drug and stated that the successful use of any drug branded it as "good."

Dr. G. F. Butler, of Alma, Mich., read a paper entitled **drugs used in nervous diseases.** Strictly speaking, the term nerve fatigue is a misnomer, not being fatigue but a true nerve poison, and should be treated as such. The common drugs used in affections of the nerves were discussed thoroughly. They were divided into 2 classes, narcotics and stimulants. These remedies have been used on such a wholesale scale that they have come to be very dangerous in the hands of those who do not know their limits. It is necessary for certain elements to undergo biochemical changes before they exert any action in the body. The mineral sedatives were then discussed. Since nerve action is nerve waste, it is necessary to treat it with stimulants and restoratives.

The next paper, on **the mind as the causative and therapeutic factor in medicine,** was read by Dr. B. C. Kiester, of Roanoke, Va. As medicine, the mental factor has become practically obsolete. Certain instances go to show how far this great factor has been overlooked. The so-called mental healing, Christian Science and other similar superstitions would have no basis on which to stand if more attention was paid to the subject by medical schools. Measures should be taken to provide our institutions for teaching a subject of such importance as this. Several observers have reported a number of cases of malignant disease which had developed from mental disorders. Particular attention was paid to the close relationship between mind and body. The general practitioner and all specialists should make a much closer study of the mental condition of their patients. Dr. Butler thought mental therapy very valuable in certain diseases. He spoke of the faith patients place in their physicans, and said that the cases most benefited by this treatment were those having hysteria. Dr. Ballard spoke of the hoodoo belief in the negro. Dr. Solis-Cohen had long considered exophthalmic goiter to be, in many cases, due to fear. He thought that in such cases and in hysteria the mind should be an important therapeutic agent.

SECTION ON OBSTETRICS AND DISEASES OF WOMEN.

TUESDAY AFTERNOON, MAY 5.

After the address by the chairman, Dr. A. P. Dudley, of New York, on **conservative operations**, Dr. H. P. Newman, of Chicago, discussed **appendicitis from the gynecological standpoint**. Appendicitis may be mistaken for salpingitis or ovaritis, as was shown in the case of an anemic girl of 16, with recurring attacks of pain in the lower portion of the abdomen, at the menstrual period, lasting a few days. Upon operation the distal end of the appendix was found attached to the ovary. After removal of the appendix, all symptoms disappeared. The differential diagnosis in these cases is not important, as the operative procedure is the same. General peritonitis with appendicitis is generally fatal; this is not so in salpingitis. In appendicitis there is no history of gonorrheal infection, though there may be dysmenorrhea and irregular menstruation. The appendix should be examined in all abdominal disturbances. In opening the abdomen, examine the appendix macroscopically; the certainty as to whether it is diseased or not will depend on the skill of the operator. Whether the abdomen is opened for uterine or other troubles, the appendix should always be carefully examined. Dr. Michinard, of New Orleans, said that it is most important, from the standpoint of the gynecologist, to determine the difference between chronic right-sided salpingitis and appendicitis. A woman suffering from right-sided pain may have chronic appendicitis, and the appendix may become gangrenous with death resulting. In chronic salpingitis, on the contrary, it is possible for her to go a long time without any trouble. He emphasized the differential diagnosis. Dr. E. S. Lewis, of New Orleans, said that until recently he thought no differential diagnosis could be made, but under chloroform the tubes can easily be palpated from the uterus to their fimbriated extremities, in chronic salpingitis. He reported the case of a young girl with pain for several years, accompanied with intestinal and gastric derangement. Upon examination no enlargement of the tubes or ovaries, but distinct pain on pressure was found, without tumefaction or thickening. An error is only possible in cases in which the tubes and ovaries are not enlarged and palpable. At operation the appendix was found healthy, but the ovary was very much diseased. The skilled gynecologist should be better able to distinguish these affections than a surgeon.

The next paper, on **gastric ulcer**, was read by Dr. A. H. Cordier, of Kansas City, Mo. If inflammation is located in any part, we give that part rest. This can be applied to the stomach, though it is difficult. Chronic ulcer may remain very small for years. The posterior wall along the greater curvature is its most frequent location. As the ulcer erodes the coats of the stomach and comes to the peritoneal coat, adhesions form, most frequently with the pancreas. Any delay will increase the size of the ulcer, and large cicatrices will form, the latter impairing very much the normal functions of the stomach, leading to fermentation and dilatation. The deeper the ulcer, the larger the vessel associated with it, and the greater the liability to severe hemorrhage. Nature prevents this to some extent by causing adhesions. In women, pain and vomiting are most frequent during menstruation, the vomiting seldom being accompanied with nausea, and often occurring 2 hours after meals. In large ulcers near the pylorus, dilatation occurs and the vomited matter consists of fetid food. Excision of these ulcers is bad, if we take under consideration the lowered vitality of the tissues and scars around the ulcer. The best way to rest the stomach is to perform gastro-enterostomy. In operating for ulcers on the posterior gastric wall, do not turn the stomach out of the wound, but make an opening through the anterior wall of the stomach, and operate on the posterior wall through this opening. The advantages of this are that it does not disturb adhesions with the pancreas, and it does not necessitate turning the stomach out through the abdominal wound. Hemorrhages due to ulcers may be severe. After a hemorrhage it must be decided whether to operate at once or to try gelatine and defer operating to a better time. We seldom see a patient with one of these severe hemorrhages. After a severe hemorrhage we should operate at once, and it is here that the Murphy button finds its chief use. The main point in operating is to make the opening in the most dependent position of the stomach, so that drainage will be facilitated and the food passed through into the small intestine.

WEDNESDAY MORNING, MAY 6.

Dr. E. H. Ricketts, of Cincinnati, read a paper on **infected gall-bladder contents with or without gall-stones.** When inflammation occurs, the freeing of adhesions often results in cure. If jaundice is a complication it is quite serious, acting principally on the heart and kidneys, besides predisposing to fatal hemorrhage after celiotomy. Fistulous tracts between the bile-duct and the intestines are quite common, not as frequent, however, as is generally supposed. If empyema of the gall-bladder exists, a sudden rupture means rapid fatal infection, hence the importance of early diagnosis and the establishment of free drainage extraperitoneally. The incision should be made directly over the gall-bladder and attempts made to push the gall-stones into the duodenum. If necessary, an incision may be made into the duodenum, over the entrance of the common bile-duct and the stones removed. Then the common bile-duct should be washed out by inserting a catheter. If the stones are in the common bile-duct, there are no emergency symptoms. As the liver is the largest organ in the body, it should not be the last drained; if pus is found it will be more than apt to cause abscess of liver, and these cases are quite satisfactory. When malignancy occurs, the patient is usually over the age of 50. Medication is unsatisfactory treatment, hence early diagnosis and free drainage are advised.

The next paper was read by Dr. H. O. Marcy, of Boston, **on the better methods for the repair of perineal structures.** The repair should be as near to normal as possible, hence a knowledge of the anatomy is necessary. If there is simply a laceration of the fourchette, it is necessary to suture. The tear may be lateral or central; in case of tear of the transversus perinei muscles, owing to lateral retraction, there will be gaping of the vaginal orifice, also prolapse of the rectum and the formation of a rectocele, the cervix dropping forward. The mucous membrane of the vagina is not so much affected as are the posterior vaginal muscles. The suture material to be used is chromicized catgut. The following is the technique of the operation: With one finger in the rectum, the posterior vaginal wall is pushed forward at an angle of 45°, a button of mucous membrane is denuded, with a specially devised knife, the cicatrix is divided with the Emmet scissors and 3 cobbler stitches are introduced, involving, in a case of complete laceration, not the rectal wall, but the connective tissue surrounding the rectum. These are all buried sutures, of absorbable material. The posterior vaginal wall is dissected up for 2/3 its distance, this tissue being saved and utilized. The advantage claimed for the operation is that no tissue is lost. The operation is performed in 15 minutes, and there is no danger from contamination by urine, all the sutures being buried. There is no danger from constriction. During the operation, instead of sponging, continuous irrigation with normal saline solution is used.

Dr. J. H. Carstens, of Detroit, read a paper entitled, **the hygiene of young girls**, referring especially to the age of puberty, when physical development should be encouraged, with proper care and diet during the menstrual period; after its establishment, the avoidance of overmental anxiety and overexcitement, of society, avoiding carrying heavy burdens and excessive stair climbing. The hereditary predisposition of the nervous system should be changed by different surroundings. Good ventilation and abundance of fresh air are all essential at this time.

WEDNESDAY AFTERNOON, MAY 6.

Dr. A. H. Goelet, of New York, read a paper on **fixation of the prolapsed kidney.** After explaining a diagram of the operation, he said that the indications for operation were palpable kidney below the costal arch anteriorly, interference with the ureter, arterial supply and the return circulation. The objects of the operation are complete fixation, avoidance of scars, and avoiding destruction of kidney substance. In preparing the patient for operation, correct the function of the liver, digestion and use aseptic technique. A vertical incision is then made from the costal arch, along the outer border of the rectus muscle, downward toward the ilium for 3½ inches, separating each layer of muscle and fasciæ. The kidney is then exposed, separating it well from the perirenal fat, fatty capsule, and thoroughly freeing it from the colon. All other structures are likewise separated thoroughly, except the fibrous capsule which is allowed to remain. It is not necessary to bring the kidney out of the abdomen. The sutures, 2 in number, consisting of silkworm gut, are then introduced. The upper one is inserted at the middle third, the lower one into the lower third, going through the fibrous capsule and avoiding the parenchyma of the kidney. The upper one is drawn up under the costal arch and is attached to the abdominal wall, the lower one being drawn up and attached likewise. A drain of gauze is then inserted, to excite inflammation and consequent adhesion. The sutures are allowed to remain 3 to 4 weeks. One hundred and fifty-nine patients were operated upon by this method, all being cured in from 6 to 12 months, with no failures and no deaths. One developed iodoform poisoning from using iodoform gauze, but finally recovered. The following may be causes of failure: Delay, improper preparation; failure to separate the fatty capsule, perirenal fat, or colon; failure to insert the suture properly, thereby allowing it to pull out before adhesion has taken place; failure to support the kidney until the cut adheres. Too early removal of sutures; failure to drain by gauze; failure to remove drain; excessive vomiting or coughing; too early exertion; and too low attachment of the kidney, allowing irritation from clothing.

Dr. E. Reynolds, of Boston, read a paper entitled, the **repair of cystocele by utilization of the anatomic attachment of the anterior vaginal wall.** The success in the repair of cystocele rests on an adequate conception of the anatomy of the anterior vaginal wall. This wall is firmly attached at its lower end to the pubis and at its lateral edges and upper lateral corners to the pubococcygeal and allied transverse muscles, these being reinforced by the support of the posterior wall below, which is subjected to distension and often laceration during labor, while the anterior wall is subjected to little strain. After labor the anterior wall is distended, but its edges are held firmly in place. When cystocele supervenes, a portion or all of the anterior wall remains distended and useless, while its attachments are usually intact. Cystocele is a hernia of the bladder through the foramen formed by the attachments of the anterior vaginal wall, and is to be treated as all other herniæ, i. e., by excision of the hernial sac. The older operations of simple denudation of the anterior vaginal wall would have answered, had the hernial sac been excised. If cystocele is complicated by descent of the cervix, the operation will also relieve this condition. The following is the technique of the operation: First and most important of all, free the bladder from the anterior vaginal wall as high as the internal os. A triangular shape is then denuded from the vaginal wall and 2 sutures are introduced through the center of the denuded area, thus dividing it into 4 unequal arms, the posterior 2 arms being equal and longer than the anterior. This completes the operation, but to be sure of good union other sutures are introduced along the raw edges. The exact shape is not as important as is excision of the sac. The sutures should be introduced transversely and not anteroposteriorly, otherwise the cervix will not be pulled back and the purpose of the operation will be defeated. The ultimate results are most satisfactory.

Dr. D. H. Craig, of Boston, followed with a paper on **lacerations of the cervix; where shall they be repaired?** Lacerations are physiological. The symptoms are not due to the laceration, but to the results of laceration. They should not be repaired unless positive symptoms point to this as a cause, as the result may be harmful in subsequent labors, preventing easy dilatation; subsequent labor, after trachelorrhaphy, may cause a worse tear. Indications for the operation are: Great pain and the prevention of future miscarriage. Laceration is not a predisposing cause to carcinoma. Some cases of pelvic inflammation and endometritis are cured by suturing a laceration. Lacerations should always be repaired when symptoms arise.

Dr. J. G. Clark, of Philadelphia, read a paper entitled, **a combined clinical and laboratory study of the effects of peritoneal saline infusions in abdominal operations.** Normal saline solution in itself is not bactericidal; many bacteria will grow in it. A laboratory study showed that one cc. of a bouillon culture of staphylococcus aureus undiluted would, when introduced into the peritoneal cavity of the animal, invariably kill, while when the same amount was introduced into other animals, diluted with 100 cc. normal salt solution, 48% recovered, the life of the other 52% being greatly prolonged. The temperature of the solution should not be over 100° and not over one quart allowed to remain. Its contra-indications are walled-off abscess cavities (appendiceal), pyosalpinx and extra-uterine pregnancy. Conclusions.—(1) There is a marked leukocytosis, increasing from 7,000 to 30,000 per cc. in some cases. (2) It dilutes the bacteria, distributes them and hence hastens their elimination by increased function of the kidneys. (3) It promotes rapid absorption and hastens their elimination in this way. (4) It relieves thirst, thereby adding greatly to the comfort of patient.

Dr. L. H. Dunning, of Indianapolis, read a paper entitled, **retroversion of the uterus—a clinical study of the symptoms, complications and treatment.** All of these cases exist with some complications, markedly prolapse of one or both ovaries. Symptoms are principally pain, in 74%, backache and dysmenorrhea, pain in the inguinal region and back of head, profuse menstruation, gastritis and nervous symptoms. One third of the cases were treated without operation, using topical applications, tampons and internal medication, such as laxatives, hydrochloric acid and bitter tonics, general massage and pessaries. All of these showed marked benefit. In all of these cases there were only 8 uncomplicated cases out of 112. Seven out of 8 who were treated with pessaries, massage and internal medication were cured. Twelve cases were treated by tampons. Only 13 were treated by major operations, 5 by oophorectomy and 12 by means of pessaries.

Dr. J. Wesley Bovée, of Washington, D. C., read a paper entitled, **a further report on operations on the uterosacral and round ligaments for retroversion of the uterus.** The preferable route is the abdominal when, if the appendix and ovaries are found diseased, they can be removed and the round ligament can then be shortened as well as the uterosacral. In some cases the anterior vaginal wall was lengthened. Ventral fixation and ventral suspension were not performed, as future pregnancy might call for Cesarean section. Alexander's operation was not performed owing to danger of suppuration and the causation of intestinal obstruction. Some of these operations are suited for some cases, some for others.

Dr. O. G. Pfaff, of Indianapolis, read a paper entitled, **a report of a case of ectopic gestation following inhibited tubal peristalsis.** Too much stress is laid upon the ciliary wave, and the peristaltic function is not sufficiently appreciated. When this peristaltic function is interfered with by inflammation or adhesions, or even by functional paralysis, the contents of the tube are retained. Hence there is occasional adjustment of the impregnated ovule in the walls of the tube, as the oviducts perform their function in a manner similar to that of other excretory ducts.

Dr. C. V. Theinhaus, of Milwaukee, read a paper, entitled, **advisability of vaginal exploratory puncture and celiotomy in doubtful diagnosis in diseases of the female genital organs, with cases.** The indication for puncture is when the life of the patient depends on the diagnosis. In all cases in which pus is present this must be extraperitoneal; the procedure is not dangerous and hence is to be commended; besides, vaginal drainage may be employed if pus is found, drainage being established through the posterior cul-de-sac. By exploration, if pus is found, the virulence of the bacteria may be demonstrated. Three cases were reported in which vaginal puncture was used to make a differential diagnosis.

Dr. H. O. Pantzer, of Indianapolis, then read a paper on **conservative surgery of the sclerotic ovary.** Sclerosis is due to obstructed circulation. In the following case it was due in inflammatory adhesion. Patient, aged 25, married 4 years, began menstruation at 13. There was dysmenorrhea, pain in the left inguinal region, growing emaciation and constipation. Operation was performed in October, 1902. Left and right ovaries were both sclerotic, the left was removed, the right being allowed to remain, adhesions were separated and a V-shaped piece of ovary was removed. This was left unsutured and hemorrhage was very slight. The incision was made horizontally. Care should be taken that the incision should not be made transversely, otherwise the nerve-supply will be interfered with. Patient recovered from operation and menstruation became regular which, previous to operation, had been very irregular. Six months after operation patient's general condition was greatly improved. In March, 1903, patient was delivered of a 9-pound child. This case shows the conservative operation on the ovary.

THURSDAY AFTERNOON, MAY 7.

Dr. Rudolph W. Holmes, of Chicago, read a paper entitled, **nonabsorbent gauze. The proper material for tamponades for hemorrhage, with special reference to obstetrics.** Gauze used should be aseptic and antiseptic. Untreated gauze has very little capillarity, hence is of no service as drainage, but is good for packing, for checking hemorrhage and the carrying of hemostatics. Gauze treated with paraffin and celluloid has great capillarity; hence it is good for drainage but of no service for packing. If post partum hemorrhage is due to a tear in the uterus which cannot be controlled by sutures, intra-uterine packing is indicated. For this purpose plain sterile gauze is used, and packed tightly into the uterus, thereby preventing any loss of blood and promoting a rapid formation of blood-clot. Prophylaxis is of great importance, and Credé's method cannot be employed after 20 minutes. There is a specially constructed instrument for the application of intra-uterine packing.

Acute general staphylococcus infection through the puerperal breast, was the title of a paper read by Dr. W. P. Manton, of Detroit. The predisposing cause of infection from this organ is its increased vascularity. All serious results in this organ are due to microbic invasion, and, since the advent of aseptic methods, general infection through the puerperal breast is of rare occurrence, hence the care of these cases is important. The treatment of engorged mammary glands by massage during the establishment of lactation is not devoid of danger and should be carried out with the utmost gentleness and the most rigorous aseptic precautions. An example of the above condition was given in a case with enlarged and painful breasts, with the formation of an abscess which was evacuated, cultures showing staphylococci, while the culture taken from the cervix uteri was sterile. Numerous abscesses occurred throughout the body, one in the perirenal space, all being evacuated by incision, resulting in recovery of the patient. The temperature throughout the attack ranged from normal to 105° F. In this case massage was applied to the breasts early in the inflammatory condition. There is only one other similar condition occurring in the past 10 years. Distinction should be made between an infection and engorgement; in the former there is fever, in the latter none; massage should be applied only in the latter, not to relieve the breasts of the milk, but of the engorgement, hence massage should be applied toward the trunk and axilla from the nipple. The hands should be sterile and the massage gentle, occupying about 20 minutes.

Dr. G. B. Massey, of Philadelphia, read a paper entitled **destructive sterilization by cataphoresis of cancer of the uterine cervix.** The instrument consists of a rod coated by shellac which is fused on; at one end of the rod a wire connects it with the battery, at the other a piece of zinc is fused on the rod. This piece of zinc is coated with metallic mercury; by immersion of the zinc into a 10% solution of sulphuric acid and then immediately immersing this into mercury, it readily takes on a thin coat of mercury and is held quite loosely. The principle embodied is that the oxygen and chlorine of the tissues are set free from the tissues, combine with the mercury and zinc of the rod, forming the oxychloride of mercury and zinc, which produces an aseptic slough, free from odor, and a layer of healthy tissue is left between the growth and the healthy portion of the cervix. It at the same time destroys the growth, the probability of failure in operative cases being due to reinfection of the malignant growth in the cut edges. In this method there is no opening up of the lymphatics or bloodvessels, hence the danger of metastasis is eliminated. The nascent salts (oxygen and chlorine) produced are diffused in all directions, devitalizing and destroying the growth. The average time required in its application is from ½ to 2 hours under general or local anesthesia. The amount of current used is 500 to 600 milliampères for this purpose, (160 volts necessary) built from a series of galvanic cells. The batteries should be fresh and a meter should be used to read and control the current. In case of rapid growth, as much as 1500 milliampères may be used once, while in a slow growth as little as 35 milliampères, repeated daily, are used. In on instance this was used 3 times in a sarcoma of the throat with a complete cure. Description of the application is as follows: The patient is placed on the back, knees drawn well back and cervix exposed with speculum. In order to prevent burning of back of patient and vagina, and also the production of a "short current," the following is used: A wooden table with a rubber sheet placed on it, on this rubber sheet is placed a lead plate and this is then entirely covered. A Keely pad is also placed under the buttocks. The point is now inserted into the growth and the current is turned on slowly, the finger of the operator being in the vagina throughout the entire manipulation, to detect any excess of heat, and, when this occurs, a current of cold water is allowed to run into the vagina. This is continued until the growth has changed from its feeling of hard induration to that of a soft mass. This is not a positive cure for all cases, but relief from pain, hemorrhage and fetid discharge is often obtained. Only 7 cases were treated by this method, resulting in one complete cure. The rest had all developed metastases, which had probably existed before the application. Only one patient died, 6 days after operation, due to the escape of some mercury into the abdominal cavity, thereby setting up peritonitis.

The last paper read was on **typhoid perforation,** by Dr. W. D. Haggard, Jr., of Nashville, Tenn. He had personally operated on 137 cases of typhoid fever, with perforation, with 37% of recoveries. The diagnosis of these cases is important, the symptoms presented being shock, rapid pulse, tenderness in the right iliac fossa, etc. For surgical intervention to be of any benefit, the patients must be operated upon within 8 hours after the occurrence of perforation. If shock and hemorrhage are severe before operation, results are not so satisfactory. Rectal saline infusions are to be recommended. A differential diagnosis between appendicitis and typhoid perforation is necessary in every case.

IL POLICLINICO (SEZIONE PRATICA).

March 21, 1903.

1. Contribution to the Treatment of Hyposystole and Anasarca. C. TREVISANELLO.

1.—The therapeutic value of drugs which increase the force of the heart's action is practically nil in many cases of **hyposystole accompanied with extensive serous infiltration of the tissues,** and exudates in the body cavities; owing to the increased peripheral resistance produced by stasis in the capillaries and veins and pressure upon their walls from the fluid transudate. Various measures have been resorted to in order to decrease the edematous condition of the tissues and thus lessen the peripheral resistance. In a case of this kind Trevisanello used, with favorable effect, **Southey's method of draining the fluid from the lower extremities,** after first aspirating the pleuritic fluid. The author thus describes the procedure: The patient is seated upon the side of the bed, with the feet upon the floor. From 1 to 2 small trocars, furnished with silver cannulæ 21 millimeters long and having a diameter of 13/10 of a millimeter, are then inserted in the upper third of the legs. The trocar is then withdrawn and the cannula left *in situ;* and to the lower end of this is attached a rubber tube connected with a receptacle for the outflowing fluid. In the patient so treated this procedure was repeated, at intervals, 6 times, from 500 cc. to 1700 cc., being withdrawn within a few hours. After each treatment the patient experienced the greatest relief; dyspnea disappearing, the pulse improving and a general change for the better being seen. Digitalis, given after withdrawal of the fluid, increased the strength of the pulse, whereas, when used before the peripheral resistance had been thus lessened, it failed entirely of effect. An entirely dry diet was given; food being limited to 8 eggs daily for a prolonged period. The decrease of edema was further favored by the administration of purgatives. The author emphasizes the necessity for rigid asepsis in using this method of treatment, and suggests gentle massage or sligth compression of the tissues to start the flow of the liquid through the cannula. [R. L. F.]

Original Articles.

THE THIRD AND FINAL REPORT OF A CASE OF PRESYSTOLIC MITRAL MURMUR, COMPLICATING PREGNANCY, ETC., WITH EXHIBITION OF SPECIMEN, SHOWING TRIPLE VALVULAR LESION, VIZ., MITRAL STENOSIS, TRICUSPID STENOSIS AND AORTIC STENOSIS.

By JAMES TYSON, M. D.,
of Philadelphia.

Two previous reports have been made of this case at the meeting in May, 1899, and that in May, 1901. The patient was finally admitted to the wards of the hospital of the University of Pennsylvania, May 13, 1902, having been working more or less at her old occupation in a shoe factory since August, 1901, about the date of her discharge from the hospital. When readmitted she was suffering from dyspnea, palpitation, precordial pain, vertigo, cyanosis, cold hands and feet, and tenderness in the epigastrium. There was moderate ascites and edema of the legs and feet. Six months previous to admission menstruation had ceased, although she was only forty years of age.

Physical examination recognized a slight prominence of the left precordial region, with the apex-beat in the fifth interspace in the nipple line; also a short, feeble, presystolic thrill, and a typical presystolic mitral murmur. There was no systolic murmur audible at either the mitral or tricuspid areas. It will be remembered that a systolic tricuspid murmur was conspicuous on previous admissions, but the cardiac action was, perhaps, too feeble to develop these murmurs. As stated, the apex beat was in the nipple line in the fifth interspace, and the cardiac border, as determined by percussion, pointed to moderate enlargement. The liver was enlarged and tender, especially in the epigastric region.

The urine presented the usual characteristics of the urine of mitral disease; it was concentrated, with a specific gravity of 1029, and deposited copiously pink urates. There was a small albuminuria and a few hyaline and pale granular casts. After this admission she did not rally as after previous admissions. There was obstinate nausea and vomiting; she gradually declined, and died on May 25, twelve days after admission.

Two days before death there probably occurred cerebral embolism, as evidenced by numbness in the *right* arm, followed by a convulsion. The head and eyes were drawn to the left, and the left arm was in a spastic condition. Within half an hour the convulsion ceased and the muscles relaxed, though she still complained of numbness. She soon went to sleep, and next day was more comfortable, but died the following day. On the 23d., she developed also signs of pleuropulmonary disease, more particularly on the right side, which the autopsy showed to be due to congestion of the lung, with incipient pleurisy, while in the upper portion of the lower lobe of the right lung there was also a sharply circumscribed dark-red area, which pointed to infarction.

The autopsy was made by Dr. Hendrickson, one of Prof. Flexner's assistants, and I have the pleasure of showing the heart, which exhibits a most interesting triple lesion, confirming the diagnosis in its most important particulars. The organ weighed 370 grams, and was distinctly increased in size. Over the surface of the right auricle were numerous small, irregularly shaped, opaque areas of thickening. On section, considerable dilatation of all the chambers was noted. The wall of the left ventricle was decreased in thickness. The aortic cusps were thickened, so that they projected into the lumen of the aorta, and doubtless caused some stenosis as well as insufficiency. The mitral flaps were glued together and thickened, so that a button-hole of about 1.5 cm. in length was found. The chordæ tendineæ were markedly thickened. Evident stenosis and insufficiency existed. The pulmonary leaflets were normal. The tricuspid flaps were firmly adherent one to the other and markedly thickened, producing stenosis and insufficiency.

Tricuspid stenosis, it is well known, is a rare lesion. It is commonly associated with mitral stenosis, having been found thus associated by Herrick in 138, or 90 per cent., of 154 cases collected by him. In twelve cases only did the tricuspid stenosis occur alone. I learn, too, from Cabot's *Physical Diagnosis* that, out of 87 cases collected from the post mortem records of Guy's Hospital, 85, or 97 per cent., were associated with still more extensive mitral stenosis. My experience also accords with others, in that I failed to recognize the tricuspid stenosis before death, because of the near identity in time, quality and position of this murmur with that of mitral stenosis. The autopsy record also points to a moderate grade of aortic stenosis, also an acknowledged complication of tricuspid stenosis. It is not impossible, of course, that the tricuspid stenosis was congenital.

Subjoined is a full report of the autopsy:

Mrs. McC., aged thirty-seven years, white; nativity, Pennsylvania. Attending physician, Dr. Tyson. Admitted May 13, 1902; died May 25, 1902, at 2.45 P. M. Autopsy May 26, 1902, at 10 A. M.

Clinical Diagnosis. Double mitral disease; chronic interstitial nephritis. Dr. Lummis, resident physician.

Pathological Diagnosis. Chronic mitral, aortic and tricuspid endocarditis, with stenosis and insufficiency of mitral and tricuspid; aortic chiefly insufficiency, but doubtless also some stenosis; general chronic passive congestion; hypostatic pneumonia, with fibrinous pleuritis; healing infarct of lung; cardiac cirrhosis of liver; early chronic diffuse nephritis. Dr. Hendrickson, pathologist.

Detailed Description of the Organs. Menstruating uterus; general anasarca.

External Appearance. Body that of a well-developed and fairly well-nourished female; marked edema of upper and lower extremities; moderate abdominal distension; considerble cyanosis of face; moderate jaundice. Abdominal cavity contained 300 cc. of straw-colored fluid. Intestine revealed marked congestion of bloodvessels. Pleural Cavities. Left contained a few firm adhesions posteriorly; no fluid. Right contained numerous adhesions, but lying between these were discovered fully 500 cc. of straw-colored fluid, which was slightly turbid. Pericardial cavity contained a slight excess of straw-colored fluid. Heart. Weight, 370 grams, distinctly increased in size. Over surface of right auricle were numerous small, irregularly-shaped, opaque areas of thickening. On section, there was considerable dilatation of all the chambers. Wall of left ventricle was decreased in thickness. Aortic cusps thickened so that they projected into the lumen of the aorta, and doubtless caused some stenosis as well as insufficiency. Mitral flaps glued together and thickened, so that a buttonhole of about 1.5 cm. in length was found. Chordæ tendineæ markedly thickened Evident stenosis and insufficiency existed. Pulmonary leaflets normal. Tricuspid flaps firmly adherent one to the other, and markedly thickened with stenosis and insufficiency. Lungs. Left lung: Posteriorly a few firm tags. Surface congested, and over lower lobe a deposit of finely granular fibrin. On section, consistency was markedly increased throughout upper lobe and upper portion of lower lobe. Lack of crepitation everywhere, and little fluid exudes on pressure. Lower portion of lower lobe not so intensely congested, and consistence, although increased, is not so marked as that above. Right lung: Surface congested. Slight deposit of fibrin over lower portion of lower lobe. At extreme posterior and upper portion of lower lobe was discovered a dark-red area 3 cm. in diameter, with sharply outlined and somewhat elevated borders. About this there was slight congestion. On section the area was found to be the base of a cone-shaped mass of increased consistence, dark-red in color and limited by an opaque, yellowish, firm zone from the adjacent area of marked congestion. Throughout the lung marked congestion and increase of consistence existed, and in places early hypostatic pneumonia doubtless existed. Bronchial lymphnodes pigmented, but otherwise negative. Spleen. Weight, 190 grams; of normal size; of stony consistence, and on section dark-red in color. No increase of trabeculæ. Gastro-intestinal Tract. Marked congestion everywhere. Pancreas. Marked congestion. Liver. Weight, 1125 grams; decrease in size. Surface smooth, but coarsely lobulated by lines of slight depression. On section, typical nutmeg surface was revealed. Borders of lobules of a distinct yellow tint. Increased consistency. Adrenals. Negative. Kidneys, weight 290 grams; somewhat decreased in size. Capsule strips with some difficulty. Surface markings obscured. Cortex slightly decreased in thickness, and consistency slightly increased. Moderate congestion. Bladder. Slight congestion of vessels in mucosa. Uterus. Marked congestion of endometrium, with some increase of mucus. Aorta. Negative.

THE PRESENT TREATMENT OF PUERPERAL SEPTIC INFECTION.*

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Recent advances in medical science in securing immunity and counteracting toxemia lead us to hope that the treatment of puerperal septic infection may see great and important advances in the near future. At the present time, however, we have not arrived at a clear knowledge regarding the treatment of this condition, and hence the object of this paper is to state as concisely as possible our present knowledge. We may divide the subject under four heads:

First, the prevention of puerperal septic infection; second, those methods of treatment which have stood the test of long experience and accurate observation; third, methods of treatment which must be considered at present as experimental, and, fourth, methods of treatment which we believe should be condemned.

The Prevention of Puerperal Septic Infection.

Recent knowledge leaves no doubt concerning the important part in the prevention of puerperal septic infection played by the patient's blood and the normal resistance of the healthy body; hence, loss of blood distinctly predisposes to infection. To prevent infection, we must treat obstetric patients on the lines of correct surgery and reduce the blood loss to the lowest possible point.

Lacerations increase the danger of puerperal septic infection because they destroy the natural barrier against bacteria, the epithelia of the unwounded genital tract. Tearing of the cervix in premature delivery, unskilful and rude delivery and spontaneous expulsion when the mother is uncontrolled by anesthetics, when the genital canal is not relaxed and when extensive laceration occurs, all of these greatly predispose to infection. A pre-existing infection of the genital tract predisposes to the development of subsequent infection in labor. Any obstruction to the natural lymphatic circulation of the abdominal organs predisposes to infection from bacteria within the intestine. Constipation with chronic intestinal catarrh also predisposes to the development of abdominal septic infection after labor; hence, the intestine during pregnancy should be emptied as completely as possible and chronic constipation should be avoided.

The faithful and invariable use of antiseptic precautions in the management of all obstetric cases is absolutely demanded. Asepsis and simple cleanliness are not sufficient because, unlike the abdomen, the genital canal cannot be completely closed after delivery but remains an easily accessible wound and hence is easily infected. To strict cleanliness must be added the thorough use of antiseptics upon the hands of the physician and nurse and upon the external genital organs of the patient. Obstetric instruments must be sterilized by boiling, and obstetric dressings must be made first sterile and then antiseptic in addition. Recognizing the fact that the vagina contains abundant bacteria in all patients, douching should never be practised. Under proper indications the vagina may be surgically cleansed or the entire genital tract so far as accessible may be made antiseptic as part of an obstetric operation.

Methods of Treatment Which Have Proven of Value.

Upon the development of septic infection, the first duty of the physician is to cleanse as thoroughly as possible the uterus and vagina. In doing this, every precaution must be taken to avoid opening channels for fresh absorption of septic material and to remove in the most gentle and thorough manner possible infective material already within the uterus. Foci of infection, when accessible, should be destroyed. To carry this out efficiently, the vulva should be first inspected and ulcers upon the vulva and vagina should be cauterized with carbolic acid and iodine or with any other suitable strong antiseptic. They may be powdered with iodoform or boracic acid. The vagina should be thoroughly sponged out with cotton dipped in lysol, 1%, or mercury bichloride, 1-4,000. If possible, the cervix should be inspected and ulcers cauterized and disinfected. The uterine cavity should then be gently but thoroughly explored by a blunt-edged curette and the interior of the womb gently but thoroughly scraped to bring away necrotic material. The utmost caution should be observed to avoid wounding the uterus or exciting fresh hemorrhage, and the curette should act simply as an elongated finger. This exploration may be accompanied by prolonged irrigation of the uterus with lysol or creolin, 1%, or normal salt solution. Not less than one gallon should be employed in douching the uterus alone. This should not be hot nor should it be cold, but the temperature of the douche should be not less than 100° F. Should this manipulation excite bleeding, it is well to pack the uterus moderately with gauze containing 10% of iodoform. Under no circumstances should mercury bichloride be introduced within the womb. The vagina should be lightly tamponed with dry bichloride gauze. This gauze should remain without disturbance for forty-eight hours. It should then be removed and the uterus and vagina thoroughly irrigated with lysol, 1%. No further douching of any kind should be practised.

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*Read before the Lycoming County Medical Society, May 8, 1903.

The application of cold to the abdomen over the uterus is of decided value. This may be combined with counterirritation by preparing a turpentine stupe large enough to extend from the pubes to the umbilicus, and placing over this an ice-bag which does not leak. As the stupe is made with flannel, the sensations of the patient are not distressing. This may remain until the skin of the abdomen is distinctly reddened. This application is the best method in our experience for combating pain in the abdomen in these cases.

The prompt and thorough emptying of the intestine is of great importance. If salts are given freely, the temperature of the patient will rise while the salts are operating. After the intestine has been emptied, the temperature will gradually fall. Salts often cause the formation of considerable gas within the intestine, and compound cathartic pills are better in our experience. If the action of the kidneys is deficient, calomel followed by salts will give better results.

Medication should be limited to the use of those drugs which act most efficiently as tonics and stimulants to the nervous system and which produce contraction of the uterus. Strychnine and ergot are most valuable in our experience. They should be given together every four to six hours until distinct improvement has occurred. The only antiseptic which we possess which can be introduced within the body of the patient without disastrous results is alcohol. The only limit to the administration of alcohol in these cases is the patient's capacity to absorb it without intoxication. Only the purest and strongest alcoholic stimulants should be employed. Pain can usually be prevented by cold and counterirritation. Alcohol in full doses acts as a sedative and induces sleep. Very rarely is any analgetic drug demanded, but, when necessity arises, opium must be employed. In the form of codeine or morphine given hypodermically it may be cautiously used. It should be stopped as soon as possible.

It is an axiom of surgery that all septic patients must be liberally fed. Should fever ruin appetite, fever must be reduced by the local use of cold or by sponging or packing. Then food and stimulus will be taken with some relish. Beef-juice, broths, gruels, milk, the juices of fruits and fresh raw eggs should be plentifully used. An abundance of water is required as a diuretic and to promote nutrition, and soda-water may be used abundantly, especially in giving stimulants.

Good nursing is most valuable in these cases. The skilful nurse controls pain, feeds and encourages the patient and hastens her recovery, while the unskilful nurse is a constant detriment and menace. The use of cold demands both judgment and experience, and so does the administration of alcoholic stimulants, and here the best of nursing is required. Those patients who recover from puerperal septic infection with inefficient nursing do so more as the result of their inherent strength of constitution than of the care which they receive.

It is of great importance that the patient's elimination be promoted, as well as her nutrition. In patients who have suffered from hemorrhage there is an especial advantage in increasing the volume of the bloodserum and in the endeavor to maintain it at the normal standard as nearly as possible. The absorption of normal salt solution, whether from the bowel or by hypodermoclysis, is of undoubted value and should be secured in all serious cases. If the necessity arises for operating under ether upon a septic patient, the opportunity may be utilized to perform intravenous saline transfusion. An immediate improvement follows this method of treatment in the gain in the volume of the pulse and in increased action of the skin and kidneys.

The surgical treatment of puerperal septic infection, concerning which there can be no question, has been well stated by Leopold in his paper before the Fourth International Congress of Obstetrics and Gynecology at Rome, September, 1902[1]. Collections of pus occurring during puerperal septic infection should be emptied in whatever situation the collection occurs and in whatever organ. The obstetric surgeon must use his best judgment in selecting the mode of attack. As a rule, pelvic and abdominal abscess is best dealt with by abdominal incision followed by vaginal drainage. Hysterectomy is justifiable only in those exceedingly rare cases in which an infected placenta cannot be removed from the uterus. These cases are so infrequent that they are among the curiosities of medicine. In a considerable experience, I have never seen one. If upon abdominal section the Fallopian tubes are found distended with pus, their removal is justifiable.

Methods of Treatment Which Must Be Considered at Present as Experimental.

We mention first of these the use of antistreptococcic serum, because the hopes of the profession were much raised by the introduction of this substance, and the success of serum in diphtheria led us to hope for similar results in the treatment of puerperal septic infection. A few years ago a committee, appointed by the American Gynecological Society, after a careful review of the evidence presented by our members and collected from the literature, concluded that at the present stage of our knowledge the use of antistreptococcic serum is unreliable and must be considered as a matter of doubtful experiment. Personally I have seen apparently brilliant success follow its use in some of my cases, and in others absolute failure. A most striking illustration of the latter occurred in my observation during the past winter.

A young, vigorous woman was seen in consultation. She had a streptococcus infection of the blood, proved by thorough examination of the blood, including bacteriological culture. Marmorek's serum of undoubted purity was injected in full doses, and

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*Read before the Lycoming County Medical Society, May a second complete examination of the blood was made after the serum had been used sufficiently long to exert its effect. The progress of the patient's disease was not in the least retarded, nor did the condition of the blood improve. The case went steadily on to a fatal issue. The case was interesting from the fact that all known methods of investigation were employed, that experts met daily in consultation and that the case was most typical in all its characteristics. We are told by those who urge the use of serum that it is only valuable in infections by streptococci. Here was an ideal case in which streptococci preponderated in the blood of the patient.

The reason for the failure of antistreptococcic serum, when compared with the success of antitoxin, may be briefly stated as follows: In diphtheria toxemia is the important and fatal element. Antitoxin neutralizes the action of the toxins of the diphtheria bacillus and immunizes the patient, and is for this reason successful. In streptococcus infection the streptococci are the active element, while toxemia is less potent. Completely to neutralize streptococci we possess at present no efficient agent.

Another method of treatment which is experimental is the use of nuclein to produce increased leukocytosis. Theoretically, this also should prove of undoubted value. Practically, it is impossible at present to assert that such is the case. In the case of streptococcus infection just described, nuclein was faithfully employed at the suggestion of one of the consultants. It produced no effect. Hofbauer, at the Congress at Rome[2], urged the employment of nuclein in connection with normal salt solution. His paper is of theoretical rather than practical value.

The name of Credé is familiar for his introduction and advocacy of silver as an antiseptic agent. The value of solution of silver nitrate in conjunctival infection is proven. For some years Credé's silver ointment has been urged upon the profession as a means of combating general infection. In varying quantities pure silver is given by inunction, if possible near the site of infection. Reidhaar[3] describes an interesting case in which he gave intravenous injections of 10 gm. of a 1% solution of collargol. In this case, for purposes of comparison, alcohol was withdrawn and practically no treatment was employed but the injections of silver. The blood contained abundant streptococci at the beginning of the treatment. Streptococci disappeared from the blood, and the patient recovered. It would, however, be hard to prove that the patient's recovery was directly and entirely due to the silver employed.

The intravenous injection of formalin presents for consideration one patient who survived the injection. Up to the present time no adequate evidence has been presented which warrants the further employment of this method.

Among the French great importance is placed upon the substitution of écouvillonnage for other methods of cleansing the interior of the womb. The écouvillon is a swab containing bristles, by which the uterine cavity is vigorously brushed by rotating the swab. Budin[4] and other French observers are enthusiastic in its praise. Its use is at present peculiar to the French.

The question of hysterectomy for puerperal septic infection has occasioned wide discussion. At the Congress at Rome, of which mention has already been made, this was one of the principal topics. Fehling collected 61 operations for puerperal septic infection, with a mortality of 55.7%. The mortality of vaginal extirpation in this series was 69.6%, of supravaginal extirpation 50%, of total extirpation following abortion 75%, and of abdominal total extirpation 31.5%. From a large series of cases, Fehling concluded that the general mortality in puerperal septic infection varied from 18% to 50%. The mortality-rate of hysterectomy is admitted by all to be considerably above 50%. Leopold's conclusions, given during the same discussion, have already been stated, and I believe them to be sound. Sippel and others came to the conclusion that hysterectomy in puerperal septic infection, to be efficient, must be done so early in the case that its precise value as a method of treatment cannot be ascertained. If we operate sufficiently early to insure a good result, we can never be certain that the operation was absolutely necessary. It is significant that the lowest mortality-rate followed the abdominal operation. When this is done, the Fallopian tubes are usually removed with the uterus, as the tubes are frequently filled with pus. A reason for the good results obtained in the abdominal operation lies, I think, in the accompanying removal of infected Fallopian tubes.

Freund, Thomas[7], Bumm[8] and Sippel[9] have drawn attention to the value of ligating and dissecting out infected and thrombosed veins in these cases. Such may be the veins of the broad ligament or the spermatic or other veins infected from the circulation of the pelvic organs. This procedure appeals to good surgical judgment and may be carried out when possible. It has been most successful in pyemic cases with repeated chills and great variations of temperature. Stone[10], in a paper describing cases in the service of the New York Lying-In Hospital, has drawn our attention to the similarity between eclampsia and septic infection. This we have long noticed, and we are heartily in accord with him in urging the importance of the analogy. This shows us that, when the uterus has once been emptied, further interference with the genital organs is injurious and serves only to produce increased absorption of bacteria and toxins. Although personally I have at times obtained good results from hysterectomy, I have never been able to satisfy myself that the patient might not have recovered without the hysterectomy.

One method of hysterectomy deserves support and more encouraging description. I refer to hysterectomy during labor in infected cases. In two patients brought to the Jefferson Maternity with dead child and infected uterus, recovery followed the delivery of the child by the Porro operation. This operation removes the pelvic viscera and the child and leaves infected material in the stump outside the peritoneum. Should the operator prefer in such cases, he may remove the entire uterus and tubes without opening the womb. One or both ovaries may be left to avoid the nervous disturbance caused by their removal.

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[2] Hofbauer, Archiv f. Gynaekologie, Band 68, Heft 2,1903.

[3] Reidhaar, Monatsschrift f. Geb. und Gyn., Band 16, Heft 4, 1902.

[4] Budin. L'Obstetrique. No. 4, 1901.

[7] Thomas, Zeitschrift f. Geb. und Gyn., Band 39, 1898.

[8] Bumm, Graefe'sche Sammlung. 189

[9] Sippel, Centralbl. f. Gyn., No. 50, 1902.

[10] Stone, Am. Journal of Obstetrics, January, 1903.

Methods of Treatment Which Must Be Considered Injurious.

If one reviews the treatment of puerperal septic infection, he will find that, like the treatment of diphtheria, there is scarcely a drug in the pharmacopeia which has not been commended in this condition. I believe that many a woman has been sacrificed to indiscriminate and wholesale drugging. In a case seen in consultation, I once found a patient taking ten different drugs to cure puerperal septic infection.

We believe it to be a great mistake to give a septic patient drugs to reduce temperature. Pathology teaches us that temperature is but a symptom and that it rarely injures a patient. No drug controls temperature without depressing the patient. In the use of cold and the administration of alcohol or in hot sponging followed by the use of alcohol, with or without cold, we have methods of treatment which are not only not depressing but distinctly conservative and stimulating. I have made it an invariable rule at the Maternity to allow no antipyretic drugs to be administered to puerperal patients.

Another source of useless and injurious drugging is the anxiety of the physician to stimulate the heart. He seems at times to forget that the heart is largely a self-regulating mechanism and that it always endeavors to accommodate its work to the conditions under which it is placed. It is true that there are times in treating septic cases when the value of digitalis becomes evident, and there can be no possible objection to its use, provided it is so administered that it does not lessen the patient's appetite and interfere with digestion, but its use is seldom necessary in septic patients and, if the patient's nutrition be properly secured, the heart muscle will do its work and will often emerge from a trying septic conflict in a remarkably good condition.

Another injurious use of drugs in septic cases is the effort to check the purgation which nature often sets up. When this occurs, the patient's milk should be peptonized or broths and meat-juice used, and the diarrhea allowed to continue unless it becomes remarkably excessive. It is also seldom necessary to give drugs to procure sleep in these cases. Bromides, chloral, hypnotics and sedatives are worse than useless. The patient's stomach is the stronghold of defence, and it should be reserved for that sort of ammunition which is most valuable in the battle. It is true that brains are much more expensive and much more rare than drugs, and that good nurses are not always obtainable, and hence the skilled nursing which will secure sleep to the patient may be lacking, but even then it is better to push the use of alcohol than to resort to sedative and hypnotic drugs.

We cannot too strongly emphasize the mistake of repeated intra-uterine manipulation. But a short time ago, in consultation, we strongly urged a practitioner to abstain entirely from uterine medication or treatment in a septic case. The patient's temperature soon fell, and she began to recover. Worst of all and most dangerous is the use of mercury bichloride within the womb. Abundant and repeated evidence is available of the danger of this method of treatment. When the uterus is emptied, lysol, 1%; creolin, 1%, or normal salt solution should be chosen. I have seen no case, nor have I found in the literature a case in which iodoform poisoning has occurred from the use of iodoform gauze within the puerperal uterus. At present we cannot consider this use of iodoform as dangerous or improper.

With our present knowledge, we may hope for improvement in the prevention and treatment of puerperal septic infection in the following directions: Gradual increase in knowledge among the laity regarding the nature of infectious diseases and efforts which should be made to prevent them. At the present time two factors combine to prevent the lessening of septic infection: One is the ignorance and carelessness of the laity who consign obstetric cases to midwives and incompetent persons; the other factor results from this, and is the cheapening of obstetric work. Complicated deliveries are considered matters of course and are expected to be done in a careless and inefficient manner and are compensated accordingly. All obstetric operations are surgical procedures and should receive the same compensation which surgical procedures of like nature demand. When they are so regarded by the populace and practitioners, there will be greater compensation for them and there will be more care exercised in their performance.

Among the poor, and those of small means, obstetric patients should be encouraged to go to hospitals for confinement. They may there receive the benefits of antisepsis, lacerations may be closed under favorable circumstances and infection prevented. Private rooms at varying prices available for obstetric cases should be provided in each hospital, and private patients whose cases demand especial attention should be encouraged to go to hospitals for confinement. Within the last few years a number of my private patients have requested admission to private rooms in hospitals for confinement, although they had comfortable homes and were possessed of ample means.

Thorough diagnosis and examination during pregnancy will indirectly lessen the mortality of septic infection. The prevention of toxemia, the recognition and treatment of anemia and the recognition and treatment of a previously infected condition of the genital tract are all of the greatest importance.

Limits of space and time in the present paper have caused me to omit entirely the consideration of puerperal mastitis.

DECREASING FECUNDITY: ITS CAUSES AND RESULTS.

By SCOTT P. CHILD, M. D.,
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As society is constituted to-day, whether we consider the individuals composing it or society as a whole, it is not presumptuous nor pessimistic to say that it is primarily selfish. We see the child striving to secure and hold to itself the prettiest plaything or the largest piece of sweetmeat; the pupil and student eager to attain the highest grade, or the greatest popularity with teacher and class-

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*Read before the Jackson County Medical Society, Kansas City, Mo., October 17, 1902.

mate. The business or professional man endeavors to secure the most trade or largest practice, and, when once attained, thinks naught but to hold the same to himself. Generic man is ever striving to climb to the summit of the social pyramid, and yields only to the force or greater selfishness of another. Institutions, business corporations, modern city, if not the national, government, are all likewise selfish in practice. And, when motive is considered, often anything save the selfish is recognized in it. If such is true, and it cannot be controverted, is it strange that our whole *moral* fabric is becoming selfish in the extreme, and that the very continuance and development of the human race is threatened?

When seeking the causes of such social conditions I contend that we have not far to go. They lie, first and foremost, in the interruption and disruption of wholesome family-life. It is universally held that the family and its continuance, unbroken and unsullied, is the basis of all society and good government. According to the standard dictionary, "a family consists, not of husband and wife, nor of man and his mistress, but of husband, wife and children." But what is the fact when we carefully note the most accurate vital statistics of recent years? We learn that family-life is yearly growing a less important factor in society, and that the birth-rate amongst civilized peoples is alarmingly on the decrease.

Vital statistics in the United States are, unfortunately, very incomplete. In fact, the national government makes no pretence to publish such, since very few of the states furnish the necessary data. But a few, such as Massachusetts, Michigan, Rhode Island and New Jersey, through the efforts of their respective state medical boards, are securing legislation for and gleaning vital statistics, which are yearly growing more accurate and detailed. It is through the annually published records of those boards that reliable and striking statistics can be presented of certain specific states, and a general average struck for a larger territory—if not the whole United States.

We find that in European states the gathering and publishing by law of vital statistics is quite a universal custom, and their published data are accepted by statisticians, sociologists and by the medical profession at large. Few reliable statistics date later than 1899, but those up to 1895 and 1897 show sufficiently well the conditions and tendencies which may be accepted as applicable to-day.

In considering the birth-rate, or vital statistics in general, of foreign countries, we are dealing with a far simpler problem than in the United States. For instance, if Russia, Italy or France are studied as to marriage- or birth-rate, we have but one nationality to consider, while in this country native and foreign population must be taken separately as well as together. This fact has a very important bearing upon the subject under discussion.

From a careful examination of the birth-rate of some twenty European countries it is found that all, save Norway and Switzerland, which show for five years past an increasing birth-rate, and possibly, as claimed by one writer, (South American) Spain and Servia, have been for years steadily decreasing in the number of births per 1000 population. Of these twenty foreign countries, Russia, with a population largely of peasantry, has the highest birth-rate; France and Ireland possessing the lowest. From the thirty-third, or latest, registration report of the vital statistics of Michigan, we have data yielding the following table for Europe for the years 1885, 1890, 1895 and 1899, respectively:

Births registered per 1000 population (still-births excluded):

Country.	1885	1890	1895	1899
Austria,	37.6	36.7	38.1	37.1
France,	24.2	21.8	21.9	21.9
German Empire,	37.	35.7	36.1	35.9
Hungary,	44.8	40.3	41.5	39.
Italy,	38.5	35.9	35.1	34.2
Norway,	31.3	30.3	30.6	30.9
Switzerland,	28.0	26.4	27.1	28.9
United Kingdom,	31.6	29.2	29.5	28.7
England and Wales,	32.9	30.2	30.4	29.3
Ireland,	23.9	22.3	23.2	22.9
United States.		26.7 (Estimate)		
New England States (save Me.),			25.1	

(p. Abbott)

Leaving this table without further comment for the present, I now call your attention to the data, so far obtainable, for those states of our own country in which registration is required by law, and hence approximately correct. The only ones which can be given as furnishing detailed statistics are, as heretofore stated, Massachusetts, Connecticut, Michigan, New Jersey and Rhode Island. Considered geographically, they do not represent the whole country, and still two such widely separated states as Massachusetts and Michigan are quite typical of the East and West as regards age and character of population. The statistics of Massachusetts are more accurate than those of Michigan, but under Dr. Wilbur, secretary of the board of health of the latter state, we have secured statistics which are approximately correct and suggestively ominous.

A table for the five states above mentioned yields the following birth-rate for the years corresponding to the given foreign table:

State.	1885	1890	1895	1899
Connecticut,	22.7	23.3	24.4	22.6
Massachusetts,	25.1	25.8	27.	25.8
Michigan,	21.7	19.8	19.8	17.0
New Jersey,	18.8	20.9	19.	15.8
Rhode Island,	23.1	24.7	25.7	25.6

The figures in both the European and American tables explain themselves, *i. e.*, that, by taking the so-called civilized world as a whole, the birth-rate is steadily decreasing; fewer children for the simple continuance of the human species are being born per each 1000 population than were 15 years ago. But, in addition to this, when carefully analyzing the second or American table, we learn that the United States is fast losing its individuality as a race power. Anglo-Saxonism is dying out. We are gradually becoming a foreign, or at least an amalgamated people, with a positive increase to the foreign side. Taking Michigan as an example, we learn that, of the reported 17 per 1000 born in 1899, out of 41,818 total births but 44.3% were possessed of parents both of whom were native, 33.4% having both parents foreign. Of the balance, 22.3%, the births were either of mixed or unknown parentage.

We find that in Massachusetts both the foreign population and foreign births are gaining fast upon the native. In 1850 the native population of this old New England state was 830,490. In 1895 it had increased to 1,735,253. During this same period, however, the foreign population has increased from 164,024 to 764,930. This means a native gain of but only 100% in 45 years, while the foreign increase, recruited to a considerable extent from French Canadians, was 450%. And of the total population the native birth-rate in 1895 was but 16.58, compared with a foreign birth-rate of 50.40 (per thousand). And still another fact to note is that, while the native birth-rate has decreased since 1850, that of the foreign population has slightly increased, notwithstanding that the marriage-rate of foreigners has decreased more rapidly, during corresponding years, than the native.

Returning again to the birth-rate of Massachusetts. In 1899 it was, as stated, but 25.8, this being less than for thirteen years immediately preceding; and since 1896 it has been steadily decreasing. In Michigan, the western state taken as a type, we note a decrease from 21.7, in 1886, to 17, in 1899. This means for Michigan a population of only about 2.3 children to each married couple or 6.3 to one hundred women of child-bearing age; and, according to the last census-report for Michigan, it has but 3.22 children per marriage of native origin, and 4.37 of foreign. Wilbur, in his latest Michigan report on Vital Statistics, completed in 1900, says, with reason, that, "if the ratio of births to the average American family is 3 or less, then the average family is a vanishing quantity." He continues: "This number of births will not even support a stationary population, and, as in France, which has reached the limit of 3 children per marriage, the population would actually decrease, were it not for immigration from more vigorous stocks." Dr. George J. Engelmann, of Boston, an authority on vital statistics, says: "At the present time (1901) over 20% of American married women are childless, whilst in the earlier days of the country only 2% were sterile."

If we accept the figures from the tables and statistics just given, we must be convinced, even disregarding the national mortality and causes of death, that America, as well as the whole civilized world, has a mighty problem to consider and solve in a question so important to society as a decreasing birth-rate. And if we as physicians and interested citizens recognize this, and acknowledge our responsibility as conservers of health and life, and in the development of a great race, we should carefully look into the causes and results and see wherein remedies may be applied to check this lowering birth-rate. I ask you now to consider with me some of the "*causes*" of a decreasing fecundity.

However we, as individual physicians, may differ as to the degree of specific causes, I am sure we will agree that for a general classification they may be divided into:

(1) Social causes;
(2) Criminal causes.

Social conditions and social customs or habits have done much in recent years to decrease the birth-rate. The social demands among most wage-earners, the great middle class, are such that marriage is deferred or delayed, thus rendering productive soil unproductive. The feeling is that the cost of living is too high to raise a family, hence women go into business or into the professions, often remaining single for life, or, on marrying, are so near the menopause that but one, if any, children result.

On the other hand, among the wealthy and those living in luxury and ease, we find not so many late marriages, but means often resorted to which prevent conception during or after intercourse. This is, of course, most reprehensible because unnatural, and always results in a debasing moral tone, as well as an unsatisfied physical need and physiological fulfilment. It is not meant that man should cut short in some way the conjugal act nor that women should resort to douching following coition. And every physician giving advice to do so, or not discountenancing it, in just that degree assists in keeping low our annual birth-rate.

In securing data and opinions for this subject as presented to-night, I submitted a few questions to several prominent gynecologists and obstetricians, among whom were Drs. Baldy and Hirst, of Philadelphia, and Dr. Howard Kelly, of Baltimore. From Dr. Baldy I quote the following, with which I heartily agree. "I think," he writes, "among the better class of people an exceedingly patent cause is expense of living and lack of desire to bring up children, and the inability to keep up the same scale of living and to support a large family in the way their mother and father have been in the habit of living."

"It is," he continues, somewhat sarcastically, "truly one of the penalties we pay for our so-called higher and advancing civilization. It is the whole people's fault, not the fault of the individual."

Kelly, of Baltimore, is most direct and clear in his written opinion. He writes: "I think that the causes of 'Decreasing Fecundity' in our country are entirely immoral in their scope and must, therefore, be met by the inculcation of true morality, which, of course, means religion." "The whole source of the difficulty," he further says, "seems to lie in the eager desire for pleasure and riches and impatience of any restraint in securing these ends and enjoying them to the utmost." In these few words Kelly reaches the "bottom of the trouble."

But, to be more specific, society or social intercourse is productive of another great cause, namely, the diseases which either directly or indirectly bring about a decreasing fecundity, *i. e.*, gonorrhea and syphilis. The former, in causing diseased conditions requiring operations upon, or removal of, the reproductive organs, thus removes the possibility of impregnation; while syphilis causes frequent, if not persistent, abortions or miscarriages. In my own practice one striking example presented itself in which the husband contracted syphilis after the birth of the first child. Following this infection he impregnated his wife five times, she aborting each time, save the last. The product of the last conception was born with characteristic lesions and lived but two or three months. In the practice of every physician many such cases occur, showing what syphilis—and it is not the least common of social infections—does in lowering the birth-rate. Gonorrhea is a very important cause in that it may, and often does, render man, as well as woman, impotent or sterile. More men than we realize, having acquired a gonorrhea with complicating epididymitis or orchitis, fail to impregnate their wives. But, of course, the pathological fault usually lies with the woman, who, having been infected with an acute or an awakened latent gonorrhea, suffers from diseases of the tubes and ovaries which require operations of such nature that they render her sexless, or unable, though innocent, to bring children into the world. Drs. Sänger and Rosthorn, of Germany, claim that 33% of all tubal diseases in women are due to the gonococcus. Kelly thinks that about 20% of the pelvic operations performed upon women are due to gonorrheal infection. All gynecologists and obstetricians believe gonorrhea plays its part, though they differ as to the degree in which it may be a cause.

So far we have been speaking of social causes. The second grand division given is the "criminal causes" or "induced abortion" often resorted to by both physician and layman. If there is one crime to-day that is reprehensible and still seldom made known in law or public, it is that of common, frequent, induced abortion among all classes of society. In a paper on "Criminal Abortion," by Ed. A. Ballock, of Washington, he said rightly: "We, as biologists are convinced that the end and aim of the human animal is the reproduction of its species, and whatever interferes with such reproduction is a biological crime." I wish to add to this that the interruption of pregnancy after conception, as resorted to by both regular and irregular physicians to-day, as well as by the laymen and laywomen themselves, is not only a biological crime, but a social and civic one, and should be punished as such. If induced abortions, except as indicated by a very few pathological conditions, were reported to the department of health or vital statistics, and the law applied accordingly, it would not be very long before an alteration and an increase in the birth-rate would be seen. That such is true is forced upon every physician and surgeon. Every year several women solicit our services to remove a viable embryo or fetus. It may be early or late in pregnancy, but nevertheless it is a living human organism, the destruction of which is manslaughter.

If we refuse, as every honorable practitioner does, notwithstanding fee or patient's good will, we are immediately told that some other physician will do it, and this we recognize as only too true. Sympathy for an unfortunate single woman, or a poor wife with numerous progeny, or the slave of a drunken brute, as the case may be, or, on the other hand, the desire to hold the practice of a wealthy family who wish no more children and make an offer of a handsome fee, all count to influence one. But sympathy, the desire to hide a woman's shame or some personal relation, should never weigh. The question is: Are we doing something to ennoble and continue the human species, and to assist in the furtherance of a plan of an all-wise Creator, or are we tending to bring about the decadence, if not the extinction, of mankind. As Ballock further says in his admirable paper: "Women should be made to understand that it is vastly more harmful to have an abortion than to bear a child, and that, while the mortality of the one is practically *nil*, the other causes many deaths and untold miseries every year."

Probably every physician of at least two years' practice has been called in to complete an abortion started by a mother or father, in which infection or some other serious sequelæ have resulted. Or, as the case may be, we are called in to treat a woman whom another physician has relieved of an embryo or fetus, but who through ignorance or carelessness has infected the patient. One life has been sacrificed by parent or physician, and we are sent for to prevent another death or to ease the mother until she joins her child. Many such cases occur every year. But no report of still-birth goes to the health board, nor, in case of the mother's death, are we likely to find a correct cause reported.

That the above are among the many causes and results of a lowering birth-rate none will deny. To be more specific is needless. Such facts are known not only to the profession, but to too great an extent to the public at large.

As physicians, as members of one of the noblest of professions, if not the noblest, it is largely within our power to correct many of the causes of a decreasing fecundity. And I cannot but feel that it is to be done largely through education, assisted by legislation. No class is entirely to blame for the condition, nor is any class free from blame. The clergy, our own profession, men high in the business world, the large middle class, the poor and illiterate and every stratum of society are aware of the causes named, and at times wittingly lend their assistance to their continuance.

Legislation should be urged which may tend to lessen the power of the irregular and dishonorable practitioner, as well as to prohibit the sale by druggists and advertising charlatans of all unsafe remedies or drugs sold for criminal purposes. Further, as is true in some of our states to-day, we should urge the passage of laws to prevent the marriage of syphilitic and gonorrheic people, at least until they may, by competent and honorable physicians and judges, be adjudged safe to marry.

And above all is the need of every physician inculcating in the minds of his patients a perception of the danger in resorting to any means toward preventing conception or in terminating an early pregnancy. And further, while we may not all acknowledge it as our duty, we, as supposedly cultured, scientific and moral men, should not hesitate to present the moral and sociological sides of the question to our patients. For, being possessed of the knowledge as to the influence of such acts upon the parent as well as upon the race, as physicians we are, therefore, under a grave responsibility.

MALNUTRITION.*

By THEODORE J. ELTERICH, M. D.,
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Those who observe considerable numbers of infants not uncommonly find subjects in whom occurs a progressive and, in some instances, extreme wasting of the soft tissues.

While all these patients usually present the same clinical features, they, nevertheless, form several distinct clinical groups. In a certain number of cases the impairment of nutrition is due to an insufficient supply of food either in quantity or in quality. These are, therefore, instances of starvation. In another class of patients the malnutrition seems to be due to an impairment of the function of absorption rather than that of digestion. In a third class of patients the wasting is the result of constitutional or local organic diseases.

At no other period does the manner of feeding play such an important rôle as during the first year of life. At birth the development of the glandular system of the intestine is by no means completed, but, on the contrary, certain very important changes have yet to take place. According to the researches of Baginsky, from birth on there is a constant increase in the number of glands of the entire intestinal tract, while at the same time the efficiency of the intestinal lymphatic system is notably diminished.

For this reason, therefore, very young infants are less capable of assimilating foods for the digestion of which considerable chemical action on the part of the digestive system is required.

Throughout all ages nature has referred the newborn to the maternal mammæ for its sustenance. There are, however, several conditions which render it impossible to follow nature's indication. An insufficient supply of breast-milk, undeveloped nipples, disease in the mother and circumstances requiring the mother to earn a livelihood away from home are perhaps the most excusable conditions under which this principle, vital in importance, is disregarded. Absurd notions about feeding, superstitious beliefs, bad hygienic surroundings, lack of light, pure air and cleanliness are the missing links in the chain of circumstances that bring about this unfortunate condition.

While malnutrition is most frequently seen in children of the poor, it is by no means limited to the proletariat. It is also, though less frequently, seen in children of more fortunately situated families. The social demands, made upon the society woman of to-day, not only furnish her with a strong disinclination, but also render her totally unfit for carrying on the function of wet-nursing. An inherited weakness of constitution, improper foods and wrong methods of feeding become the contributing causes in these cases.

Frequently malnutrition occurs as a secondary condition to various constitutional and local organic diseases. Prominent among these are tuberculosis, syphilis and chronic gastro-enteric diseases. It may also constitute a sequela of some of the acute infectious disorders.

When malnutrition does not occur as a secondary condition, the pathological conditions which are found are exceedingly unsatisfactory. No definite pathological lesion has yet been found in the various organs. In the intestine there is considerable atrophy of the mucous membrane and submucous tissue. The mesenteric lymphglands are seemingly enlarged. The enlargement, however, is not real and is probably due to the atrophy of the surrounding mesentery. Frequently we find secondary morbid conditions,. such as atelectasis of the lungs, bronchitis, bronchopneumonia, fatty liver and catarrh of the intestinal tract.

Cases of malnutrition differ in severity, but the main tendency is alike in all. The most characteristic feature is the general and often extreme emaciation of the patient. The infant begins to lose in flesh, sometimes so rapidly that the soft tissues seem almost to melt away, and he is practically reduced to skin and bones. The skin is wrinkled and hangs in loose folds from the limbs. Bedsores over the sacrum and erythema and excoriations of the buttocks are usually present. The fontanel is sunken; the features are pinched, and the face looks old and wrinkled. The fingers are so thin that they resemble the claws of birds. Anemia is always present, and occasionally edema of the feet and scrotum is seen. The number of fecal movements may be increased or diminished, although the ordinary history of the disease gives a moderate number of unusually large stools. The abdomen is often prominent, although in most cases it is sunken. The temperature is usually subnormal, and the pulse is weak and rapid. The skin feels cold and clammy to the touch. Complicating disorders of the mouth, of the bronchi, and functional nervous disturbances are liable to occur.

A condition of malnutrition is easily recognized. The diagnosis as to cause, however, is at times exceedingly difficult. Cases that are due to ordinary starvation are easily recognized by the rapid improvement which follows a diet carefully adapted to the digestive capacity of the infant. When the impairment of nutrition is due to a vice of assimilation, the improvement is much slower, and many weeks of careful treatment are requred to bring about a decidedly improved condition. The principal difficulty encountered in the diagnosis is the exclusion of tuberculosis. This is often impossible. A family-history of tuberculosis is of some importance. Physical signs of consolidation found anteriorly are very significant and make tuberculosis almost certain. The presence or absence of the tuberculin test will be required in some cases to make a differential diagnosis.

The prognosis of malnutrition is in all cases bad, especially during the first year of life. It is most favorable when the condition results from ordinary starvation. If the disease has not gone too far, and if the requirements of treatment are carefully and logically carried out, the infant has a fair chance to recover. It is, however, even under the most careful treatment, a very intractable disease.

Treatment.

Many cases of malnutrition may be more easily prevented than cured. A frequent and sometimes serious mistake made by physicians is that they either allow the infant to be weaned for evidently insufficient reasons, or, on the other hand, of having breast-feeding continued when the child does not thrive. In both instances a proper knowledge of what can be done with human milk, that is with the management of its different constituents, by increasing its relative proportions, would be of benefit to both the mother and the child, and, in some instances, even save the life of the latter. The effects of diet upon the quality and the quantity of milk are often very great. In those cases in which the milk does not agree with the infant, or its development is unsatisfactory, an intelligent attempt should be made to rectify it. Another point, and one so frequently neglected by the physician, is the systematic weighing of the infant during the first year of its life. It is of great importance and the most useful method of determining the nutritive condition. A sudden loss in weight is often the precursor of an impending illness.

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*Read at the Pittsburg Academy of Medicine, January 19, 1903.

In the many cases in which the mother is unable, for physical or other reasons, to nurse her infant, a proper substitute must be found with as little delay as possible. The highly reprehensible practice of waiting for some definite improvement is liable to result in a very pronounced condition of malnutrition.

One of the first resources is to secure a wet-nurse. Unfortunately such persons are hard to find, and, when found, rarely possess the qualifications necessary for this function.

The problem in the treatment of malnutrition consists in adapting the milk of a domestic animal to the digestive and assimilative capacities of the individual patient. The only one which can be modified to the needs of the individual case is cows' milk.

My experience in the management of cases of malnutrition has shown me that mixtures containing a low percentage of fat and proteids and a moderate percentage of sugar, yield the best results. The proportions which I have found the best suited for the early treatment of the majority of cases of malnutrition of a high grade are:

Proteids	0.25
Fat	0.25
Sugar	4.00
Lime water	5.00

After a few days I increase the percentage to P. 0.75, F. 1.00, S. 5.00, L. W. 500.

As an infant gains in weight I increase the percentages of proteids and sugar, but for some time I do not raise the percentage of fat above 1.00. For some unknown reason these patients seem to be unable to utilize any but small amounts of fat, and continue to lose when larger quantities are given. My experience in this respect is fully in accord with that of Westcott, who says: "It is a curious fact that there seems to be in certain delicate infants a distinct inability to digest cream when added even in very small proportions to a milk dilution, and the same experience has occurred with certain infants temporarily fed, for sufficiently good reasons, upon condensed milk when an effort was made to increase the very low proportion of fat in such a mixture by adding small amounts of fresh cream, as, for instance, half a dram of cream to a bottle of three or four ounces. In fact, it seems to me quite probable that the low proportion of fat in condensed milk solutions constitutes one of the factors, in conjunction, of course, with low proteids, that sometimes make this preparation readily tolerated in certain cases in which more reasonable modifications fail, an experience that I doubt not has occasionally occurred to the mortification of others besides myself."

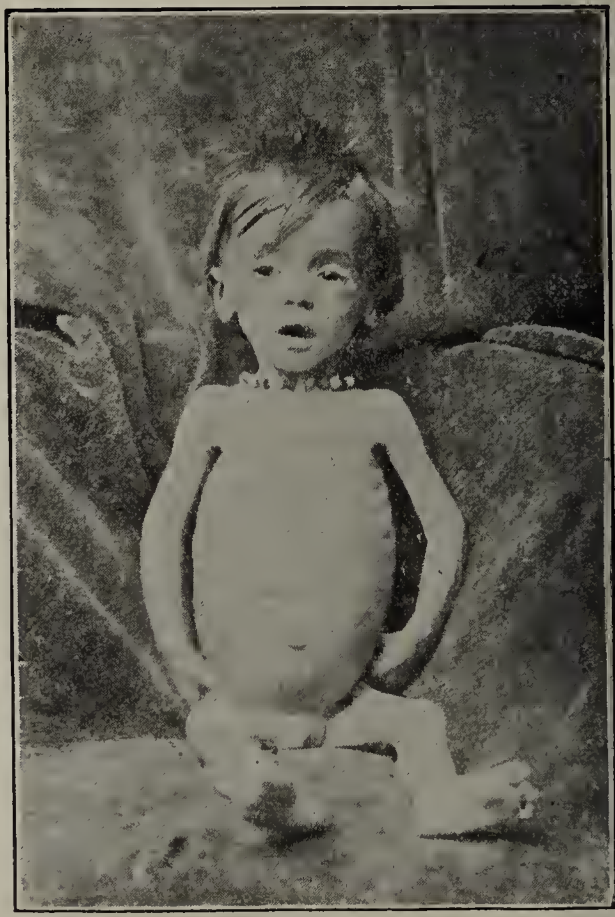
For this reason the administration of cod-liver oil in these cases is not only useless, but harmful as well.

In those cases which improve it is usually possible gradually to increase the amount of fat and other constituents until the proportions suitable for a normal infant of the same age are reached. In difficult cases the use of whey may be found to act beneficially. Whey contains all the sugar and water of milk, while all the caseinogen and most of the fat has been removed. The fat and proteid percentages are low, the remaining proteids consisting almost entirely of lactalbumin. Whey may be made according to the formula found on the label of every bottle of Fairchild's essence of pepsin.

Attention to cleanliness, maintenance of an unusual supply of fresh air and sunlight and keeping up the bodily temperature are all important details of treatment. Stimulation by small doses of brandy is of great benefit. The various complications must be treated according to their nature.

The following cases may be cited as illustrative of a high grade of malnutrition:

CASE 1.—C. M., male, 9 months old, was said to have been healthy and of normal weight at birth. During the first six months of life he was nursed at the breast and thrived. The mother becoming pregnant, he was weaned and fed on condensed milk. The milk was given according to the usual formula employed for an infant of that age. Failing to digest this proportion, the food was still more diluted. He rapidly lost in weight and at my first examination scarcely weighed eight pounds. His condition was most deplorable. My notes at the time of my first examination



read as follows: The face was thin and pale; the expression apathetic. The chest was emaciated so that the ribs showed plainly. The fontanel was open and depressed. The abdomen was very prominent and tympanitic. The loss of adipose tissue and the distension of the bowel by gas was so great that the outlines of the transverse colon were plainly visible. There was edema of the feet and scrotum. The skin covering the buttocks was excoriated. There was no evidence of rachitis or scurvy. The temperature was normal, the pulse rapid and weak. The bowel movements were seven or eight a day in number, thin, green in color and usually offensive. They sometimes contained mucus. Evidences of bronchitis were found on physical exploration of the chest. On being placed on a diet of modified cows' milk, according to the plan described above, the infant rapidly gained in weight, notwithstanding his extreme degree of emaciation, weakness of the digestive organs, unsanitary surroundings and a somewhat careless and ignorant mother. Although still somewhat below the average weight, he has entirely recovered.

Another case seen in consultation with Dr. M. C. Taylor, of Beltzhoover, is very instructive.

CASE 2.—A male infant, 14 months old, had been fed on various kinds of foods. He was said to have been healthy during the early months of life while he was nursed. After he was weaned he began to lose progressively in weight, and he became very anemic and emaciated. He had eight teeth. Nothing abnormal was found on physical examination. The bowels were constipated, and the fecal movements were brown and imperfectly digested. On being placed on the modified cows' milk, beginning with the percentages as given above, in two weeks the infant began to gain in weight and to digest its food. After two months he had recovered entirely and was quite plump.

CASE 3.—An infant, 4 months old, referred to me for treatment by Dr. H. T. Price, of Allegheny, gave a history of having been fed on various foods containing starch from the first few days of life. It was very apathetic and looked as if it could not live many days. The fecal movements were large and fairly well digested. Its respirations were shallow, its pulse weak and its temperature was subnormal. It did not respond to the various modifications of milk given it, but lost steadily in weight and died several weeks later.

CASE 4.—C. H., male, 14 months old, was healthy during the first year of life. When 12 months old he was weaned suddenly early in the summer. He contracted a severe fermental diarrhea from which he never completely recovered, but which gradually developed into a chronic ileocolitis. He lost rapidly in weight, became very anemic and was finally reduced to a mere skeleton. There was such constant interference in the treatment of this patient by the relatives and friends that I was finally compelled to withdraw from the case. The infant died a short time later.

Cases I and II illustrate malnutrition caused by starvation. In both these patients the improvement was marked and rapid as soon as the patients were placed on a suitable diet.

Case III represents malnutrition due to a vice of absorption. It is a case of acute atrophy or athrepsia. This form of malnutrition is exceedingly difficult to manage and, occurring in infants less than six months of age, usually terminates fatally.

Case IV represents malnutrition the result of grave organic intestinal disease.

REFERENCES.

1. Untersuchungen ueber den Darmkanl des menschlichen Kindes. Virchow's Archiv, Bd. 89, 1882.
2. Hennoch, Kinderkrankheiten.
3. Keating, Cyclopedia of Diseases of Children.
5. Rotch, Pediatrics.
6. Westcott, Management of the Fat Percentage in Difficult Cases. Archives of Pediatrics.

A FATAL CASE OF ANTHRACOSIS, WITH AUTOPSY.

By THOMAS STOTESBURY GITHENS, M. D.,

of Philadelphia.

The term anthracosis is used indifferently, by medical writers, for deposition of carbon in the lungs, and for the changes induced in the lung by such deposit. In the former sense it is a very common condition, and may be seen, to some extent, in every autopsy on old persons, especially in the city. It is, however, rare for the deposit to be of a sufficient amount to cause structural change; and extremely so for it to be the direct cause of death. I was fortunate enough, while resident at Blockley, to see a case that proved fatal, and, with the kind permission of my chief, Dr. James Tyson, I shall report it. The history of the case is as follows:

Frank G., aged 27 years, a barber, whose place of residence was Pottsville, was admitted to the hospital April 14, complaining of pain in the chest. The family history is interesting, both parents having died of lung disease, the mother of pneumonia, the father of some obscure affection. The patient's previous history revealed the suggestive fact that he had had syphilis five years before. He said that the present illness had lasted several years, but that he could not set an exact date for its beginning. It started with dyspnea and cough, with slight pain in the side at times. These symptoms steadily increased, but he was able to work until the day before his admission, when he had a sharp, stabbing pain in the right side, accompanied with a chill. A severe hacking, exhausting cough started at the same time and continued until his death. On being questioned he stated that he had had night-sweats for the past year, but that there had never been any blood in the sputum.

Examination showed a young man of fair development, rather emaciated, sitting up and holding the sides of the bed to steady the accessory muscles of respiration. The respirations were 32 to the minute; and the pulse, 120, of quite high tension. Face anxious. Tongue heavily coated. Chest much emaciated; interspaces depressed. Heart rapid, displaced, occupying the middle line. No murmurs.

Left Lung. Anteriorly: Vocal fremitus increased over the apex. Percussion note impaired from the second to the fourth rib. Auscultation showed over this area bronchovesicular breathing and fine moist rales. Over the base of the lung the rales were much larger, and the breath-sounds not so high-pitched. Posteriorly: Vocal fremitus increased over the base. Percussion-note generally impaired, but especially over the scapula. Auscultation, same as anteriorly.

Right Lung. Anteriorly: Fremitus increased over base, Dulness and bronchovesicular breathing over base; harsh breathing over middle of lung. Posteriorly: Similar, except for a small area of cavernous breathing and pectoriloquy in the suprascapular space.

Abdomen and *Limbs* were negative.

The sputum examination was entirely negative. Tubercle bacilli were not found, and the amount of pigment was not sufficient to excite remark.

The urine was slightly albuminous and showed a few casts.

A diagnosis of tuberculosis was made in spite of the fact that the examination of the sputum was negative.

The patient's condition remained entirely unchanged until death occurred in an attack of dyspnea, four days later. Toward the end he was somewhat delirious.

Autopsy. Body of a well-nourished adult male. Rigor mortis absent. Pylorus, 3 cm. below umbilicus. Liver, 10 cm. below costal arch to sixth interspace. Pleural cavities totally obliterated. Pericardium normal. Heart displaced, occupying the middle line. Spleen, soft and pale. Adrenals normal. Kidneys: Capsule stripped with difficulty. Pelvic fat increased. Cortex, striated and injected.

Lungs. Pleura: There was a chronic plastic pleurisy, with marked thickening of the pleura and firm interlobar adhesions. Beneath the endothelial layer of the parietal pleura were sharply circumscribed areas of coal-dust infiltration, varying in size from that of a pin-head to half an inch long. There was considerable free pigment in the bronchi. The left lung had four lobes, one being merely a tab from the base. It was extremely heavy, and the entire lung sank in water. Pieces of the upper and middle lobe sank, but those of the lower lobe floated. On section the lung was found to be intensely pigmented with coal-dust and extensively fibrous. The middle and apical lobes were hard and rough, giving free pigment to knife and hands, and showed no structure to the naked eye. Here and there were small areas of softening with inky contents. The lower lobe showed irregular gray patches, varying in size from that of a point to an inch or more in length, and giving an appearance not unlike that of gray marble. No tubercles could be found. The peribronchial and mediastinal glands were large and black. In the right lung, on section, the appearances were much the same. In the posterior part of the upper lobe was a cavity about the size of a walnut and filled with black fluid. There was no sign of tuberculosis.

Microscopical sections of these lungs showed that the pigment-granules were, in part, extracellular; in part, enclosed in cells. The former formed great masses around the bronchi, in which no structure was visible, and, where the lung was consolidated, they were arranged in narrow bands, perhaps corresponding to the lymphatic vessels. Where the lung was not consolidated, the pigment was always contained in cells of one of three types: (1) Far most numerous were round cells, which corresponded closely in size with the cells lining the alveoli, and may have been either these or wandering connective-tissue cells; (2) small round cells, like lymphcorpuscles; (3) branched cells of the fixed connective tissue type.

Any of these types of cells may be so filled that they constitute a solid black mass, or they may contain only one or two granules. The flat cells lining the alveoli almost always contain pigment, and any granules lying free in the alveoli are enclosed in similar cells.

The lungs become solid through the formation of new connective tissue, which, by its contraction, cuts off the bronchioles and partly collapses the air-cells. The epithelium lining these cells then desquamates, and the alveoli are filled by these cells and by wandering corpuscles. They are at first distinguished from the surrounding lung-tissue by the absence of masses of pigment; but soon, by the deposition of pigment in them, the boundaries are lost, and it is no longer possible to determine the outlines of the pre-existing alveoli.

Of the special tissues, the pleura always contains pigment; and it is not uncommon to find deposits on the parietal pleura opposite masses on the visceral, where there are no adhesions. The cartilage of the bronchi rarely contains granules. I was unable to find any, but one writer has seen them in the cells of the cartilage. The lymphglands, of course, are always black; and, microscopically, we see the same sorts of pigment-cells as in the lungs, in about the same proportion. A good deal of the pigment seems to be extracellular; many, if not all, of the original cells of the glands contain no pigment.

The shape and size of the individual pigment-granules are very variable. A large number are long and narrow—too long to be carried in a cell. One of my sections showed a mass in the pleura as large as two or three cells.

Chemically, the pigment was about one-fifth of the lungs by weight, and 6.23% of the pigment was ash. This proportion fitting hard coal best, we assume that such was the pigment, and that the patient had worked in the mines before becoming a barber.

The first writers on anthracosis held that the carbon is endogenous. Mannkopf, Warburton-Begbie, Ritter, Koschlakoff and even Virchow, all writing in the sixties, espoused this view. Arlidge, however, during the next decade, pointed out that, in workers in steel, lime, etc., the pigment agrees chemically with the dust inhaled, and is not carbonaceous; and the experiments of Rosenthal, Slavjansky, Ruppert, Schottelius and others, all done before 1880, and Greenhow's cases of pneumonokoniosis in stone-cutters, steel-grinders and even flax-dressers, convinced the profession that the pigment is inhaled.

Kuborn, in 1862, and Mayet, in 1871, had held that the pigment is swallowed and deposited in the lungs by the lymphatics; but the experiments of Ruppert and Schottelius, before mentioned, in which rabbits were made to inhale powdered ultramarine, silenced this theory also. Having shown that the pigment is taken up by the lung itself, the question still remained as to the manner in which the pigment-granules penetrate the tissues.

The first theory was that Crocq, in 1862, who held that the cells lining the alveolar wall desquamate on account of the irritation of pigment particles, and that the granules force their way through the spaces thus left in the wall. The next view advanced was that of Traube, that the force of impingement of sharp particles drives them through the cells into the tissues. Several theories have since been advanced. Aufrecht's, that they force their way between the cells lining the bronchi, and that all the granules that reach the alveoli are expectorated; Rindfleisch's, that they are carried in by ameboid leukocytes; Buhl's, that the endothelial lining of the alveoli is related to lymphatic tissue, and is, therefore, absorptive; and Knauff's, that there are spaces between the cells of the alveoli through which they can pass. The last four are probably all true to some extent.

Whether sterile dust is, of itself, able to cause inflammation and consolidation of the lung, without infection, is a much more difficult question to decide. Most of the discussion has, however, been confined to the relations between tuberculosis and the lesions of anthracosis; and here we find the most opposing views. The strongest writer in favor of its tubercular nature is Tripier, who wrote, in 1884, and again in 1894, reviewing all the literature and trying to show that all reported cases were tubercular. Most writers, however, consider that the dust is, of itself, sufficient to cause inflammatory change in the tissues. In any case, it is clinically distinct from tuberculosis; and the differential diagnosis is of importance. The most characteristic sign is the black sputum, but this is often absent. The next point, upon which I would lay especial stress in the history of our case, is the extreme dyspnea, entirely out of proportion to the fever and weakness. Finally, the diffuseness of the process in the lungs, and its long course, and in most cases the history of a dusty trade. The temperature in our case ranged from 104° to 99°; but, as the first observation was made only three days before death, it is impossible to draw conclusions from this. The respirations varied from 28 to 40, and the pulse from 100 to 140.

The points of extreme interest in our case are the youthfulness of the patient, the fact that his occupation was given as barber, and the history of syphilitic infection five years before.

In conclusion, I should like to add a note in regard to the paucity of literature relating to anthracosis in this country. In a careful review of the subject I have been able to find no mention of the disease in the United States, and only one from this continent—an article published by Osler in the *Canada Medical and Surgical Journal*, 1875. I wrote to the Secretaries of the County Medical Societies of the six counties of Pennsylvania in which most coal is mined, and they all answered that no cases or articles upon the subject had ever been presented before the societies. I wish to take occasion here to thank them for their prompt answers to my letter.

UPON THE LOCAL USE OF COCAINE IN THE NOSE.*

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The local use of cocaine is barely alluded to in most text-books, its advantages are dwelt upon, but usually no hint of its dangers is given. There is scarcely a rhinologist, however, that has not had an alarming accident occur in his practice from cocaine, and as a consequence some of our ablest specialists hardly dare to use the drug at all. It may be well, therefore, to review briefly the complications that may occur, to give some idea of their causes and to consider how they may be avoided.

It is the writer's belief that accidents occur because of errors in dosage, and he agrees with Grayson[1] when he says that there is nothing treacherous or exceptional in the action of cocaine, that, although powerful, it is quite controllable and that, by estimating the vital power of the patient, we can obtain a fairly accurate idea of the amount of the drug we can use with safety. The usual dangers can be summed up as follows: (1) Drug habit; (2) secondary congestion and hemorrhage; (3) local subjective sensations; (4) effects attributed to the so-called idiosyncrasy.

(1) *Drug Habit.* The cocaine habit is too well known to need any extended mention here. It is readily acquired, is terrible in its results and is practically incurable. No physician should ever give cocaine in any form into the hands of his patient for the relief of nose or throat symptoms, unless the patient is in the last stages of tuberculosis or similar painful and hopeless disease; it is even wise not to inform patients when cocaine is applied. One views with horror and alarm the careless way in which prescriptions for cocaine snuffs and sprays are recommended for hay fever and even for simple colds in the head.

(2) *Secondary Congestion and Hemorrhage.* Applied to the mucous membrane of the nose, cocaine produces not only a local anesthesia, but also a local anemia. The latter is due (according to Wood[2]) to action upon the constrictor nerves and unstriped muscles of the arteries and veins. After an hour or two this ischemia is often followed by a marked congestion, usually in proportion to the amount of the previous constriction, and hemorrhage occurs if the mucous membrane has been broken. The reason why the congestion takes place has not been discovered. Bosworth[3] taught that the bloodvessels are less dilated after cocainization is past than they were before, but the opposite view is the one now generally held. Troublesome secondary congestion can usually be avoided by restricting the strength and amount of the cocaine solution used. Hemorrhage, if it occurs, will, of course, be in proportion to the amount of congestion present. Iodoform gauze or similar packing makes a satisfactory guard against this important complication.

(3) *Local Subjective Sensations.* In some persons a sensation of constriction and strangulation is induced if even a small amount of cocaine reaches the rhinopharynx and pharynx. As absorption takes place slowly in these localities, the paresthesia is more disagreeable than dangerous, and can be ignored if the solution is applied only when it is needed.

(4) *Effects Attributed to the So-called Idiosyncrasy.* Just how cocaine produces the alarming faintness and other symptoms which sometimes arise, symptoms that have been ascribed to a peculiar idiosyncrasy of the person affected, has not as yet been explained. Probably, as the weak pulse, pallid lips and cold, clammy skin indicate, it is due, as Reichert[4] suggests, to an overdose of cocaine paralyzing directly through the circulation the intrinsic nerve apparatus of the heart.* This effect is instant and profound. Syncope and convulsions may also occur from anemia of the nerve centers. Randall[5] recorded, some years ago, a case of cocaine poisoning

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*Read before the Univ. of Pa. Medical Society, Jan. 16, 1903.

*Cocaine given internally accelerates the heart by acting upon the vagus and lessening its inhibitory action. G. W. Crile. Alvarenga Prize Essay, 1902. Small doses increase the reflex irritability of the cord. Crile, loc. cit.

that occurred in a child, six years of age. He estimated that one-fifth of a grain was the maximum that could have been absorbed, about 5 minims of a 4% solution having been applied to the turbinates with the applicator. Shortly afterward the child became weak and fainted. When seen half an hour later, the patient was delirious and very restless, the pupils were dilated, the face flushed and dry, temperature, pulse and respiration were not affected; within 24 hours the child was well. This case was unusual, because it occurred in a child, children being seldom affected by cocaine applied locally in the nose, and because of the symptoms that followed syncope, which were more like the symptoms of general cocaine poisoning. In the typical adult case the patient suddenly feels weak and faints, the pupils become dilated, the lips and face pale, the muscles rigid, convulsive movements of the arms and legs may occur, and then, in the course of a few minutes, recovery ensues, general weakness being the only after-effect.

Various explanations can be advanced to account for this apparent susceptibility to cocaine. Ball[6] believes that accidents from cocaine result from its use in spray form. The lining membrane of the nose presents a broad vascular surface, making absorption rapid, and, when a spray is used, hard to measure and regulate; nevertheless, although toxic symptoms are readily produced when the spray is carelessly used, the symptoms sometimes occur when the drug has not been applied in this way. In a person weakened by age or illness, and whose circulation is poor, absorption may take place so slowly as to tempt the operator to deluge the tissue in order to hasten the local effect. In such a case, after absorption is completed, poisoning may be expected to occur. One can readily realize that the solution applied to a greatly distended turbinate will soon find its way into the large venous sinuses of the nasal mucous membrane of this part, and, when the constricting action is at last produced, solution and blood will be at once thrown into the circulation and quickly reach the heart. In persons of nervous and sanguine temperament, with especially vulnerable nerve tissue and with an active capillary circulation, less amounts are required to bring about therapeutic and toxic results. Such a condition of the circulation and nervous system is produced by the exhibition of alcohol, which explains the unfortunate results that occasionally follow the application of cocaine to patients who have taken whiskey to fortify themselves for an operation. In the weak, old and nervous, therefore, cocaine must be used with caution.

It will not do to overlook the fact that occasionally syncope will occur when cocaine has not been used at all. Weak, nervous persons may collapse from sheer apprehension, and, as is well known, stout, hearty men sometimes faint at the sight of blood or while being vaccinated. Differentiation as to the cause of the symptoms, therefore, is not always easy, and, no doubt, toxic effects arise usually from a combination of causes, but a sufficient number of cases is found in which faintness occurs when ordinary applications of cocaine solution are made, and do not occur when cocaine is omitted from the solution applied, enough cases to justify the belief that in them certainly cocaine alone is responsible for the ill effects.

Adrenalin chloride has proved a most valuable aid in lessening the dangers and in enhancing the powers of cocaine. In hay fever and like congestions it may be used as spray in the strength of 1 to 10,000, or in these and in other cases be applied locally in the strength of 1 to 4,000. Both cocaine and adrenalin act slowly and, therefore, one-half to three minutes should be allowed to elapse between the applications. Schleich's solution, instead of cocaine, may be injected before such operations as that of resection of the columnar cartilage.

In closing, it may be said that clinical experience warrants the belief that cocaine in spray form can safely be employed if limited to a few gentle puffs of a 1% aqueous solution. If used on the cotton-tipped applicator, a 5% solution should be the maximum strength employed. It should be applied carefully and accurately, half a minute at least allowed between the applications, and the tissues should be repeatedly inspected, touched and tested, so that no more cocaine than is necessary shall be applied. Adrenalin chloride solution should be employed to aid in bringing about the effects desired. If due attention is paid to these directions, no one need fear any untoward result from the local use of cocaine.

BIBLIOGRAPHY.

1. C. F. Grayson, Dis. of Nose, Throat and Ear, p. 78, 79.
2. H. C. Wood, Therapeutics.
3. Bosworth, Dis. of Nose and Throat.
4. Reichert in Therapeutic Gazette, Aug., 1902, p. 521.
5. B. Alex. Randall in Univ. Medical Mag., April, 1889.
6. Ball, Dis. of Nose and Pharynx, 4th. Ed., p. 84.

THE SCOTTISH MEDICAL AND SURGICAL JOURNAL.

March, 1903. (Vol. XII., No. 3.)

1. The Inefficacy of Disodicmethyl Arsenate (Arrhenal) as a Therapeutic Agent. THOMAS R. FRASER.
2. The Treatment of Auto-intoxications of Pregnancy by Thyroid Extract: The Anticipation of Impending Eclampsia. H. OLIPHANT NICHOLSON.
3. A Note on the Chemical and Physiological Properties of Plasmon. CARSTAIRS DOUGLASS.

1.—Fraser says that the much praised **disodicmethyl arsenate or arrhenal**, though containing much arsenic, is practically an inert substance; that even in enormous quantities it is incapable of producing the well-defined physiological action and the well-recognized toxic effects of the arsenic ion; and that, as might in that case be anticipated, it is also incapable of exerting the remedial or therapeutic influences which are those of the older and commonly used compounds of arsenic. [T. M. T.]

2.—Nicholson, in his paper on the **treatment of auto-intoxication of pregnancy**, reports a case in which the following points were noted: (1) When pre-eclamptic symptoms were present, the urine secreted was of a very low specific gravity, and the urea excretion was also strikingly diminished. There was only the faintest trace of albumin on these occasions, and there was none at all at other times until after the fit, when a somewhat larger amount appeared. (2) Invariably, after thyroid extract was given, the specific gravity of the urine was raised and the urea excretion was increased: (3) On the occasion when amaurosis was present and eclamptic seizures were evidently impending, the toxicity of the urine was roughly estimated by injection into the jugular vein of a rabbit. The urine was found to be feebly toxic. (4) The toxicity of the urine passed on the following day, after large doses of thyroid extract had been given, was similarly estimated and was found to be remarkably toxic. (5) Diuresis was observed to follow very promptly after the large doses of thyroid extract, and the solid general edema which was present was obviously reduced. [T. M. T.]

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Pneumonia in Chicago.—The prevalence of pneumonia in Chicago during the past few months has been one of the most extraordinary phenomena in disease that the civilized world has seen for many a year. We expect to see plague and smallpox and even typhoid fever prevail in widespread epidemics, but there are few persons outside the medical profession (or even inside it, for that matter) who are prepared to hear of pneumonia acting as a pestilence in the midst of a large city. And yet the fact that pneumonia has assumed pestilential proportions in Chicago, is shown clearly by the figures.

According to the *Bulletin* of the Chicago Health Department, for the week ending May 16, pneumonia headed the death-list in that city. Of the total 586 deaths from all causes for that week (including 46 from suicide and violence) 172, or nearly one third, (29.3 per cent.) were due to pneumonia. Since the first of the year there have been 2,659 deaths from pneumonia as compared with 1,190 from consumption, or nearly 125 per cent. more from pneumonia that from the "great white plague."

We confess that these figures are to us very astonishing, and that they present a problem which in our ignorance seems to us to be one that has not only alarming features, but also novel and unsolved ones. We cannot recall anything that is exactly comparable with it. We know, of course, that pneumonia has sometimes assumed epidemic form in other localities, and we realize that, being a bacterial disease, there is nothing mysterious in its proving itself infectious, but what we mean is that the unprecedented extent and virulence of this epidemic seem to demonstrate that pneumonia has capabilities for evil that certainly have never been fully recognized by the profession at large. In this sense this epidemic in Chicago will be an object-lesson of unusual importance.

The stolidity of human nature in the face of a familiar danger is often remarked, and is shown strikingly in this instance. If plague or even smallpox had caused as many deaths in Chicago since January 1 as pneumonia has done, there would long before this have been a popular stampede.

The Chicago *Bulletin*, from which we quote the above figures, naturally concerns itself with the question of prevention, and cries aloud for prophylaxis and for the sanitarians to come forward with a remedy. But not much seems forthcoming in this line except some rather platitudinous suggestions from a Michigan health officer about a "propaganda of healthful living, etc." We fear such propaganda will not solve the whole problem which Chicago is presenting to the world. It is a question for nicer scientific work than conducting a "propaganda of healthful living."

Conditions in Chicago of late years have seemed highly favorable for the propagation of the infectious diseases, as shown by the prevalence not only of pneumonia but also of typhoid fever. But it is noteworthy that this latter disease is not very prevalent there now according to the death-rate—only 7 for the week indicated. As for pneumonia, its high mortality is a cause for concern in other places than Chicago. For instance, in New York State this disease caused 8,800 deaths in 1902, or a little over 50 per cent. of the mortality from diseases of the respiratory organs, thus exceeding tuberculosis of the lungs.

The Etiology of Vaccinia and Variola.—Dr. Councilman's presentation, regarding the etiology of smallpox, resembles a great many other presentations on similar subjects; the verdict with regard to so many must be "interesting but not proven." It is always a question just how much we can let down the bars that are known as Koch's rules, when the conditions are such that is appears to be absolutely impossible to apply those rules, either now or in anything like a reasonable period. Of course, we can hardly expect to apply them to these mysterious intracellular bodies the nature of which as living entities, we must remember, has never been conclusively proven; which have never been cultivated outside the body, or inside the body either so far as we know, for that matter; the methods of reproduction of which by sporulation, although they bear a certain distant resemblance to those of the plasmodium of malaria, cannot be said to be beyond the possibilities of degenerative processes. If one takes the trouble to study the nucleolus of a ganglion cell of the central nervous system in various stages of degeneration of the cell, he will be impressed by the extraordinary manifestations of growth and apparent multiplication which occur in it and which can nevertheless readily be explained as merely phenomena of disintegration.

Dr. Councilman deserves praise for two things; first, the technical perfection of his work, the clearness with which the intracellular and intranuclear bodies are shown by his methods, which is exceedingly interesting and leads us to hope that if these bodies exist in other structures it will be possible, by the application of the same careful methods, to demonstrate them and disprove the assertion that they are the parasites of smallpox; and, second, the very ingenious explanation which he gives of the different forms. Now this explanation may be incorrect. As we said in the beginning, the facts are not sufficient to prove the theory. Nevertheless, an ingenious theory which fits the facts may be of great use even although it goes beyond them and is in itself incorrect. There are so many theories regarding natural phenomena that are regarded at one time as facts, and at another time as false, that it would be unfair to expect certainty regarding Dr. Councilman's theorization. And yet it is fair to say that in nearly all these theories the stimulus that they have given to investigations have proven of inestimable benefit, and we have no doubt that the statements made and the specimens shown with reference to the etiology of smallpox will stimulate renewed investigation of this subject.

Briefly stated Dr. Councilman's theory is as follows: There is an intracellular parasite which reproduces by endogenous sporulation. It gives rise to the phenomena of vaccinia. In some cases these spores enter the nucleus where they undergo a sexual form of reproduction and at the same time give rise to the phenomena of smallpox. This is one of the most ingenious theories ever suggested to explain the relation and difference between these two diseases, and why vaccinia protects so completely against smallpox, because, of course, if the parasite cannot gain its intracellular position, its spores cannot infect the nucleus.

But, after all, we must find some way either to cultivate the parasite outside the body—for example, in the tissues of other animals, as we are able in a way to watch the parasites resembling the plasmodium of Laveran in the blood of birds, or we must study its life-cycle in the cell during its existence, as we can study the plasmodium of malaria in the bloodcell during its active existence; or we must find some method that will demonstrate beyond peradventure that a certain peculiarly shaped substance in the protoplasm of a cell is a parasite and not a product of the abnormal activity of the cell. Then, if in an enlarged series of cases of a certain disease this parasite is found to the exclusion practically of all others, and it is not found in a still larger series of cases of other forms of disease, we may begin to suspect that it has some etiological connection with it.

In the meantime the problem of the etiology of the infectious exanthemata must be regarded as but little nearer solution.

The Pathogenesis of Cancer.—Dr. Hemmeter, of Baltimore, recently made a noteworthy contribution on the pathogenesis of cancer. Let us premise that we are not sure, as Dr. Hemmeter is not sure, that the results hitherto obtained are conclusive; but they are highly suggestive, and, although the burden of proof of all scientific investigations invariably rests upon the plaintiff, we feel that he has at least made out a sufficient case to secure an indictment. The experiments have been performed in accordance with the following hypothesis. If cancer develops frequently in the site of a gastric ulcer, then it may be possible to obtain it experimentally by producing gastric ulcer artificially in a number of dogs. If cancer is most readily transplanted from one animal to another, it may be possible to transplant such carcinomatous tissue experimentally obtained from one dog to another, particularly if the second dog has been previously prepared by the artificial production of a gastric ulcer. After obtaining a cancer in a dog in which gastric ulcer had been experimentally produced, he prepared eight other dogs with gastric ulcer, and then inoculated the edges of the ulcer with an emulsion of the cancer tissue. Five of the dogs died as a result of complications, and, of the remaining 3, 2 developed histological changes resembling the early stages of adenocarcinoma.

The weak point in this series of experiments lies in the fact that the possibility of the spontaneous origin of these histological changes is not excluded. Granting, however—and it seems not unlikely—that they were due to the infection with the cancer tissue, it remained to be proved whether this was the effect of the cells or of some substance in solution. Therefore, another series of ten dogs with experimental gastric ulcer was treated with the fluid prepared by triturating cancer tissue in sand and water, suspending it and filtering the suspension through a bacteriological filter. This apparently excluded the cells, but, nevertheless, four of the animals developed changes resembling adenocarcinoma.

Upon the basis of these experiments Hemmeter builds his theory regarding the pathogenesis of cancer, which he regards as due to an enzyme that is developed in the cells, and has possibly become perverted. This enzyme apparently is destroyed by heating to 60° C. As we said at the beginning, the work is not conclusive, merely suggestive, but so suggestive that it would be wise for other investigators to follow the same lines until we know whether there has been some error in theory or interpretation or not.

A Peculiar Form of Cancer.—Mr. Jonathan Hutchinson, during his recent trip to India, made some interesting observations on disease, and he comments upon them in his usual interesting way. In the *Polyclinic*, for May, appears an editorial on the causes of cancer, which, if we mistake not, is from Mr. Hutchinson's pen, for it has all the earmarks of his style and of his turn of thought. The writer of the editorial calls attention to a peculiar form of cancer that prevails in Kashmir—the "Vale of Cashmere" of the poets. This variety of cancer is an epithelioma, which is not peculiar in a histological sense, but is merely of peculiar origin. The site of the growth is either the abdomen or the inside of the thigh. Of 20 cases, reported by Elmslie as long ago as 1866, 4 were in females and 16 in males.

Dr. Elmslie attributed the disease to a curious local custom of the inhabitants of Kashmir. It seems that Kashmir (which is an elevated valley among high mountains) has a severe winter climate, and the natives carry what is called a *kangri*. This is a small brazier, filled with burning charcoal, and is carried underneath the clothing. It is of earthenware, protected by wickerwork. When the bearer is in the erect position the *kangri* hangs on the abdomen, but when sitting it is placed between the thighs. In Kashmir no man, woman or child thinks it possible to be comfortable in winter without a *kangri* under the clothes. Other writers have described this peculiar custom, and a reference is made to it in the British Encyclopedia.

Recently some valuable additions to our knowledge of kangri-cancer have been made by Dr. Neve, the head of a mission station in Kashmir. He proves that the disease is common, for he refers to nearly 500 cases. These cases point indubitably to local irritation—frequently repeated burns from the *kangri*—as the cause of the disease. In this respect the subject of kangri-cancer offers nothing new, for the fact that cancer originates in local irritation is generally accepted. The only odd thing about the subject is the odd custom which causes so many instances of epithelioma in such unusual localities. We cannot agree with Mr. Hutchinson, however, that these cases furnish an argument against the possible parasitic origin of cancer; and, in fact, we only recognize in his arguments the peculiar dialectic twist he gives to everything in order to prove some favorite thesis of his own. Kangri-cancer, like many other cancers, may arise from local irritation, but its essential cause may nevertheless be a parasite. The two ideas are not antagonistic.

Dr. Osler's New Disease.—In due time, when the work of the recent meeting of the Association of American Physicians in Washington comes to be evaluated, we have no doubt that the paper of Dr. William Osler will be regarded as one of the most noteworthy features. Dr. Osler discussed a series of cases, some of which he has found in the literature, and others which have come under his personal observation, that present features of a new clinical entity. The new affection is by no means difficult to recognize. Patients are usually able to walk about, presenting symptoms of chronic cyanosis, which is suggestive of either advanced emphysema or congenital heart disease. Yet the lungs and heart are normal, and the kidneys show no marked evidence of disease, only slight albuminuria being present. Further, these patients are often past middle life, a feature which also excludes congenital heart disease. There is usually a history of the condition having extended over many years, and, despite the cyanosis, the patients do not suffer from dyspnea. The examination of the blood furnishes, in conjunction with the cyanosis, another distinctive feature of the disease. There is a marked polycythemia with an increase in the red bloodcells up to 10 or even 12 millions per cubic millimeter. With the increase in the number of red cells there is a proportionate increase in the hemoglobin value. This may reach as high as 150% or 180%. The renal condition appears to be functional in character rather than organic, since casts are rarely found and, if present, consist of a few hyaline forms. All the patients have suffered from chronic constipation and show an enlarged spleen. A number of physicians who took part in the discussion following the reading of this paper, reported similar observations, which, however, had not been recognized as clinical entities. This contribution is to be regarded simply as preliminary, but it should serve as an incentive for the collection of many of these hitherto unclassified cases, and should lead to a thorough study of the pathological conditions present.

Maladie de Mills.—The recent meeting of the Neurological Association was particularly noteworthy on account of the report of a new clinical syndrome by Dr Charles K. Mills, of this city. Dr. Dana, of New York, in the course of the discussion remarked that he saw no escape from the obligation of calling it the "Maladie de Mills," and it appeared to be the sense of the meeting that his position was irrefutable. Mills' disease, therefore, is a progressive ascending hemiplegia, a syndrome not hitherto described, although, if one may judge from the discussion, not so infrequently observed by neurologists. The pathological basis is still uncertain. Dr. Mills has made many and notable contributions to neurology in the course of his distinguished career. He has also been mildly antagonistic to eponyms, and it is fitting that the shades of the gentlemen whom he has so long decried—the Thomsens, the Charcots, the Graves, the Bells and others—should at last have an opportunity of justly affixing his own name to a disease the clinical independence of which has been recognized first by himself.

A Chinaman's Surgery.—The imitative faculty of the Chinese is well known. We all remember the story of the Chinese tailor who was told to make a new pair of trousers just like the old pair, and who reproduced patches and all. The point of the story is illustrated in the *China Medical Missionary Journal* for April.

According to the Harbor Master of Shanghai, one of the Chinese lighthouse keepers had a tumor in his groin which he supposed to be a bubo, such as not a few of his countrymen possess. He had heard of the treatment of such tumors by free incision, and of the good results obtained in this way by the practitioners of "Western Medicine" in China. As he was a long distance from a "Western" doctor he resolved to apply the remedy himself. Accordingly he toon a pair of scissors—the same that he used to trim the lamp wicks withal—and ripped into the "bubo." But the poor wretch had made an error in diagnosis, and instead of opening a bubo he cut into an inguinal hernia and laid open his bowel. As neither the operator nor his scissors were aseptic, he soon died of peritonitis.

The *China Medical Missionary Journal* says that there is something touching in this story of pluck and confidence, especially to those who know the Chinese character, and know how well these people bear pain and how trustful they are, at least in Shanghai, of the foreign doctor. It thinks it almost inevitable that this sort of thing should happen in the early days of medicine in China. We think it worth while to observe that this poor Chinese lamplighter was not the first man who has made that error in diagnosis, though he was probably the first man who ever made it on himself with such disastrous results.

Butchered to Make a Gallic Holiday.—The critics and enemies of academic football may find something still more to their disliking in the present rage for running fast automobiles. We have not yet come to the acute stage of the malady in America, but we have most of the prodromal signs, and it is not likely that our sporting automobilists will let Europe surpass us in a sport that has an added zest from the fact that it is attended with a killing or two—provided they dare.

In France on last Sunday the amazing spectacle was beheld of a lot of men running ponderous machines, of many horse-power, over the public roads at rates of from sixty to eighty miles an hour. In this first stage of a senseless race from Paris to Madrid *eight persons* were killed in one day. This mortality-rate was probably exceeded in some of the gladiatorial shows in ancient Rome, but the Roman amphitheatre gave the public a better chance to see the sport than the long road from Paris to Bordeaux. It is gratifying to note that, while most of the persons (and dogs) killed were foot passengers who were foolhardy enough to trespass on the public roads, still several of the automobilists themselves paid the deserved penalty with their lives.

We candidly believe that the time has not yet come in the United States, when such an infamy as such a race would be permitted by common law or vulgar public opinion; and, if it were to be tried now in some parts of the country, the inhabitants would probably turn out with their guns. Perhaps that is because we are democratic, and believe that the highways are for the public and not for the privileged few.

Reviews.

A Manual of Medicine. Edited by W. H. Allchin, M. D., Lond., F. R. C. P., F. R. S. Ed., Senior Physician and Lecturer on Clinical Medicine, Westminister Hospital; Late Examiner in Medicine in the University of London, for the Royal College of Physicians of London, and for the British and Indian Army Medical Services. Vol. IV. Diseases of the Respiratory and of the Circulatory Systems. New York. The MacMillan Company, London; Macmillan & Co., Ltd. 1902. Price in cloth, $2.00 net.

The concluding volume of this manual maintains the excellence of its predecessors. Taken as a whole these four hand-books represent a most practical work on the practice of medicine in which the trend of modern advances in the refinements of diagnosis are incorporated, and in which nothing is lost of the excellence of the older teachings. As a guarantee of the character of the work we might mention that Dr. J. Mitchell Bruce has contributed the chapters devoted to the diseases of the heart and blood-vessels; that Dr. Francis De H. Hall has discussed diseases of the pleura; while Dr. Hector MacKenzie has contributed diseases of the lower respiratory tract. The physiology of respiration and the physiology of circulation are satisfactorily presented by Mr. Leonard Hill. Dr. Lewis Smith discusses disorders of the upper respiratory tract, and last, but by no means least, the editor has contributed disorders of the diaphragm and dropsy. That portion of this volume devoted to pathology is written with commendable clearness, and rare judgement has been exercised in avoiding the discussion of mooted points. Treatment has also been fully considered, and the work as a whole has much to commend it as a comprehensive and thoroughly practical treatise.
[T. L. C.]

Medical Jurisprudence, Insanity and Toxicology. By Henry C. Chapman, M. D., Professor of Institutes of Medicine and Medical Jurisprudence in the Jefferson Medical College, Philadelphia. Third edition, thoroughly revised, greatly enlarged and entirely reset. 12mo., 329 pages, illustrated, including four colored plates. Philadelphia, W. B. Saunders & Company, 1903. Cloth, $1.75 net.

This work is based on the author's practical experience for six years as physician to the Coroner of Philadelphia, and extended teaching of the subject in connection with the lectures on Institutes of Medicine at Jefferson Medical College, presenting, therefore, the topics from the points of view of both the practical expert and teacher. The present edition is larger than its predecessor by many pages, and, the whole book having been reset, the text has been subjected to careful scrutiny and all the matter brought up to date. New references to cases have been incorporated, and several new illustrations and tables have been added. The book is compact and comprehensive, is very well printed and in its new form will maintain the position that the earlier editions secured. The general plan of the work is similar to that of the first edition. [H. L.]

A Manual of Diseases of the Eye for Students and General Practitioners. By Clarence A. Veasey, A. M., M. D., Demonstrator of Ophthalmology in the Jefferson Medical College; Assistant Ophthalmic Surgeon to the Jefferson Medical College Hospital; Ophthalmic Surgeon to the Methodist Episcopal Hospital; Consulting Ophthalmologist to the Philadelphia Lying-in-Charity. Illustrated, with 194 engravings and 10 colored plates. Lea Brothers & Co., Philadelphia and New York. 1903. 8 vo., pp. x, 412.

Careful perusal of this work must show anyone who has had extensive clinical facilities and abundant teaching opportunities that it is comprehensive, practical and systematic in its rendering; in fact, it is remarkable how much that is useful and worthy of record has been gathered within its pages. The book should soon become a successful candidate for priority among many of its less able competitors. Both the author and publishers are to be congratulated in thus helping the good cause of American ophthalmology. [C. A. O.]

The American Year-Book of Medicine and Surgery, being a Yearly Digest of Scientific Progress and Authoritative Opinion in all Branches of Medicine and Surgery, drawn from Journals, Monographs and Text-Books of the Leading American and Foreign Authors and Investigators. Collected and Arranged under the General Editorial Charge of George M. Gould, M. D. Volume on Surgery.

This volume contains an epitome of the progress which has been made during the preceding year in general surgery, obstetrics, gynecology, orthopedic surgery, ophthalmology, anatomy and diseases of the nose, throat and ear. The death of Dr. Charles H. Burnett and the resignations of Dr. Ingals and Dr. Ohls have allowed the union of the departments of otology and laryngology under the editorship of Dr. D. Braden Kyle and Dr. George Fetterolf, thus bringing these specialties into their proper logical and clinical combination.

The articles reviewed have been judiciously selected and carefully abstracted. The abstracts are sufficiently full to satisfy the reader without reference to the original articles and are so classified that one has under his eye at a glance the year's advances in any particular direction. The paper is good, the type clear, and the illustrations are excellent.

We consider this the best of the Year-Books published.
[F. T. S.]

News and Notes.

AMERICAN

PHILADELPHIA AND PENNSYLVANIA.

Pennsylvania State Board of Health.—At the fifty-fourth regular meeting, held in Philadelphia, May 23, Dr. G. G. Groff, of Lewisburg, read an extensive report on the spread of smallpox in Pennsylvania. In a recent trip which he made, he discovered 59 virulent cases, and caused the isolation of the town of Cross Fork, composed of a number of lumber camps. There has been an epidemic of smallpox in this town for over 6 months, the disease being unchecked until the appropriation of $50,000, made by the Legislature 3 months ago, was received. Outside of this epidemic there has been a great decrease in the disease throughout the state. During March and April, 1903, there were 1416 cases, with 61 deaths, in Pennsylvania.

Harrisburg State Insane Hospital.—The new building, which cost $40,000, has been completed and will soon be ready for occupancy. Plans are also being drawn for the 4 new buildings soon to be erected at a cost of over $250,000. The Attorney-General of Pennsylvania last week advised the Board of Trustees that State insane asylums must admit criminal insane patients upon the order of the court.

University of Pennsylvania.—The Thomas A. Scott Fellowship in the Laboratory of Hygiene will be vacated at the end of the present year. The holder of this Fellowship is expected to engage in special studies and research relating to the causation and prevention of disease. The salary attached to the position is the income arising from $10,000, the amount of the endowment of the Fellowship. Application must be made in writing to the Provost of the University, Mr. C. C. Harrison, 400 Chestnut street, Philadelphia, not later than the first of June. The academic year begins October first, 1903.

Bryn Mawr Hospital.—Mr. C. A. Griscom has offered to construct and equip a complete laboratory for bacteriological work, to be in charge of the resident physician, Dr. W. B. Eaton. The laboratory will occupy the basement of the hospital. Work upon it is to be started at once.

Society Meetings Next Week.—The following societies will meet at the College of Physicians, Philadelphia, at 8.15 P. M.; Monday evening, June 1, Academy of Surgery; Wednesday evening, June 3, College of Physicians, and Thursday evening, June 4, Obstetrical Society.

The Health of Philadelphia.—During the week ending May 23, 262 cases of typhoid fever with 31 deaths were reported, as compared with 247 cases, with 27 deaths, in the previous week. There was one less in the number of scarlet fever cases reported, 92 with 4 deaths, as compared with 93 cases with 3 deaths, in the preceding week. There were only 39 cases of diphtheria reported, with, however, 11 deaths, as compared with 64 cases, with 7 deaths, in the week before. There was also a great decrease in the number of cases of smallpox reported, 18 cases, with 4 deaths, as compared with 35 cases with one death during the week previous. Two cases of cerebrospinal meningitis were discovered May 20, on the monitor *Puritan*, at League Island Navy Yard. This makes a total of 16 cases of epidemic cerebrospinal meningitis which have occurred at the Navy Yard during the past 3 weeks.

Rush Hospital for Consumptives.—At the last meeting of the trustees it was decided to have plans made for the erection of a new building, which, when completed, will accommodate at least 75 patients. The present institution maintains 40 beds, one half of which are free. The new building will be erected with the appropriation recently received from the State Legislature.

St. Timothy's Hospital, Roxborough. By the will of the late Hannah B. Fry, $5000 were left to St. Timothy's Hospital, for the endowment of a free bed.

Death of Dr. Morton.—Dr. Thomas G. Morton died at Cape May, N. J., May 20, aged 67 years, of cholera morbus, following an attack of gout. Born in Philadelphia, August 8, 1835, Dr. Morton was graduated from the College and Medical Departments of the University of Pennsylvania, receiving his medical degree in 1856. After 3 years' service at the Pennsylvania Hospital he started to practise general surgery. He founded the Orthopedic Hospital, was in charge of the Military Hospital located at Twelfth and Buttonwood Streets during the Civil War, and was consulting surgeon at the Satterlee Hospital and the United States Army Hospital at Chestnut Hill. He was for many years visiting surgeon to the Pennsylvania Hospital, a member of the Academy of Surgery, the Academy of Natural Sciences, the Union League Club, Fellow of the College of Physicians, and a member of most of the local medical societies. He acted upon various commissions at various times, having been upon the commission for erecting the State Insane Asylum of the southern district in 1876. He was also a member of the Board of Education. He was the son of Dr. Samuel G. Morton and the son-in-law of Dr. Thomas S. Kirkbride. Resolutions upon his death have been adopted by the Board of Education, the directors of the Orthopedic Hospital and the Trustees of the Pennsylvania Hospital.

NEW YORK.

Association of Medical Librarians.—The sixth annual meeting of this association was held May 16. A large number of librarians and physicians representing the medical libraries throughout the country assembled in Brooklyn. The scientific session was held at the New York Academy of Medicine, the President, Dr. Wm. Osler, in the chair. Papers and discussions were contributed by Mr C. P. Fisher, of Philadelphia; Dr. T. G. Lee, of Minneapolis; Mrs. G. W. Myers, and Dr. E. H. Brigham, of Boston; Mr. J. S. Brownne and Dr. W. S. Dennet, of New York; Mr. A. T. Huntington, of Brooklyn, and others. The officers elected for the ensuing year are as follows: President, Dr. William Osler, of Baltimore; vice-president, Dr. Abraham Jacobi, of New York; secretary, Mr. Albert T. Huntington, of Brooklyn; treasurer, Dr. George D. Hersey, of Providence, and executive committee, Mr. John S. Browne, of New York, Mr. Charles P. Fisher, of Philadelphia, and Dr. James M. Winfield, of Brooklyn. The meeting adjourned to meet in June, 1904, at Atlantic City, N. J. A full report of the proceedings will be published in the *Medical Library and Historical Journal* for July, 1903.

Columbia University.—At the meeting of the trustees, May 4, Dr. C. A. Herter was appointed professor of pharmacology and therapeutics and director of the laboratory of experimental pharmacology which is soon to be established. Dr. L. E. Holt, professor of pediatrics was made a member of the medical faculty. Dr. Joseph A. Blake was appointed lecturer on surgery. Dr. George H. Fox, professor of dermatology, has been appointed dermatologist to the New York State Department of Health.

New York's Birth-rate and Death-rate.—During the first 4 months of 1903 the births reported in the Borough of Manhattan, New York City, were 2000 in excess of those reported during the same period of the preceding year. This may be explained by the large proportion of foreigners in this city. It may, however, be due to the fact that the Health Department now holds accountable any physician who neglects to report a birth. In 1900 the total number of births in New York City was 81,721, the birth-rate to each thousand being 22.72; last year the births were 85,643 and the rate 23.58. The Borough of Manhattan shows betder prize, a $100 gold medal, for an essay on the differential rate in 1900 was 27.27; in 1902 it was 27.90, and for the first 4 months of 1903 it was 30. There has also been noted a decrease in the death-rate. For the first 4 months of 1901 the deaths numbered 24,538, the rate being 22.99. For the same months in 1902 there were 24,210 deaths, the rate being 22.17. For the 4 months just ended, the number of deaths was 23,892, a death-rate of only 21.20.

NEW ENGLAND.

Association of Military Surgeons of the United States.—The twelfth annual meeting was held in Boston, May 20 to 22, under the presidency of General R. A. Blood, Surgeon-General of Massachusetts. About 100 delegates out of a membership of 1200 were present. Resolutions were offered and adopted with regard to preventing the spread of disease in the building of the Isthmian canal, and to that end the resolution contained a recommendation that the President appoint a member of the association on the Isthmian Canal Commission. Among the distinguished foreigners present were General W. L. Bell and Colonel Ryerson, of Canada; Colonel Wharton, of England; Colonel Enrico Castelli, of Italy; Dr. Robert Wreden, of St. Petersburg, and Colonel A. Aguirre, of Mexico. The Enno Sander prize, a $100 gold medal, for an essay on the differential diagnosis of typhoid fever in its early stages, was awarded to Major Frederick Smith, of Wiltshire, England. The second prize, given because a second essay was considered nearly as good as the first, consisting of life membership in the association, was awarded to William C. Rucker, U. S. P. H. and M.-H. S., Boston. A large number of papers was read during the meeting. Surgeon-General Johann von Mikulicz-Radecki, chief medical officer of the Sixth Prussian Army Corps was present at the meeting. The following officers were elected for the ensuing year: President, Medical Director John C. Wise, U. S. N.; first-vice-president, Surg.-Gen. Walter Wyman, of the U. S. P. H. and M.-H. S.; second vice-president, Maj. Albert H. Briggs, Buffalo, N. Y.; third vice-president, Surg.-Gen. Robert M. O'Reilly, U. S. A.; secretary, Maj. James Evelyn Pilcher, U. S. A.; treasurer, Maj. H. A. Arnold, Ardmore, Pa.

Diphtheria at Newport, R. I.—Beside the epidemics of scarlet fever and measles existing among the recruits at Newport, 7 cases of diphtheria have developed among the Naval apprentices on the *Constellation* and on the monitor *Amphitrite*, where many of the boys had been sent in the hope that they would escape the disease. Diphtheria appeared first 2 weeks ago; 740 boys were transferred to the *Constellation* and 100 to the *Amphitrite*, while 140 boys have been camped in tents obtained from the Army post.

Bequests.—The late Edward de la Granja has left all his property to the Massachusetts Maternity and Foundling Hospital, provided that corporation had $20,000 in its treasury at the time of his death.

WESTERN STATES.

New Hospital at Richmond, Ind.—Mr. D. G. Reid, of New York, has given the sum of $50,000 for establishing a public hospital at Richmond, Ind., his native city, upon the condition that $50,000 more shall be raised as an endowment fund. His offer, with its condition, has been accepted.

Scarlet Fever at Wardner, Idaho.—The epidemic of scarlet fever here has reached such an alarming stage that all the schools are closed and public meetings have been forbidden. Children under 4 years of age are not permitted on the streets.

To Kill Feeble-Minded and Insane Children.—Representative Rodgers of Muskegon, Mich., has introduced before the State Legislature a measure providing for the killing by electricity of all children regarded as hopeless cases of imbecility or insanity, as a substitute for a bill making an appropriation for a home for feeble-minded children. He says that humanitarian interests demand the removal of children whose minds are such as to render them a burden to society and incapable of happiness for themselves. The bill is based upon the report from the superintendent of the present asylum to the effect that many of the inmates do not possess, or ever will have, mind enough to know that they are alive. The bill has been handed to a committee, where it will probably be buried. Dr. W. B. Fletcher, the alienist of Indianapolis, is heartily in sympathy with this position, though he states that he is aware that the idea will meet with opposition. He considers that this is the best thing that can happen to incurable cases.

Diphtheria at Hurley, Wis.—The public schools were closed last week on account of the epidemic of diphtheria, which is, however, mild in form. While there are over 40 cases in this city, no deaths have as yet resulted.

SOUTHERN STATES.

Baltimore Pediatric Club.—At the meeting held May 21, steps were taken for the formation of a milk commission similar to that already in existence in a number of other cities. Dr. Henry L. Coit, of Newark, N. J., the originator of this scheme for the production of pure, clean milk, was the principal speaker at the meeting. Dr. C. W. Mitchell, president of the club, will soon appoint a committee of 5 members, who will at once enter upon a crusade for pure milk in Baltimore. Mr. Victor Bassett, who investigated the milk-supply in 1901 and 1902, reported the great amount of bacteria found in the milk ordinarily used in Baltimore. Mr. E. H. Scherer, who assisted in this investigation, discussed the preservatives used in milk, especially formaldehyde. Health Commissioner C. H. Jones demonstrated the great number of deaths of infants from intestinal trouble, believing that much of the mortality was due to diluting milk with impure water.

A New Hospital in Texas.—It is reported that a new hospital, to cost $10,000, is soon to be erected at Bonham, Texas.

In Memory of the Late Major Walter Reed.—Congress is to be urged to provide for the erection of a monument in memory of Major Walter Reed, who discovered that yellow fever was spread by mosquitoes. The committee chosen to lay the matter before Congress consists of President Gilman of the Carnegie Institute, Prof. Welsh of Johns Hopkins University, Prof. Vaughan of Ann Arbor, Gen. Sternberg, the retired surgeon-general, and Dr. George M. Kober, together with a number of army officers.

In Honor of Dr. Osler.—The ex-resident physicians and associate physicians of Johns Hopkins Hospital gave a dinner, May 15, at the Maryland Club, Baltimore, in honor of Dr. William Osler, at which Dr. Osler was presented with the Dictionary of Natural Biography in 65 volumes. a work which he had long desired.

Baltimore County Medical Association.—At the meeting held in Towson, May 20, Dr. L. Gibbons Smart was elected president; Dr. B. R. Benson vice-president; Dr. F. R. Rich, recording secretary; Dr. R. C. Massenburg, corresponding secretary, and Dr. H. S. Jarrett, treasurer.

Typhoid Fever at Hâvre de Grâce, Md.—For the past 2 weeks a great number of cases of virulent typhoid fever have been reported. The disease is attributed to impure drinking-water.

MISCELLANY.

Smallpox in the United States.—Between December 27, 1902, and May 22, 1903, there have been 18,735 cases of smallpox, with 617 deaths in the United States, as compared with 34,184 cases, with 1053 deaths, during the same period of the previous year.

Smallpox in British Guiana.—During the week ending April 25, several cases of an eruptive fever appeared, which has officially been declared to be smallpox. At that time the disease was reported as spreading rapidly. The epidemic at Barbados is over.

Bubonic Plague in China.—Under date of April 3, 28 cases of bubonic plague, with 24 deaths, were reported at Hong Kong, only one of which affected a European. Since January 1, 164 cases of bubonic plague have occurred at Hong Kong. The disease is also reported as sporadic at Canton, May 4; as spreading rapidly among towns and villages on the West River, May 12; and as having appeared at Amoy, May 9.

Yellow Fever in Mexico.—One death is reported in the city of Mexico from yellow fever between April 28 and May 3; 44 deaths at Tampico between December 7 and May 9, and 98 cases, with 37 deaths, at Vera Cruz, between December 14 and May 9.

Peru Free From Bubonic Plague.—An official despatch from Pisco, dated May 20, says that there are no more cases of bubonic plague in that city. The Board of Health then declared Pisco no longer infected. The Government has officially informed foreign nations that Peru is at present free from bubonic plague.

Obituary.—Dr. James E. Hyslup, at Kellar, Va., May 15, aged 27 years.—Dr. A. M. Gontner, at York. Pa., May 18, aged 47 years.—Dr. C. H. Blair, at Beloit, Wis., May 16.—Dr. James C. Channell, at Wrightsville, Pa., May 19, aged 60 years.—Dr. Andrew J. Sauer, at Canton, Md., May 20, aged 30 years.—Dr. John B. Burdett, at Jersey City, N. J., May 21, aged 70 years.

FOREIGN.

GREAT BRITAIN.

Edinburgh Hospital for Infectious Diseases.—This new institution, erected at Colinton Mains, 4 miles from the heart of the city, on a site consisting of 130 acres, was opened by the King and Queen, May 13 last. The hospital, which has cost over $1,500,000, will provide accommodations for 600 patients and 150 nurses.

Cancer Research Fund.—Mr. H. L. Florence has given $5000 to the Cancer Research Fund under the direction of the Royal Colleges of Physicians and Surgeons.

Jenner Institute of Preventive Medicine.—When this institution was reorganized in 1898. with Lord Iveagh's large endowment, no director was appointed. The work of the institute has, however, by this time so much increased, that the governing body is soon to fill the appointment. at a salary of $5000 a year.

CONTINENTAL EUROPE.

Fourteenth International Medical Congress, Madrid.—At this congress the prize of $1000,offered in 1897 by the City of Moscow, to be awarded every 3 years for the work which has contributed most to the progress of medical science, was given to Dr. Elie Metchnikoff, professor in the Pasteur Institute, Paris. The prize offered by the Thirteenth International Congress, held in Paris in 1900, was awarded to Dr. B. Grassi, professor of comparative anatomy at Rome. A French medical journal recently published statistics illustrating the attendence at this Congress. Of the visitors, 826 came from France, 776 from Germany, 297 from Russia, 258 from Austria, 238 from Great Britain, 235 from Italy,195 from the United States, 98 from Belgium. 33 from Portugal and 21 from Roumania, making in all 3431 strangers. As there were also present 3530 Spaniards, the total number of persons attending the congress was almost 7000, but by no means all of these were physicians. In fact the exact number of physicians present remains unknown.

Antidiphtheritic Serum Lozenges.—It is said that the diphtheria antitoxin discovered by Professor Roux, of the Pasteur Institute, is now being made up in the form of lozenges for use during convalescence. The professor had observed that bacilli found in the mouths of patients several weeks after recovery were liable to convey the disease to others. The lozenges overcome this and also render preventive inoculation unnecessary, it is said.

A Medicine Slot Machine.—Automatic machines called "everybody's doctor" are soon to be installed in the principal streets of Paris. By putting a penny in the slot, remedies may be obtained for sick headache, coryza, lumbago and toothache. Each machine will contain 12 slots, at the head of which is written the condition for which each remedy is indicated. This system has received a certificate from the Paris Medical Faculty. Naturally the plan is opposed by physicians.

University Notes.—**Berlin:** Dr. Max Bartels and Dr. A. Lissauer have both received the honorary title of professor.—Professor Martin Mendelssohn has, it is reported, been suspended from the medical faculty.—**Bologna:** Dr. Carlo Comba has been appointed professor of pediatrics, replacing the late Dr. Dante Cervesato.—**Cadiz:** Dr. Leonardo R. Lavin has been appointed professor of physiology.—**Cassel:** Dr. Endemann was made an honorary citizen in celebration of his seventieth birthday, April 10 last.—**Charkow:** Dr. Paul Michin has been appointed professor of obstetrics and gynecology.—**Dortmund:** Dr. Karl Weispfenning celebrated the completion of 50 years as a physician late in April.—**Graz:** Dr. Heinrich Lorenz, of Vienna, has been appointed professor of medical pathology, and Dr. Emil Knauer, of Vienna, professor of obstetrics and gynecology. These appointments fill the places left vacant by Drs. Kraus and von Rosthorn. Dr. Lorenz was a student of Nothnagel's, Dr. Knauer a student of Billroth's and Chrobak's.—**Halle:** Dr. Schwartze, director of the otological clinic, has been appointed professor of otology.—**Kiew:** Dr. W. A. Stefanis his been appointed professor of anatomy.—**Leipsic:** Dr. Heinrich Füth, assistant in the gynecological clinic, is to deliver the lectures on gynecology during the summer term at Jena.—**Malta:** Dr. Carmelo Mifsud has been appointed professor of medicine, replacing Dr. G. O. Galea, who recently resigned.—**Pavia:** Professor J. Tansini, one of the best-known surgeons of Italy, has been offered the position of professor of surgery in the place of the late Dr. Bottini.—**Toulouse:** Dr. Caubet has been appointed dean of the medical faculty for the next 3 years.—**Tübingen:** Dr. Hermann Küttner has been made lecturer on theoretical surgery in the place of the late Dr. Franz Hofmeister.—**Vienna:** In the absence of Professor Max Gruber. Dr. Adolf Schattenfroh has been made lecturer in hygiene.—**Würzburg:** Dr. Sobotta has been appointed professor of anatomy and Dr. Johannes Müller professor of internal medicine.—Dr. Oskar Collmann celebrated the completion of 50 years as a physician, April 21 last.

Obituary.—Dr. J. La Bonnardière, professor of therapeutics and hygiene in the French Medical School at Beirout, Syria, died recently.

The Latest Literature.

BRITISH MEDICAL JOURNAL.

May 9, 1903.

1. A Lecture on Therapeutic Inoculations of Bacterial Vaccines and Their Practical Exploitation in the Treatment of Disease. A. E. WRIGHT.
2. On Exaltation of Bacterial Virulence by Passage *in Vitro*. E. A. SHAW.
3. Further Observations on the Reaction of Bacillus Pestis in Plague. R. ROW.
4. The Use of Antitoxin in the Treatment and Prevention of Diphtheria. ROBERT D. RUDOLF.
5. Clinical Evidence for a Toxic Factor in Certain Diseases. JAMES ADAM.
6. Case of General Pneumococcal Infection With Few Symptoms. GEORGE PARKER.
7. Note on the Absence of Bacillus Coli, etc., From the Normal Oyster. R. TANNER HEWLETT.
8. Acute Rheumatism and Sepsis. JOSEPH A. ARKWRIGHT.

1.—Wright contributes an article entitled, **therapeutic inoculations of bacterial vaccines,** of which the following is a summary. In connection with every immunization process there is sequence of negative and positive phase, which is followed, in a case in which the inoculation is successful, by the maintenance of a higher base line of immunity. The inoculation of an excessive dose may involve the risk of an undue prolongation of the negative phase. The inoculation of a series of doses, when uncontrolled by blood examinations, involves the possibility of a cumulative negative phase. The cumulative positive phase, which is desirable as leading to the maintenance of a high base line of resistance, is achieved only when the successive doses are properly adjusted and appropriately interspaced. The success of a prophylactic inoculation may be imperiled if the sequence of negative and positive phase and the cumulative effects of successive inoculations are not taken into consideration. The success of serum therapy in diphtheria and its comparative failure in other diseases is explained by the fact that in the former we are able to secure a cumulative positive phase of phenomenal dimensions and the elimination of all negative phase blood; in the latter these prerequisites of successful serum therapy have not been attained. In the case of patients suffering from localized bacterial invasions, who are possessed of a considerable balance of resisting power, it is possible to undertake therapeutic inoculations of bacterial vaccines without risk, provided that the results of these inoculations are controlled by subsequent blood examinations. When all has been done that can be done to guard a patient against the risk attaching to the negative phase, the success of a therapeutic inoculation cannot be guaranteed, because it depends in each case upon the power of response which is possessed by the individual. It seems to the author that success will certainly be achieved in cases of simple staphylococcus infection occurring in the young and otherwise robust. It also seems probable that it will be obtained in cases of certain colon infections. [J. M. S.]

2.—Shaw has performed a series of experiments to determine the **exaltation of bacterial virulence by passage in vitro.** He used the bacillus anthracis, the spirillum of cholera and the bacillus typhosus. He found that from generation to generation there was a gradually increasing power of resistance of these micro-organisms to the bactericidal action of the bloodserum used, and he considers that increase of virulence is obtainable by this procedure. The procedure in question consisted in growing the organism on sloped agar for 24 hours; then making a series of broth dilutions and adding an equal part of freshly drawn serum from a healthy person. These mixtures were then incubated in sealed capillary tubes, and at the end of 24 hours incubation were expelled on the divisions of an agar surface in a Petri dish and again incubated for 24 hours. This process was repeated for a number of generations. [J. M. S.]

3.—Row contributes a paper on **the reaction of the bacillus pestis in plague.** The lysogenic action of plague convalescents' blood to bacillus pestis is brought about by the combined action of an amboceptor and a complement. A serum from a plague convalescent looses its lysogenic action by age and exposure to light in a few days and by exposure to 56° C. in a few minutes, by the destruction of the complement. This lost property is restored by a mixture of a fresh serum; for example from a rabbit, addition of complement. When suitably immunized to plague, rabbits produce a serum rich in precipitin and containing a fair amount of bacteriolysin. Roux's antipesteux serum is very rich in precipitins but is not particularly bacteriolytic. The loss of bacteriolytic property is probably due to age, but, by the addition of fresh rabbit's, man's or rat's serum, the bacteriolytic property is restored. The bloodserum from fatal cases of plague is deficient in amboceptor, and its complement is not only poor, but also of the nature of an anticomplement. [J. M. S.]

4.—Rudolf says that every case of **diphtheria** should be **treated with antitoxin** as soon as the clinical diagnosis is made and without waiting for the establishment of a bacteriological diagnosis. The serum should be administered in doses of 3000 units. The use of antitoxin does not interfere with the employment of any other form of treatment indicated. All individuals who are exposed to infection should be given immunizing doses of antitoxin; 500 units for an adult and 300 units for a child under 2 years of age. The immunizing dose should be repeated every 3 weeks while the danger of infection lasts. [J. M. S.]

5.—Adam says that asthma, urticaria and possibly epilepsy are due, in certain cases, to **endogenous toxins.** The following is the explanation of his theory: Oxidation of nitrogenous food is most active in the muscles. When these organs are exerted less than usual, but receive their usual share or more than their usual share of food, oxidation of these foods will be imperfect. Consequently, the blood gets loaded with poisons which vary according to the degree of oxidation, the nature of the food and the chemical factor involved in the constitutional peculiarities of the individual. Digestive disorders are likely to accompany the diseases in question, and an eosinophilous leukocytosis may be found. [J. M. S.]

6.—Parker reports the case of a male child, aged 17 months, who was suffering from bronchopneumonia. His temperature was normal; his bowels were regular; there was a faint trace of albumin in his urine, and there were a few scattered rales in both lungs. His blood showed a leukocytosis of 54,500; of which there were 31.6% of lymphocytes and 0.8% of myelocytes. Four weeks after admission the patient suddenly died, with no symptoms except occasional quick breathing, pallor and the abnormal bloodcount. At the autopsy there was an anterior mediastinitis, pleuritis, bronchopneumonia, pericardial effusion and congestion of the kidneys. Cultures from the pericardium and the heart's blood gave a pure growth of pneumococcus. The author considers the case to be one of **general pneumococcus infection.** [J. M. S.]

7.—Hewlett says that he has no hesitation in concluding that oysters taken from waters uncontaminated with sewage do not contain colon bacilli nor the bacillus enteritidis sporogenes. [J. M. S.]

8.—Arkwright reports 4 cases which show a relation between **acute rheumatism and sepsis.** [J. M. S.]

LANCET.

May 9, 1903.

1. An Address Entitled Where Memory Sleeps. JAMES T. GOODHART.
2. On the Treatment of Bubonic Plague With Yersin's Serum, with Observations on its Mode of Action. D. LOUIS CAIRNS.
3. A Case of Transsacral Removal of an Intussusception with Malignant Growth by a Method Unusual at Present. ARTHUR E. BARKER.
4. Acute Amaurosis following Infantile Convulsions. HENRY ASHBY and SYDNEY STEPHENSON.
5. Foreign Body in one of the Main Divisions of the Left Bronchus; Attempted Removal by Posterior Bronchotomy through the Pleural Cavity. J. GRANT ANDREW.
6. A Case of Hematosalpinx due to Tubal Pregnancy Complicated by Torsion of the Pedicle; Operation; Recovery. FREDERICK J. McCANN.

7. A Note on the Serum Reaction of Tubercle, with Special Reference to the Intimate Nature of Agglutination Reactions Generally and to the Therapeutic Inoculation of the New Tuberculin. A. E. WRIGHT.
8. A Note on the Position of the Heart in Some Cases of Aortic Aneurysm. HUGH WALSHAM.

2.—Cairns contributes an article **on the treatment of bubonic plague with Yersin's serum, with observations on its mode of action.** He gives histories of 2 patients who were treated by this method, and in whom marked improvement followed. He draws the following conclusions: (1) That Yersin's serum is a remedy of the greatest value in the treatment of bubonic plague; (2) that its action is bactericidal, as shown by the degeneration induced in the bacilli, as well as antitoxic; (3) that this double action of the serum is best secured by its early administration in large doses, both subcutaneously into the lymphatic area which drains toward the bubo, and also intravenously; (4) in very mild cases subcutaneous injection alone will probably suffice, but in severe cases the combined method should be employed. For these latter the initial combined dose should be perhaps from 150 to 300 cc., the proportion given intravenously varying with the relative severity of the general symptoms. [F. J. K.]

3.—Barker reports an interesting **case of transsacral removal of an intussusception with malignant growth.** The patient was a woman, 52 years of age, who suffered from a circular carcinoma causing an intussusception which had been, upon a previous occasion, reduced. The carcinoma was plainly palpable before reduction, but could not be felt afterward. The intussusception recurred, and the cancer was easily felt with the examining finger at the apex of the intussusceptum. Barker first opened the left groin and attempted to draw the intussusception up, but found it impossible. The wound was then closed, the anus dilated and a futile attempt made to pull the intussusception down so that it might be excised. When this had failed, all further efforts at this time were abandoned. A month later, however, the intussusception was attacked from below after the removal of the coccyx and a portion of the sacrum. The posterior wall of the rectum was divided, the intussusception withdrawn, a resection made and an anastomosis established. Excepting for a slight fecal discharge beginning on the seventh day and lasting for a few days, the patient made a good recovery. Barker claims the originality for the proposal of this operation which he recommended in 1887. He also suggests that it might be possible in some cases of carcinoma of the sigmoid without intussusception to open the rectum below the growth and to pull it down and perform a resection, as was done in this case. [J. H. G.]

4.—Ashby and Stephenson contribute an article on **acute amaurosis following infantile convulsions,** and arrive at the following conclusions: (1) That there is a form of amaurosis which occurs in infants or young children which is posteclamptic, due to anesthesia of the visual centers. (2) That the convulsions, which may be due to various causes, are apt to be severe and accompanied with coma. (3) That the amaurosis may be associated with aphasia and paresis of hemiplegic distribution; the hemiplegia may be permanent. (4) That the amaurosis is for the most part transient. It is possible that in some instances there is hemianopia. [F. J. K.]

5.—Andrew reports a **foreign body lodged** in one of the main divisions of the **left bronchus** in which an unsuccessful attempt was made to remove it by **posterior bronchotomy.** The patient was a boy, 15 years of age, and the foreign body was a squeaker out of a doll. There was absolutely no doubt about the position of the body in the bronchus. Two unsuccessful attempts were made to remove it through a tracheotomy wound, and, failing in these, Andrew resected the third, fourth, fifth and sixth ribs between the scapula and vertebral column and explored the lung and bronchi from behind, but could not locate the body. The discharge from the posterior wound later became purulent and required drainage with a tube, and the patient continued for sometime to expectorate purulent matter. He ultimately, however, made an excellent recovery, and the foreign body was never seen. A skiagraph taken after the recovery showed no foreign body present, although one made the night before the operation showed the squeaker plainly. Every avenue of escape for the foreign body was carefully watched and is discussed by Andrew, who cannot in any way account for its disappearance. He refers to the literature relating to the operation of posterior bronchotomy. [J. H. G.]

6.—McCann records a case of **hematosalpinx due to a tubal pregnancy complicated by torsion of the pedicle.** He succeeds in finding only one recorded example of a similar condition, namely that of Martin, of Berlin. McCann's case was that of a woman, 34 years of age, who was suffering from a purulent uterine discharge and acute pain in the renal region. Operation revealed a tumor on the right side of the uterus, bluish black in color and closely adherent to the intestines. After its removal it was found to be a tubal pregnancy, the tube having undergone marked torsion. There were 3½ tight twists between the cyst and the uterus. It may be said that torsion of the pedicle is one of the rare complications of hematosalpinx from tubal pregnancy. [W. A. N. D.]

7.—Wright contributes **a note on the serum reaction of tubercle.** He lays stress in particular on the negative results of the serum reaction which may indicate, (1) the absence of the particular bacterial invasion which we suspect, (2) the purely localized nature of the invasion and (3) the absence of a power of immunizing response on the part of the invaded organism. Bearing in mind, in particular, the fact that tuberculous infections are for the most part purely localized infections, we have little reason to expect much assistance in the diagnosis of tubercle from the indications of the serum-sedimentation reaction; but, on the other hand, in connection with the serum-sedimentation reaction, the fact is important that this reaction gives, in the case in which the patient is being subjected to therapeutic inoculations of tubercle vaccine, some indication of the extent to which antibacterial substances are being elaborated in the organism. He is in favor of having every patient who is submitted to antituberculous inoculation with the new tuberculin, regularly tested by the serum test to ascertain how he responds to each successive inoculation. He contends that by such a method we can hope to be successful in dealing with localized tuberculous infection by achieving a cumulative positive phase and in maintaining a higher base line of resistance. When the tests are omitted we may chance to achieve by our inoculations only a cumulative negative phase. [F. J. K.]

MEDICAL RECORD.

May 23, 1903.

1. Some Unusual Cases of Appendicitis. ROBERT F. WEIR.
2. On a Case of Complete Fibrous Obstruction (Congenital?) of Both Superior and Inferior Venæ Cavæ in a Young Man of Eighteen Years: First Case Recorded. ALFRED MEYER.
3. Total Respiratory Failure from Ether: Artificial Respiration for Over Four Hours; Recovery. H. H. EVERETT.

1.—Weir reports some unusual cases of appendicitis including (1) **internal intestinal strangulation from an elongated inflamed appendix,** (2) **strangulated hernia with gangrenous appendix,** (3) **tumor of the cecal wall follow-**

ing the removal of the appendix, (4) **appendicitis with general peritonitis.** In this case there was free purulent fluid throughout the abdominal cavity, thorough irrigation was practised, and the wound closed with large drain going to pelvis and right iliac region. Two days after operation 1,000 cc. of normal saline solution were used as an infusion, and lavage was practised. The following day 3 infusions and lavages were given, each of 1,000 cc., and this was repeated the next day. The patient made a good recovery. A case of **cancer of the appendix** is also recorded. [T. L. C.]

2.—Meyer reports a case of **complete fibrous obstruction of both superior and inferior venæ cavæ** in a young man of 18 years. The condition was probably congenital. When the patient was first seen the absence of any visible apexbeat was noted with normal cardiac dimensions and pure, though somewhat distant, heart sounds. A presumptive diagnosis of **total pericardial adhesions** was made, although confirmatory evidence of the pulsus paradoxus was looked for in vain. The diagnosis seemed best to explain the obstruction to the circulation in both upper and lower halves of the body, with the attendant enlargement of the superficial veins, the cyanosis, the edema, the ascites, the enlargement of liver and spleen, and the ulcers which were present on the lower extremities. There was also a widespread enlargement of the lymphatic glands. There was a gradual increase in the size of the abdomen in spite of treatment, and at one time the circumference equalled 87.5 cm. At autopsy it was found that the superior vena cava ended at a distance of 6 cm. above the auricle. Its circumference was 3 cm. Near the termination of the vena cava the wall was somewhat thickened. On the left side near the stenosis (about 1 cm. below it) was a small irregular tube on the wall. Above the atresia, for a distance of 1/5 cm., there was only some fibrous tissue in which both innominate veins ended. They were both small, the left being the smaller. The walls were quite thick. The right had a valve. There was no evidence of any inflammatory process at or near the atresia of the vena cava. The vena azygos major was quite large and opened into the vena cava at the usual location, its circumference was 2 cm. There was a valve near its point of entrance. The **inferior vena cava** showed atresia at the diaphragm, there was fibrous tissue about one or one and one-half cm. thick about its termination. The upper end of the vena cava was rather conical, the wall quite thickened, the atresic part was surrounded by the area of perihepatitis on the upper part of the liver (but the vein did not appear to be affected by the perihepatitis). Circumference of the inferior vena cava at widest part (behind the liver) was 4 cm. If this case is studied in the light of the post mortem evidence, it is at once apparent that **the entire return circulation was provided for by the dilated vena azygos major.** Under these circumstances the amount of distension of the superficial veins during life, particularly in the territory drained by the superior vena cava, was strikingly little; in fact, much less than has been repeatedly observed in closure of one of these great trunks alone. This may possibly have been due to the gradual and slow manner of closure of these vessels, permitting a great deal of time for the establishment of the deep and superficial collateral circulation. In fact, a rapid obliteration of either superior or inferior vena cava, as by a thrombus, probably leads to a rapid death; and this result is in conformity with the results of animal experiments. [T. L. C.]

3.—Everett reports a case of **total respiratory failure from ether** following an operation for appendicitis. Artificial respiration was practised for over 4 hours, and various stimulants were also used. Recovery followed. [T. L. C.]

MEDICAL NEWS.

May 23, 1903. (Vol. 82, No. 21.)

1. Fracture of the Spine; Three Cases. HOWARD J. WILLIAMS.
2. Rheumatic Tonsillitis in Children. JOHN STEWART.
3. Notes on Bloodpressure in Man. S. C. GOLDWATER.
4. The Circulation in Puerperal Eclampsia. DOUGLAS H. STEWART.
5. Some Interesting Phenomena of Specific Immune Serums. ARTHUR P. HITCHENS.

1.—Williams advises early operation in all cases of spinal fracture. Knowing that, even if the cord is completely crushed, the destroyed zone may be removed and the ends approximated with hope of successful union. The absence of the deep reflexes should be the most urgent reason for prompt exploratory operation, for it demonstrates that the cord is severed, and, if possible, its continuity should be restored at once. Lloyd's reason for early operation is to antedate the stage of secondary degeneration and take advantage of the possibilities of early regeneration. Laminectomy does not materially endanger life, nor does it unfavorably affect the course of the case; it may now open the way by which myelorrhaphy may possibly relieve the lesion and perhaps restore the patient to a fairly comfortable life. [T. M. T.]

2.—Stewart gives some points of the **treatment of rheumatic tonsillitis in children;** (1) Calomel and saline. (2) Salicylic acid (1 gr.) or sodii salicylas (3 gr.), to shorten and relieve pain and swelling. (3) Tr. guaiac ammon. as a gargle. (4) H_2O_2, 25% solution as a swab. (5) Tr. ferric chlor. throughout the attack. (6) Diet should be gruels. Pellets of ice give relief. (7) If suppuration is present, apply hot applications; as soon as fluctuation can be determined, the abscess should be opened. [T. M. T.]

3.—Goldwater mentions that Watzel regards the fevers as furnishing the best opportunity for the study of the relation between temperature and bloodpressure are acute gastritis, diphtheritis, acute rheumatism, typhoid, erysipelas. It has been proved that arterial tensions may be extremely low during the early stage of high fever, when the pulse is full and bounding; relaxation of the arterial wall is no doubt the cause. During convalescence we find abnormalities of pressure; bloodpressure is at this time as sensitive and changeable as the frequency of the pulse, and may rise or fall 20 or 30 mm. in the course of an hour, without apparent cause. [T. M. T.]

5.—Hitchens gives 2 theories: (1) Buchner's alexin theory. (2) Metschinkoff's phagocytic theory. Metschinkoff, at present, though still holding that the leukocytes are the active agents in producing the immune body and complement, allows that these bodies are contained in the body fluid. Buchner contends that other body cells are concerned in the elaboration of alexins, admits that the leukocytes play a prominent part in this work. [T. M. T.]

NEW YORK MEDICAL JOURNAL.

May 23, 1903.

1. In the Hemisphere of X-ray Activity. J. RUDIS JICINSKY.
2. The Ureteral Pelvis. BYRON ROBINSON.
3. Eclampsia—Its Prevention and Treatment. EDWARD A. AYERS.
4. Atony of the Duodenum Diagnosticated and Corroborated by Operation. MARK I. KNAPP.
5. A Few Differential Diagnoses in Connection with the Exanthemata. WILLIAM L. SOMERSET.

1.—Jicinsky in his paper, entitled: **In the hemisphere of X-ray activity,** says that the origin for the Röntgen-rays in Crookes' tubes seems the only proper guide to proper results. He does not believe in statements that the greatest intensity of the rays is only at the point at which the hemisphere of the X-ray activity ends and the dark hemisphere begins. Neither does he believe that the rays produced in a vacuum tube with a static machine do not burn. The best results he has found are obtained in the hemisphere of the rays with the best penetrating power. These hemispheres he has determined, fluoroscopically and photographically. This point from which the best skiagraphic and therapeutic results are obtained, is located in the center of the green radiance. The author emphasizes the importance of determining this point in all tubes used. Therapeutically the best results, he says, in superficial cases are obtained with tubes of low vacuum. When a better penetration is desired, or in internal cases, high vacuum tubes should be employed. As an agent for protecting patients he has found lead the most useful, although he has constructed a special protector which is arranged with diaphragms in order to produce the diffused rays. [P. B. B.]

2.—Robinson contributes a paper on **the ureteral pelvis.** The anatomy and topography of the organ are described at some length. Three distinct forms of the ureteral pelvis have been observed. These are: (1) The typical triangular pelvic sacculation. This is the most frequent form and consists of a triangular voluminous pouch. (2) The dichotomous division of the ureter with no pelvis or only an extremely diminutive one. (3) The half ureteral pelvis formed by the proximal or distal major calix. The author has found that bilateral pelvic symmetry arises rarely. He has never observed a case of bilateral pelvic symmetry, and infants, he has found, appear to present more variations than adults. Diverticula of the pelvis are rarely found. Hyrtl reported 2 cases, and of the author's 50 ureteral pelves only one small diverticluum was found. The relations of the renal vessels, nerves and lymphatics to the pelvis are described in detail. The pelvis receives its nutrient vessels from the arteria renalis. [P. B. B.]

3.—Ayers, in his paper on **eclampsia,** its **prevention and treatment,** says that in the etiology of eclampsia many factors are mentioned, and, therefore, we should guard our patients from all. The first advice to a pregnant woman should be to sustain normal action of the bowels and proper diet. The second advice should be to keep an accurate record of the urinary output. Whenever the amount of urea falls below normal or albumin or casts are present, the patient's diet should be regulated and laxatives and diuretics administered. If, however, there are associated headaches, eye symptoms, furred tongue, cold, clammy skin and irritable pulse, the induction of labor should be considered. The theory of the thyroid gland as an etiological factor has not generally been accepted, but Ayers would suggest the administration of thyroids in threatening cases. The general treatment of an eclamptic patient should be the establishment of thorough elimination, and, if possible, allow the pregnancy to be completed. He does not favor the immediate emptying of the uterus during the first convulsion, but resorts to general sedatives and active stimulation of the emunctories, for in some cases the condition may only be temporary. He does not favor intravenous transfusion, unless preceded by bloodletting. For checking the convulsions we should not depend on any special drug. If an eclamptic patient is in labor, he would advise that the delivery be hastened. In concluding, the author emphasizes: (1) That we can prevent the great majority of cases by the careful application of the knowledge we possess; and (2) in the treatment of these patients each case must be a law to itself. [P. B. B.]

4.—Knapp reports the case-history of a woman, 43 years of age, who suffered more or less for 3 years from symptoms of **atonic dyspepsia,** associated, however, with severe abdominal pain, cramp-like in character, and located somewhat to the left of the median line. The attacks at first occurred at intervals of several weeks, but they progressively increased in frequency, and, therefore, operation was performed. A fusiform **tumor** was found to occupy all the coats of the **jejunum;** the mass measured five inches in length and its thickest part about 2 inches. The tumor and the bowel on each side were removed. Microscopical examination of the mass revealed it to be composed of inflammatory tissue. The patient made a good recovery. [P. B. B.]

5.—Somerset records 6 case-histories as a text for his paper on a **few differential diagnoses in connection with the exanthemata.** In each of the patients observed there existed at some time in their history a justifiabe difference of opinion concerning the diagnosis. [P. B. B.]

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

May 21, 1903.

1. A Study of 534 Operations Upon the Gall-Bladder and Bile-Passages, with Tabulated Report of 547 Operated Cases. WILLIAM J. MAYO.
2. The Germicidal Action of Alcohol. CHARLES HARRINGTON and HAROLD WALKER.
3. Report of 5 Cases of Fractures of the Hip in Children. H. M. CHASE.

1.—Mayo's experience is that **palliative treatment for malignant diseases of the gall-bladder and bile-ducts** is not of great service. In a few cases of common duct obstructions, cholecystenterostomy gives relief for a time, and, if the duodenum cannot be easily reached, the transverse colon serves as well for the purpose of anastomosis. Out of 5 cholecystenterostomies for malignant disease 4 were attached to the transverse colon, with one death, and in one to the duodenum. In nonmalignant cases the author attaches to the duodenum, if possible. [T. M. T.]

2.—Harrington and Walker conclude their article as follows: (1) Against dry bacteria, absolute alcohol and ordinary commercial alcohol are wholly devoid of bactericidal power, even with 24 hours' direct contact, and other preparations of alcohol containing more than 70%, by volume, are weak in this regard, according to their content of alcohol,—the stronger in alcohol, the weaker in action. (2) Against the commoner, nonsporing, pathogenic bacteria in a moist condition, any strength of alcohol above 40%, by volume, is effective within 5 minutes, and certain preparations within one minute. (3) Alcohol of less than 40% strength is too slow in action or too uncertain in results against pathogenic bacteria, whether moist or dry. (4) The most effective dilutions of alcohol against the strongly resistant (nonsporing) bacteria, such as the pus organisms, in the dry state, are those containing from 60 to 70%, by volume, which strengths are equally efficient against the same organisms in a moist condition. (5) Unless the bacterial envelope contains a certain amount of moisture, it is impervious to strong alcohol; but dried bacteria, when brought into contact with diluted alcohol containing from 30% to 60% of water by volume, will absorb the necessary amount of water therefrom very quickly, and then the alcohol itself can reach the cell protoplasm and destroy it. (6) The stronger preparations of alcohol possess no advantage over 60% to 70% preparations, even when the bacteria are moist; therefore, and since they are inert against dry bacteria, they should not be employed at all as a means of securing an aseptic condition of the skin. (7) Provided the skin bacteria in the deeper parts can be brought into contact with disinfectants, alcohol of 60% to 70% strength may be depended upon usually, but not always, to destroy them within 5 minutes. [T. M. T.]

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

May 23, 1903.

1. Suppression of Urine. With Report of a Case Enduring Eight Days, Relieved by Decapsulation of the Kidneys. HORACE J. WHITACRE.

2. Contribution to the Surgery of Gastric Ulcer. VAN BUREN KNOTT.
3. The Surgical Conception of Pyloric Obstruction. H. D. NILES.
4. The Serum Diagnosis of Tuberculosis. L. M. LOEB.
5. The Transmission of Yellow Fever. JAMES CARROLL.
6. The Stegomyia and Fomites. STANFORD E. CHAILLE.
7. Combined Intra-Uterine and Extra-Uterine Pregnancy: Operation and Recovery. G. J. HAGENS and J. J. MOORHEAD.

1.—See **Philadelphia Medical Journal,** May 16, 1903, page 815.

2.—See **Philadelphia Medical Journal,** May 16, 1903, page 816.

3.—See **Philadelphia Medical Journal,** May 16, 1903, page 816.

4.—Loeb discusses **the serum diagnosis of tuberculosis.** He outlines the technique and points out that his personal observations are limited to 52 cases. Dilutions varying from 1:15 and 1:20 were used. His results agreed quite closely with those of the majority of workers. The following is a summary of his experiments, with bloodserums and pathological effusions:

	Pos.	Neg.	Pos.	Neg.
Bloodserums.				
Nontuberculous	2	12	15%	85%
Tuberculous	2	..	100%	..
Pathological Effusions.				
Nontuberculous	6	14	30%	70%
Tuberculous	12	4	73%	27%

He reaches the following conclusions: (1) Under various conditions animal serums agglutinate homogeneous cultures of human tubercle bacilli in liquid media. (2) Such serums may be obtained from the human or animal body without the presence in it of the bacillus tuberculosis. (3) It is doubtful whether the agglutinative powers are ever due to the specific action of the bacillus tuberculosis. (4) The presence or absence in the adult human bloodserum of agglutinative properties for tubercle bacilli is no decisive evidence of the presence or absence of tuberculous lesions in the body. [F. J. K.]

5.—See **Philadelphia Medical Journal,** May 16, 1903, page 815.

6.—See **Philadelphia Medical Journal,** May 16, 1903, page 815.

7.—Hagens and Moorhead report a case of **combined intra-uterine and extra-uterine pregnancy.** The patient was operated upon and made a good recovery. It was found that the tube had ruptured on the lower surface, the fetus and placenta developing within the right broad ligament. Straus states that no fewer than 32 instances of tubal pregnancy co-existing with intra-uterine gestation appear in the literature. Twenty hours after the operation in the present case the patient spontaneously expelled the intra-uterine fetus. [W. A. N. D.]

AMERICAN MEDICINE.

May 23, 1903.

1. Congenital Dislocation of the Hip: Report of a Bloodless Reposition, Followed by Death, with an Analysis of Twenty-three Cases in Process of Treatment. H. AUGUSTUS WILSON, J. TORRANCE RUGH and W. M. L. COPLIN.
2. Acute Leukemia. JOHN BENJAMIN NICHOLS.
3. Retrocecal Appendicitis With Retroperitoneal Pelvic Abscess. A. ERNEST GALLANT.
4. Fracture of the Ischiopubic Ramus and Rupture of the Bladder: Recovery After Operation. LINDSAY PETERS.
5. Anomalies of Respiration in High Altitudes. W. A. BRIGGS.
6. A Rapid Method for Hardening and Embedding Tissues. B. MEADE BOLTON and D. L. HARRIS.

1.—Wilson, Rugh and Coplin present a report of 23 cases of **congenital dislocation of the hip** now undergoing treatment, with the detailed statement of a **bloodless reposition (Lorenz method), followed by death.** [T. L. C.]

2.—Nichols embodies in his report of 2 cases of **acute leukemia** the result of his study of the recorded cases and data bearing on it. The distinction beteen acute and chronic leukemia is one of degree rather than of kind and rests upon the clinical picture, the overwhelming intensity and virulence of the symptoms, the rapidity of the course. The phenomena, that in chronic cases extend over 3 or 4 years, are in acute cases compressed into as many weeks. The intensity of the morbid process is such that conditions that are rare in chronic forms, such as stomatitis, are brought out with great frequency and prominence in the acute cases. It is entirely by the character and malignancy of the clinical features that acute leukemia is distinguished from the chronic forms. No arbitrary time-limit can be satisfactorily fixed as a dividing line between acute, subacute and chronic leukemia; while intermediate cases difficult to classify may occur, just as with other diseases, in the majority of instances the acute and chronic cases can be easily distinguished and recognized. A case running a mild course, terminating prematurely within a month or two after its onset through some such untimely accident as a cerebral hemorrhage, could not be regarded as acute; and, on the contrary, it is probable that a chronic case of long standing could take on a sudden access or exacerbation of virulence and then run a really acute course. It has been suggested that cases of leukemia can not be considered really proved fatal unless blood examination at or before the beginning of the course showed the previous blood condition to have been normal, and that there was not a previous latent or unsuspected leukemic condition of which the acute case developed. Cases rarely come under observation early enough or under such circumstances that the condition of the blood prior to the leukemic changes has been determined; yet in a few instances early blood examinations have shown previously normal conditions, so that the possibility of leukemia running its entire course within a few weeks is fairly demonstrated. [T. L. C.]

3.—Gallant reports 3 rare cases. One of **retrocecal gangrenous appendicitis with retroperitoneal pelvic abscess.** One of **postcecal appendicitis with postperitoneal pelvic abscess;** and the third, **retrocecal appendicitis with retroperitoneal pelvic gumma.** The last patient was a sufferer from locomotor ataxia. [T. L. C.]

MUENCHENER MEDICINISCHE WOCHENSCHRIFT.

March 17, 1903. (No. 11.)

The Semicentennial Jubilee of the Münchener medicinische Wochenschrift.

1. From the "*Aerztliches Intelligenzblatt*" of the *Münchener medicinische Wochenschrift.* G. MERKEL.
2. The Medical Journalism in Germany of the Middle of the Nineteenth Century. A Bibliographic Literary Sketch. K. SUDHOFF.
3. Contribution to the Knowledge of the So-called Banti's Disease and Splenic Anemia. F. MARCHAND.
4. Influenza. W. EBSTEIN.
5. A Case of Uronephrosis Cured by Ureter-Plastic and Unfolding of the Pelvis of the Kidney. W. PETERSEN.
6. The Operative Treatment of Carcinoma of the Uterus. G. KLEIN.
7. The Danger of Infection With Ankylostoma in Trench-Digging. H. BRUNS.
8. Tetany of Gastric and Intestinal Origin. W. FLEINER.

1.—See editorial, **Philadelphia Medical Journal,** April 25, 1903, page 690.

2.—See editorial, **Philadelphia Medical Journal**, April 25, 1903, page 691.

3.—After discussing the literature of **Banti's disease,** Marchand reports the case of a boy, 16 years of age, who was brought to the hospital in a cachectic state and died 5 hours later. There was a history that 3 years before he had been operated upon for suspected tuberculous peritonitis, ascites was discovered, and later enlargement of the spleen. When the autopsy was performed, the following condition was found. Atrophic cirrhosis of the liver, hypoplasia of the spleen, interstitial pancreatitis, general varicose condition of the veins—a hemorrhage from one of the cardiac veins having caused death—anemia, fatty degeneration of the heart, perisplenitis and pulmonary edema. The histological examination of the spleen showed a very marked proliferation of connective tissue, in some cases completely obliterating the follicles. The case corresponded closely to Banti's description. He also reports the case of a man, 23 years of age, who developed loss of appetite, weakness in the course of 6 months, great enlargement of the spleen, then pulmonary tuberculosis, and who then died. At the autopsy the spleen was found enlarged, the liver was moderately enlarged, both kidneys greatly enlarged, and there was splenization of the bone marrow. Microscopical examination showed in the veins and capillaries large ameba-like cells which were evidently phagocytes. These cells contained curious enclosures which were evidently not bacteria, but probably represented fragments of chromatin substance. It seems incredible that in this case the spleen should be regarded as the organ primarily diseased. The findings in the first case also appear to indicate that the spleen was not primarily diseased, but that its enlargement had little if any influence upon the progress of the cirrhosis of the liver. Marchand, therefore, believes that splenomegaly probably does not cause cirrhosis of the liver. [J. S.]

4.—Ebstein discusses the history of **influenza,** tracing it back probably to 412 years before Christ. The recent epidemics occurred in 1889 and 1890 and returned in 1891. It appears that during the return about 5% of those who had it during the first epidemic were again infected. During these two epidemics catarrhal symptoms predominated. Young adults were affected more frequently than others. Ebstein discusses the manifestations of this epidemic in Göttingen, recognizes 3 types of the disease, the nervous, the catarrhal and the gastro-intestinal, and mentions some of the complications. [J. S.]

5.—Petersen reports a case of **hydronephrosis which presented the symptoms of renal calculus** for which operation was performed. The hydronephrosis was found to be hemorrhagic in character. No satisfactory cause for it was found. A fistula was made, and the sac diminished in size. A second operation was therefore performed and the ureter found adherent to the sac and constricted. A valve-like fold of mucous membrane was found overlying the orifice of the ureter in the pelvis. The opening into the ureter was made free, the sac constricted by sutures, and the patient made a complete recovery. The author believes that careful diagnosis and rational procedures are necessary in the treatment of hydronephrosis. [J. S.]

6.—Klein states that, in order for **carcinoma** to develop, it is necessary for the patient to be of the appropriate age; there must be a local disposition on the part of the tissue; and the unknown cause must be present. Prophylaxis of carcinoma of the cervix consists in the prompt repair of lacerations, and the avoidance of ulcerative processes. The only possible cure lies in early operation. He collects the statistics of various authors, and finds that anywhere from 35% to 53% of all cases are operable according to different methods, and, although relapse occurs in many of the operated cases, hemorrhage and suppuration are avoided. (The paper is still unfinished). [J. S.]

7.—Bruns discusses the factors that favor **infection with the ankylostoma duodenalis in tunnel work.** The temperature must be fairly high (at least 20° C.); and there must be plenty of moisture. It is necessary to find out whether or not any of the workmen are infected, and for this purpose microscopical examinations should be made. A single unguarded case is of the utmost danger. [J. S.]

8.—Fleiner reports the following additional case. A woman, 51 years of age, developed a tendency to diarrhea, having from 2 to 7 thin movements every day. Gradually she began to notice stiffness in the limbs, walked with some difficulty, and no longer could carry on fine work with the hands. The features became rigid so that the expression became peculiar. Examination of the stomach showed a moderate deficiency of HCl., no retention of the stomach contents; the feces were gray, not particularly offensive, contained a small amount of gas and mucus, and were semi-liquid. The patient improved upon treatment, and the stiffness in the limbs disappeared, then recurred, and Fleiner, suspecting tetany, was able to elicit Trouseau's phenomenon. There was evidence of inspissation of the blood. Later the patient had a typical attack of tetany with severe pain and the characteristic tonic cramps which involved the neck and back. This was relieved by morphine and hypodermoclysis. The patient gradually improved with increase in the daily quantity of urine, diminution in the quantity of feces, and finally was discharged much improved. Fleiner, after discussing various possibilities, regards the case as one of **gastro-intestinal catarrh,** although he is not sure that he can exclude pancreatic disease; at least alimentary glycosuria was not present. A large proportion of the feces consisted of intestinal secretion. In regard to the treatment of this condition he warns urgently against the use of opium or other astringents, and against execssive diet. [J. S.]

VIRCHOW'S ARCHIV.

1902. (Band 170, Heft 2.)

7. Congenital Muscular Defects. R. BING.
8. Contribution to the Knowledge of the Changes of the Organs After the Extirpation of the Thyroid Glands in Rabbits. W. BENSEN.
9. Hemorrhage Into the Adrenal Bodies. M. SIMMONDS.
10. Contribution to the Casuistry of Mesaortitis Gummosa. L. HEINE.
11. The Cause of the Action of Concentrated and Rarefied Air Upon the Animal Body. E. ARON.
12. The Chemistry and Technique of Weigert's Elastic Stain. B. FISCHER.
13. Twin Bearing in Its Hereditary Relations; A Historical Criticism of False Statements. H. NAEGELI-AKERBLOM.
14. Brief Communications: (1) Contribution to the Knowledge of Lipochrome. E. NEUMANN. (2) Sawing Through the Skull Without Injuring the Dura Mater. G. von WALSEM.

7.—Bing contributes a case and scientific study of the **various muscular defects.** He reports a case observed by himself and carefully studied, occurring in a man who died at the age of 66 years. During life it had been observed that the right pectoralis major was defective, and that there were fibrillary twitchings in other muscles of the shoulder girdle on the right side. At the autopsy only the clavicular portion of the pectoralis major was found. The pectoralis minor was replaced by some connective tissue, and other muscles were recognized as only partially developed. The histological examination of the various muscles showed changes in the pectoralis major and minor, the triceps, the teres minor, the deltoid and the infraspinatus on the left side. Therefore the case represents a defect of certain muscles on the right side which had existed from earliest childhood, and pathological alterations in certain muscles of the left side or in the shoulder girdle. Bing has made a thorough study of the literature of this condition, and reports in full the most important cases. The question arises whether such cases are to be included under the group of muscular dystrophies, or whether they represent malformations. The examination of the spinal cord was entirely negative, disagreeing with the findings of certain other authors. It appears that this group of muscular defects has not a similar etiology, but nevertheless, as the same muscles are frequently affected, they must have some uniform basis. [J. S.]

8.—Bensen has examined the tissues of 12 rabbits, two of which were fed with thyreodin and 10 had been subjected to thyroidectomy. The first 2 rabbits showed enteritis, hyperemia, fatty infiltration of the liver, colloid bodies in the kidneys, and homogeneous thrombi in the bloodvessels. In the animals upon which thyroidectomy had been performed there were colloid bodies and homogeneous masses in the renal tubules, and in the animals that had lived for some time granular degeneration of the epithelium was found. In the liver there was fatty infiltration, nuclear degeneration of the cells, hyperemia and accumulation of leukocytes in the neighborhood of the bloodvessels. In the heart muscle there was degeneration of protoplasm, and the striation became less distinct. In the spleen there was hyperemia; the lungs showed hyperemia and thickening of the interalveolar septa; in the intestines there was enteritis; the stomach, pancreas, parotid gland, adrenals and sexual organs were all normal. Three of the animals upon which thyroidectomy had been performed received thyreodin. In these animals the changes were similar to those in the preceding group, or less distinct. The rabbit was employed in all the experiments. [J. S.]

9.—Simmonds reports the case of a man, 57 years of age, who had severe pains in the epigastrium, radiating to the back, and vomiting. He died in 2 days, and at the autopsy there was found hemorrhagic infiltration of both adrenals, recent lobular atheroma of the aorta, and chronic myocarditis. Microscopically the bloodvessels of the adrenal bodies were intensely congested. The second patient, a man of 53 years, with varicose ulcers on the legs and chronic nephritis, suddenly developed symptoms of peritonitis, there was vomiting and collapse and finally death. At the autopsy obliterative pericarditis, chronic emphysema and hemorrhagic infarction of both adrenals were found. There was also embolism of the superior mesenteric artery and commencing necrosis of a large portion of the intestine. Microscopically the adrenals resembled those in the previous case. The embolism of the mesenteric artery was quite sufficient to explain the clinical symptoms. It must be remembered that hemorrhagic cysts of the adrenals sometimes reach such dimensions that they cause mechanical disturbances. A third patient, a girl of 20 years, died of pulmonary tuberculosis. She had an adrenal body twice the normal size on the right side. A fourth patient, a man of 63 years, had inspiration pneumonia and pyelonephritis, both adrenals were enlarged and showed hemorrhagic infiltration. The fifth patient, a woman of 51 years, died of cancer of the uterus and pyelonephritis. The right adrenal was the size of a pigeon's egg and showed hemorrhagic infarction. The sixth patient died of hemorrhagic nephritis. The right adrenal was greatly enlarged,and there was a thrombus in the vein extending almost to the vena cava. The seventh patient, a girl of 15 years, had chronic mitral endocarditis, fibrinous pericarditis and pneumonia. The posterior two-thirds of the adrenals were swollen and showed hemorrhagic infiltration. These 7 cases represent hemorrhages **into one or both adrenals,** associated with other severe conditions. He reports an eighth case, that of a boy, one year of age, who had whooping cough and developed lobar pneumonia and multiple pyoarthritis. There was suppuration in both middle ears. At the autopsy osteomyelitis due to the streptococcus was found. Both adrenal bodies were enlarged and showed hemorrhagic infiltration, and in the thrombi masses of stereptococci were found. A ninth patient, a woman of 46 years, was brought to the hospital moribund. At the autopsy arterial sclerosis, myocarditis, obliterative pleurisy, general venous stasis and hemorrhagic infiltration of both adrenals were found. The capillaries of the adrenals were occluded by masses of streptococci. A tenth case was that of a male infant, 4 months of age, in whom there was found stenosis of the colon by peritoneal adhesions, colitis, proctitis, enlargement of the adrenals with hemorrhagic infiltration, and emboli composed of masses of the colon bacillus. An eleventh patient, a girl of 22 years, died of septic endometritis. The adrenals were large and showed hemorrhagic infiltration, and the capillaries were occluded by masses of colon bacilli. A twelfth patient, a child, 4 months of age, who died of pneumonia, had an enlarged left adrenal body which was found to consist of the remains of an old thrombus. Simmonds concludes (1) that small ecchymoses of the adrenals frequently occur in infectious diseases, and are to be regarded as toxic hemorrhages. (2) That hemorrhagic infarction of both adrenals often causes death with symptoms of peritonitis and collapse: these symptoms, however, may not be present. (3) Adrenal hemorrhages occasionally give rise to huge hematomata. (4) Adrenal hemorrhages occur as a result of the following conditions: First, traumatism; second, hemorrhagic diathesis: third, the result of venous thrombosis; and fourth, the result of bacterial capillary emboli. The commonest cause is venous embolus. (5) Thrombosis may affect either the main vein or the chief branches; it may involve both sides or only the right side; it is to be regarded as marantic thrombosis, and therefore occurs only in cases of chronic disease; it is to be regarded as a primary disease of the adrenals. (6) Bacterial emboli occur in cases in which neither clinically nor anatomically we are able to recognize a septic condition. (7) These hemorrhages may lead to destruction of the organ. [J. S.]

10.—Heine reports 3 cases of **gummous inflammation of the aorta** occurring in the course of florid syphilis. The chief changes were found in the media and consisted of foci that showed hemorrhagic infiltration, and accumulation of cells in which were some giant cells, with deep loss of elastic fibers. Foci consisting of leukocytes were also found in the adventitia, and there were some areas of necrosis. The differential diagnosis between tuberculosis and syphilis would be difficult in these cases, but the absence of tuberculous lesions and the presence of florid syphilis rendered the diagnosis reasonably certain. [J. S.]

11.—Aron has endeavored to determine **the physiological action of compressed and rarefied air upon the animal body.** For this purpose he constructed an experimental body which consisted of a flask filled with a rubber bag which communicated with the compressing and rarefying apparatus. The space between the bag and the flask contained a small quantity of air, and this was united with a water manometer. The pressure in the flask is, of course, negative, corresponding to the elasticity of the rubber bag. As the atmospheric pressure in the bag is increased, however, the negative pressure is correspondingly decreased. Upon living rabbits practically the same results were obtained. Aron then discusses some of the symptoms of mountain disease, and disagrees with Mosso that they are due to diminution of the carbonic acid in the blood, and states that, as a rule, they can be best relieved not by the inhalation of carbonic acid gas, but by the inhalation of pure oxygen. Experiments with the flask and rubber bag upon living rabbits showed that, as the pressure of the external air is diminished, the intrapleural pressure is increased. The explanation of this curious fact is that, as the external pressure is diminished, the quantity of air in the pleural cavity is increased. As, however, the diaphragm follows the lung upward. the space is not altered, and, therefore, the pressure upon the lung is greater. When the atmospheric pressure is increased, then the quantity of air in the pleural cavity is diminished and the reverse occurs. [J. S.]

12.—Fischer, after a careful scientific discussion of Weigert's **elastica stain,** gives a series of methods for using this stain for various purposes, either staining the elastic fibers alone, or various other substances, such as the nuclei, cartilages, etc. [J. S.]

13.—See editorial, **Philadelphia Medical Journal,** March 21, 1903, page 493.

14.—(1) Neumann calls attention to **the color of the fat in fasting frogs,** which under these circumstances becomes a dark reddish yellow. He has discovered that this stains blue and then black with Lugol's solution. He does not believe that it is derived from the blood. (2) Von Walsen describes the **kranioprion** which consists essentially of a saw-blade, the anterior portion of which contains ordinary teeth. The posterior portion is smooth and contains a small movable tooth fixed with a spring, that projects beyond the line. During the sawing of the skull this tooth remains pushed upward by the bone, but as soon as the skull has been sawn through it is forced down by the spring, pushes through the dura and at the same time notifies the operator that the incision is sufficiently deep. By using an interrupted cut it is possible to remove the calvarium without injuring the dura. By carefully selecting the points which are to be sawn through, the thin portions of the bone are left and these can be easily broken. [J. S.]

RUSSKY VRATCH.

February 8, 1903. (Vol. 11, No. 6.)

1. On the Casuistics of Excision of Large Nerve Trunks in the Removal of Tumors of the Neck.
   S. P. PHEDOROFF.
2. On the Casuistics of Complications of Typhoid Fever. Embolism of the Aorta. Z. F. ORLOVSKY.
3. On the Question of the Purgative Action of Purgatir.
   K. IU. BERGMAN.
4. The Course of the Variolous Process During the Internal Administration of Xylol. I. K. VISCHNEVSKY.

5. On the Teaching of Hygiene in General and Professional Hygiene, in Particular in the Higher Technical Schools. D. P. NIKOLSKY.
6. The Medical Report of the St. Petersburg Maternity Hospitals for 1901. E. L. PUSCHKINA.

1.—Phedoroff reports 4 cases in which **the removal of malignant growths in the neck necessitated the excision of some of the large nerve trunks.** His observations show that sectioning of the long branches of the brachial plexus does not endanger life but leads to serious functional disturbances, such as complete paralysis or loss of sensibility. Less disturbance follows the section of the so-called accessory nerve of Willis and the short branches of the brachial plexus. Finally, the results of sectioning the branches of the cervical plexus remain almost imperceptible to the patient. On the other hand, great care should be exercised in the excision of the pneumogastric to avoid pinching the nerve, as this may cause sudden death. Cutting of the nerve does not have this effect on the pulse and heart. The author's cases also show that the prognosis in malignant growths of the neck, when removed by surgical operation, is quite favorable. [A. R.]

2.—Orlovsky reports the case of a man, 22 years old, who developed, during the second week of typhoid fever, cardiac weakness, which was followed on the fifteenth day by a sudden pain in, and complete paralysis of, both lower extremities. There were all the indications of an occlusion of the aorta by an embolus at the point of bifurcation. The post mortem verified the diagnosis and also established the fact that the embolism was derived from a thrombus which formed in the left ventricle as a result of myocarditis. [A. R.]

3.—Bergman experimented with **purgatin** on animals, rabbits and dogs, and as a result of these experiments as well as his observations on man arrived at the following conclusions: (1) Purgatin does not have the slightest effect on rabbits as a purgative, even in quantities larger than those which act well on man and dogs. (2) In dogs, doses of 1.5-3 gm. usually produce soft, generally mushy evacuations. (3) Comparatively large single doses, 10 gm. in rabbits and 15 gm. in dogs, caused no untoward symptoms. (4) Repeated doses of 1-2-3 gm. daily, administered for several weeks, were not harmless to rabbits. (5). Dogs become somewhat habituated to purgatin and after prolonged administration develop constipation. Whatever advantages this drug possesses, the author believes, they are overbalanced by the disadvantages, that small doses are ineffective, that there is a possibility of becoming habituated to its use so that constipation eventually develops, that it colors the urine and soils the linen to the great annoyance of the patient; also that it is too expensive. The author also states that parallel experiments performed with sulphur showed that the latter is equally efficient in its effect on dogs. [A. R.]

4.—Vischnevsky reports **exceptionally favorable results from the internal administration of xylol in the treatment of smallpox.** He administered the drug in doses of 15 drops in red wine 4-6 times daily. No other drugs were used, except external applications of 1% carbolized vaseline or cold cream. The author's conclusions are: (1) In all of the 6 cases under observation the treatment was commenced during the eruptive stage, on the second, third and even the fourth day of eruption. (2) Not a single patient developed pustulation. If some of the vesicles commenced to suppurate prior to the commencement of the treatment (usually on the scalp and face), pustulation did not advance and the pus underwent caseation. (3) The vesicles with the caseated contents did not suppurate but became contracted and dried up, leaving a thin superficial scab. (4) The eruption which appeared at the beginning of the treatment in the form of nodules remained in that condition without becoming vesicular. (5) The course of the disease was either afebrile, and if fever did develop it was of an extremely irregular type, having in no case lasted more than 4 days from the commencement of the treatment. (6) In none of the patients thus treated did any scarification remain, although no precautions were taken to prevent this. [A. R.]

5.—Nikolsky discusses **the importance of knowledge of hygiene to men of a technical training** and presents the following conclusions: (1) For the successful application of sanitary measures in industrial pursuits intended to protect the lives and health of the workmen it is indispensable that the technical men should acquire a knowledge of general and professional hygiene before they leave their school benches (2) With this aim in view the teaching of general and special hygiene should enter into the course of instruction in technical schools. (3) Hand in hand with the development of industry there is a progressive widening of the problems of industrial hygiene, and it is therefore necessary that in technical schools a special chair should be devoted to the teaching of hygiene, the chair to be filled by one who is not only theoretically but practically familiar with the problems of industrial sanitation. (4) It is necessary to widen the program of teaching hygiene in medical schools and the academy, especially concerning professional or public hygiene. Besides, it is extremely desirable that special courses should be given, just as they are given in other departments of medicine. (5) The chair of hygiene in the higher technical schools should have a museum of professional hygiene as well as appliances for giving first aid in emergencies. (6) In connection with the instruction of hygiene great aid will be derived from excursions to various factories, mills and other industrial establishments, for the purpose of familiarizing the students with the sanitary conditions prevailing in such places. (7) It would be extremely useful to establish student's societies for the purpose of studying more thoroughly sanitary-technical problems bearing on industrial pursuits. [A. R.]

6.—Puschkina tabulates and discusses the statistical data furnished by the reports of the city maternity hospitals of St. Petersburg. The tables are based on an analysis of 10,205 cases. [A. R.]

THE PRACTITIONER.

December, 1902.

1. Fracture of the Greater Process of the Calcaneum. ALBERT CARLESS and STEPHEN MAYOU.
2. The Berlin Congress on Tuberculosis. NATHAN RAW.
3. A Clinical Lecture on Congenital Dislocation of the Hip. W. BRUCE CLARKE.
4. Is the Catheter ever Required in Abdominopelvic Operations on Women? STANMORE BISHOP.

1.—Carless and Mayou discuss **fracture of the greater process of the calcaneum.** It is only since the introduction of radiography that the frequency with which fractures of this bone occur has been recognized. Radiography has demonstrated that there is a fairly common fracture of the os calcis which results from falls on the feet. The writers have had the opportunity of observing several cases of this type recently, and their paper is accompanied by several radiographs of these cases. The immediate clinical signs are not characteristic, and it would be difficult to distinguish them apart from radiography of fractures of the astragalus without displacement. The ecchymosis is usually placed a little above the fracture, since the tissues immediately below the malleoli are more capable of swelling than the plantar structures. The heel is usually somewhat drawn up, and thus the foot is in position of slight talipes equinus. The loss of the arch of the foot is not very evident owing to the swelling of the part, but it looks longer than usual, and its vertical dimensions may be diminished. The movements of the subastragaloid and midtarsal joints are more likely to be impaired than those of the ankle itself, unless the astragalus is involved in the lesion. It is important in these cases to take radiographs not only from the side, but also from the front, as very different information may thus be gained. [T. L. C.]

3.—Clarke presents a clinical lecture on **congenital dislocation of the hip.** The term, in a sense, he regards as a misnomer, because dislocation of the hip does not exist at birth. It is not so much a deformity in itself as the result of some one or other kind of deformity: the head of the bone gets out of its position, not necessarily because there is something wrong with the head of the bone, but because there may be something wrong in connection with the acetabulum. Clarke details the characteristic symptoms of a well-marked case. He briefly describes the **methods of Hoffa and Lorenz.** The principal difference between Hoffa's and Lorenz's operations is that Hoffa's is performed from behind and Lorenz's by the anterior incision. Lozenz is rather inclined not to cut through the muscles and ligaments, but to stretch them by means of a sort of wrench and extension apparatus which he applies at the time of operation to the foot. Hoffa is inclined to cut them and to bring them into proper position. According to Clarke the particular incision chosen is unimportant; the most important thing to do is to cut down upon the bone itself and to find out how much of the bone remains. It is necessary at the time of operation for some one to pull on the limb and to bring it down for the operator, and then one by one the various muscular structures are to be cut through until the bone is reached and placed in its proper position. It is very probable that the acetabulum will be found half-filled up, in such an event it is necessary to chisel out a new acetabulum and make a lip, so as to prevent the head of the bone being re-dislocated after the operation. As to the after-treatment, a weight is kept upon the limb, and, if the patient is a child of 5 or 6 years, he advises that a long splint be applied with an interruption to it at the hip. Passive movements should be begun as soon as the wound is healed, in about ten days or two weeks. After the child has been in bed about a month, he permits him to get up with weight applied to the leg. The use of a Thomas hip-splint is recommended. [T. L. C.]

4.—Bishop discusses the following question: **Is the catheter ever required in abdominopelvic operations upon women?** Cystitis after operation in women is a complication which is to be avoided if possible. It adds greatly to the risk both at the time and later, and it may utterly spoil the perfect result otherwise to be obtained. The great cause of cystitis in women after operation is catheterization. The routine practice he regards as unnecessary and futile. Postoperative catheterization can, in the majority of instances, be avoided. The bladder will empty itself if sufficient time be allowed, and when once this has occurred no further question of catheterization is likely to arise. Bishop has seen no other result than good from such delay. Operations upon the bladder itself must be considered as a separate class, to which these observations do not apply. [T. L. C.]

LA RIFORMA MEDICA.

April 1, 1903.

1. Experimental and Clinical Investigations of Two Cases of Paroxysmal Hemoglobinuria.
G. MATTIROLO and E. TEDESCHI.
2. Reduplication of the Second Sound in Mitral Stenosis.
U. GABBI.
3. Contribution to the Study of Septicemia from the Micrococcus Tetragenus in Man. F. LUIGI.

1.—To be abstracted when concluded.

2.—Concerning the mechanism of the production of reduplication of the second sound there is some diversity of opinion, though the general tendency seems to be to attribute it to the successive closure of the arterial valves, instead of the simultaneous closure normally taking place. Gabbi seeks to prove that closure of the pulmonary valves occurs before that of the aortic. In a previous paper he advanced the theory that, in view of the increased pressure in the pulmonary artery existing in this condition, the force and rapidity of the valve's closure would be increased: whereas, bloodpressure in the aorta being normal or somewhat diminished, closure of its valves would be less forceful and slower. Granted that this is the case, he believes it natural to suppose that the first part of the reduplicated sound would be the louder and would correspond to the closure of the pulmonary valves. A case of mitral stenosis has recently come under his care in which the first part of the reduplicated sound was much louder than the second, and this, he believes, offers convincing proof that the pulmonary valves are the first to close. Further, he was able to diminish the difference in intensity between the first and second parts of the duplicated sound by increasing the general bloodpressure; and increase the difference by diminution of bloodpressure. [R. L. F.]

3.—The possibility of a septicemia from the micrococcus tetragenus in man was first demonstrated by Mya. A case of this kind came under the observation of Luigi, who describes it as presenting a true clinical picture of septicemia of long duration, 7 months in all, of which 6 at least were characterized by fever. The general type of the latter was remittent; the rise of temperature being preceded by a chill and followed by profuse perspiration. Quinine, even when injected endovenously, failed utterly of effect, and the absence of the plasmodium from the blood was positively demonstrated. Objective examination revealed only an enlarged liver and hemorrhagic pleuritic exudate. From the latter, as well as from the blood and urine, the micrococcus tetragenus was isolated; the morphological and cultural characteristics of the latter corresponding to the white variety, save when the patient's condition began to improve, when there was a tendency for the cultures to take on a yellow color. The author believes that this fact, which is contrary to accepted ideas as to the chromogenic stability of the tetragenus, represents an argument in favor of the transition of one variety to the other; and that the change from white to yellow might indicate a lessened activity of the micro-organism, as the virulence of the yellow variety is generally conceded to be less than that of the white. Under repeated endovenous injections of corrosive sublimate, supplemented later by hypodermic injections of ferric arsenate and strychnine, the patient gradually improved and was finally restored to health. [R.L.F.]

REVISTA DE MEDICINA TROPICAL.

April, 1903.

1. Probable Nature and Life-Cycle of the Yellow Fever Germ. CARLOS FINLAY.
2. Duration of Life of the Stegomyia Fasciata or Yellow Fever Mosquito. JUAN GUITERAS.

1.—Finlay presents an interesting paper in which he compares the method of infection in yellow fever with that of malaria; and the fact that the germ of the former requires 2 hosts—a nonimmune human being and a certain species of mosquito—for the completion of its life-cycle, leads him to the belief that it, like the parasite of malaria, is a protozoon. It has been proved that **the germ of yellow fever lives in the body of the stegomyia fasciata for at least 2 months**, and probably till the death of the mosquito host; and from his study of the subject **the author concludes that the stegomyia is the permanent host of the germ, and hence it must be a much smaller protozoon than the plasmodium malariæ** of which the permanent host is the human blood. He further concludes that the sojourn of the yellow fever germ in the human body is of short duration in accordance with its object, which is mainly to secure the preservation of the species by sexual reproduction, and that this function of sexual reproduction of the germ in the human host is accompanied with the the elaboration of toxins to which must be directly attributed the attack of yellow fever. The ultramicroscopical size of the germ, he believes, accounts for the failure to isolate it; but he entertains the hope that some larger, resting form, analogous to the crescent of malaria, may yet be found within the body of the stegomyia. [R. L. F.]

2.—**As the stegomyia fasciata retains its activity all its life**, the facts pertaining to the **duration of its life** are of great interest. Guiteras reports the following laboratory experiment undertaken with the view of ascertaining the length of life in that insect: Eighteen mosquitoes, hatched on August 1, 1902, were made to bite, on the fifth of that month, a patient suffering from yellow fever. Of these mosquitoes, 7 were killed, to study the intestines and salivary glands, and the remaining **11 died after a lapse of from 5 to 154 days.** [R. L. F.]

ZENTRALBLATT FUER INNERE MEDICIN.

February 21, 1903.

On Ether Glycosuria and on the Influence Exerted Upon it by Intravenous Infusions of Oxygen.
ALBERT SEELIG.

The author refers to ether glycosuria and to his own investigations, which have shown that **inhalation of ether always produces glycosuria in healthy dogs**, that this glycosuria is always discoverable during narcosis, and that after the narcosis is past **the glycosuria rapidly disappears** (within 3 or 4 hours). The sugar may reach 8 or 10 per cent. in strong animals; in poorly nourished or weak animals it is less. Glycosuria is apparently associated with hyperglykemia, and it **is probably due to a reduction in oxidative processes**. To prove the latter point, Seelig in**fused oxygen intravenously and administered ether at the same time, with the result that glycosuria was never produced**. If glycosuria had already been produced by the administration of ether, the administration of oxygen did not influence it. A further communication will follow.
[D. L. E.]

Society Reports.

NEW YORK OBSTETRICAL SOCIETY.

Meeting held April 14, the president, Dr. E. H. Grandin, in the chair.

Dr. G. H. Mallett presented **a uterus containing a submucous fibroid, removed from an elderly woman** on account of profuse hemorrhage. The relations of the tumor prevented complete **curettage**, but the temporary relief afforded by that operation a year ago suggested that the benefits were the result rather of uterine irritation than the actual removal of uterine mucosa. Dr. Vineberg recalled 2 experiences in which curettage seemed to interfere with the bloodsupply, necrosis and sepsis resulting. Dr. Jewett related the history of a similar, but larger, growth for which hysterectomy, supplementary to myomectomy, was indicated.

Dr. Joseph Brettauer presented **a multilocular cyst**, part of the lower wall of which consisted of a fibroid that had developed from the fundus of the uterus. The abdomen had increased in size for 3 years, gradually followed by a rapid increase during the 3 months prior to operation, suggesting an ovarian cyst, probably malignant. Dr. Boldt thinks it often impossible to differentiate between a fibroid cyst and an ovarian cystoma. He had been surprised, lately, to find a tumor which he had diagnosticated sarcoma of the ovary to be a sarcomatous liver, almost completely filling the abdomen. There was, however, a sarcoma of the ovary beneath the liver. Dr. Clement Cleveland narrated the history of a case in which impacted feces had been mistaken for a fibroid. Dr. Brettauer discussed **the differential diagnosis in abdominal tumors**, presenting 3 large tumors that appeared to be soft fibroids. A diagnosis of intraligamentous tumor on the left side and dermoid cyst on the right side had been made. The 2 tumors on the left side proved to be situated between the layers of the broad ligament, having no uterine attachment. The other tumor was a soft fibroid attached by a small pedicle to the right horn of the uterus. These cases illustrated the **difficulties of diagnosis.** Dr. Vineberg described a case in which a large retroperitoneal fibroid was so closely related to the uterine artery that this was injured during operation. Dr. Grandin said that such aberrant fibroids derive their nourishment from the vessels of the omentum or broad ligament. He had previously presented photographs of a large fibroid cyst that had been nourished by omental vessels.

Dr. Ulysses Kahn, by invitation, presented an original **pattern of the Bossi dilator**, described its mechanism and related his own successful experience with its use. Dr. H. C. Coe presented a modified form of the instrument. Dr. Jewett objected to this instrument because the hand cannot be passed along the blades to watch dilatation, and the degree of dilatation cannot be gauged. He prefers the Gau dilator, omitting the ratchet clasp in which the extent of force is measured by the muscular sense. Dr. J. C. Edgar objected to both instruments because their sharp points may perforate the uterus. Dr. R. A. Murray thought the instrument dangerous, preferring to rely on his fingers for rapid dilatation. Dr. W. S. Stone had been unsuccessful in performing rapid dilatation with his fingers. Dr. G. T. Harrison thought the instrument must be dangerous. Dr. Grandin preferred using the hand. Dr. Brettauer presented a set of clamps devised by Michel for uniting wounds. The instrument had proved satisfactory in a number of cases. obviating stitch abscess and giving better co-aptation than plaster.

Dr. J. Riddle Goffe read a paper entitled "**a new suggestion for the relief and cure of cystocele.**" Early procedures for the relief of cystocele consisted in building up a strong perineal body, to retain the prolapsed tissue within the vulva. All operations devised failed in grasping the true cause of the difficulty and in attacking it on rational principles. The fascia was the sustaining tissue, and if a hernia was produced in it the only permanent relief consisted in cutting out the atrophied area of the fascia, and in bringing into apposition the strong, well-nourished areas that had resisted destructive pressure. The 2 layers of distended fascia may be overlapped and firmly stitched, as in the Bassini operation. But even after this had been done, the base of the bladder still remained in folds, causing decomposition of the urine, with various symptoms. He decided, therefore, to spread out this redundant tissue, smoothing out the base of the bladder by making an anterior vaginal incision, spreading the excess of bladder wall over the face of the uterus and broad ligaments, stitching the middle point well up on the face of the uterus. The incision extended through the vaginal mucous membrane and sheath, the supporting fascia in this region. The bladder was dissected from the interior of this fascia for an inch and a half or more, to either side of the median line. The principle of the operation was support from above. Details in the treatment were then given in full, with a minute description of the technique. Drs. Cleveland, Ward and Mallett, who had examined some of Dr. Goffe's patients, reported that the results achieved were excellent. Dr. Cleveland stated that absolute cure does not result in many cases, because the mucosa is simply doubled up. The walls should be resected and the fascia united. Dr. Ward thought that spreading out and attaching the bladder laterally to the broad ligaments might be difficult. Dr. Mallett suggested that further applications of this separation of the bladder might be had in the treatment of vesicovaginal fistula. Dr. Vineberg considered this operation similar to that of Mackenrodt. He had himself done similar work for 10 years with very gratifying results. Dr. Coe thought Dr. Goffe's operation would require special skill in vaginal work. Dr. Brettauer hoped that the operation would prove of value, but would be afraid to perform it during the child-bearing period. Dr. Waldo thought the essential feature in the operation was the dissection of the bladder from the vaginal sheath, by which solid tissues could be brought into apposition. Dr. R. H. Wylie believed that, as some of these cases were really herniæ, enough time had not passed since the operation to test its value. Dr. Goffe, in closing, stated that he was unaware of any procedure like this. The 2 essential principles of his method were treating cystocele as a hernia by cutting out the sac and bringing the fascial edges together; and smoothing out the base of the bladder, stitching it to the anterior surface of the broad ligament, thus preventing folds in that part of the bladder.

NEW YORK ACADEMY OF MEDICINE.

Section on Orthopedic Surgery.

Meeting held April 17, Dr. T. H. Myers in the chair.

Dr. Ely showed **a boy of 18 for diagnosis.** There was no history of tubercular or venereal disease, though he had had malaria 3 years before. Two years ago, while swimming, the patient noticed sudden pain in his right knee; 2 weeks later he began to walk lame and has been lame ever since. While pain is not always present, it is especially severe in the right hip after a hard day's work. He does not complain of pain at night. He has also had pain in his left shoulder for some time. There is only one cm. atrophy in the thigh; the limb is in flexion at 150°, in abduction and exernal rotation. Motion is limited in all directions, and there is marked muscular spasm. There is actual shortening of 3 cm. and apparent lengthening of 2½ inches. The left arm is slightly atrophied, and motion in the left shoulder is restricted. Radiographs show nothing. Dr. Dowd thought the case suggested septic joint disease. Dr. Townsend said that tuberculin was employed in such cases at Johns Hopkins Hospital for ascertaining positively whether the condition was tubercular. Results by this method have proved successful in over 90% of cases. He considered this case rheumatoid arthritis. Dr. Myers had used tuberculin in St. Luke's Hospital for diagnosis in children, obtaining typical reaction. He considered Dr. Ely's case rheumatic. In closing, Dr. Ely said that the case had always been a puzzle. The patient had been in plaster.

Dr. Dowd presented 3 cases, children in whom **tendon transplantation** had been done with successful results. Dr. Townsend believed that good results were largely due to subsequent treatment rather than to operation itself. Dr. Townsend presented a girl with **syphilitic osteitis** of the spine and hip, who had had frequent leg ulcers. The hip presented symptoms of hip joint disease which, however, recovered upon potassium iodide and mercury. He believed that few cases of hip joint disease should be ascribed to syphilis, but, when due to that disease, the symptoms disappeared upon antisyphilitic treatment. He thought the condition might be a neurosis. Dr. H. L. Taylor had watched the case and believed that the lesions were syphilitic. Dr. Nathan recalled a case of double tubercular hip disease in which the child walked about 3 weeks after using the iodide.

Dr. Hibbs presented a boy of 18 with **typhoid spine,** cured by the application of a brace. He then showed a girl of 8 with diabetes insipidus, dactylitis, arthritis of the knee, marked anemia and several other symptoms, **for diagnosis.** He also showed a girl of 11, with **hypertrophy of the fringes of the synovial membrane** of both knees, treated with an apparatus; and a child with **internal derangement of the knee joint,** in both of which cases movable cartilages were palpable in the joints. Dr. Myers then presented a colored child, 4 years old, showing **extreme rachitic deformities.** Dr. Northrup suggested that the case with diabetes insipidus might have been tubercular. Dr. Freeman also thought that tuberculosis would account for almost all symptoms shown by the child. Dr. V. P. Gibney did not believe that tuberculosis could cause pancreatitis and involve the mesenteric glands without affecting the brain. Dr. Taylor believed that the case was not tuberculous. Dr. Hibbs said that he had been treating the case with mercury and iodides, but could not see any improvement. He had then applied the apparatus.

Dr. Napler presented a case of **congenital dislocation** of the left hip **with hip disease** in the right hip. Dr. Lorenz saw the patient and suggested reducing the dislocation, including the right hip in the plaster bandage to be applied. The child was 9 years old. He showed another patient, a boy, supposed to have typical posterior curvature of the spine with lateral deviation. On account of recent symptoms, however, the disease seems to be **spinal osteitis.** Dr. A. B. Judson presented the history of a case of **talipes equinovarus,** treatment having been begun at 3 months. He showed a chart on which the increase in the growth of the foot was noted. Dr. V. P. Gibney thought that the second case reported by Dr. Napier was one of lateral curvature, primarily tuberculous, with paraplegia. The child may have had Pott's disease before.

Dr. Freeman read a paper on **the etiology of rickets,** discusses the causes suggested and the experiments carried out to demonstrate these causes, most of which had given negative results. His observations show the remarkable frequency of rachitis among institution children, even when surroundings were hygienic and the food was breast milk. Dr. Northrup found that babies in hospitals with the best of care were as much subject to this disease as those in tenements. Dr. Taylor thought Dr. Freeman's statistics were based upon too few cases, from a far too limited class of infants, to draw any very wide general conclusions. He thought sterilized milk was more digestible than raw milk. Dr. Nathan thought, when infants could be nursed by their mothers, rickets occurred much less frequently.

Special Article.

HISTORICAL SKETCH OF VACCINATION.

By CHARLES W. DULLES, M. D.,
of Philadelphia.

Lecturer on the History of Medicine, University of Pennsylvania, Fellow of the College of Physicians of Philadelphia, etc.

The history of vaccination can be properly understood only by looking back to the time when first attempts were made to lessen the ravages of smallpox, a disease which probably existed long before the time when it was first definitely described, and which, between that time and our day, has made frightful ravages in civilized and uncivilized countries. Without going into figures, it may be said that in some countries at times half of the deaths occurring in a given year were caused by smallpox. In England this was the case, the disease being especially severe among children, a very large proportion of those afflicted and dying with it being under ten years old.

In a curious little book, written by C. R. Aikin, of London, and reprinted in Philadelphia in 1801, with some additions, including a letter from President Jefferson to Doctor Waterhouse, of Boston, by Dr. John Redman Coxe, Professor of Materia Medica in the medical department of the University of Pennsylvania, it is stated that more than 2,000 persons died of smallpox every year in London, and many more when there were epidemics.

In China smallpox is supposed to have been known many centuries ago, and some attempt at preventing its most dangerous forms was made by introducing dried and pulverized crusts derived from smallpox vesicles into the nostrils of persons not yet attacked, with the idea of producing a form of the disease which would be of less severity than that acquired in the natural way, and one which would protect against this those upon whom the practice was carried out. The first medical author to describe smallpox systematically was the Arabian author Rhazes, who lived in the ninth century, and who wrote a treatise on smallpox and measles, most admirable in its descriptions and most delightful in its style. Beginning with the customary caption of the Koran: "In the name of God, the Compassionate, the Merciful, Abu Becr Mohammed Ibn Zacariya says: It happened on a certain night at a meeting in the house of a nobleman, of great goodness and excellence, and very anxious for the explanation and facilitating of useful sciences for the good of mankind, that, mention having been made of the smallpox, I then spoke what came into my mind on that subject. Whereupon our host (may God favor men by prolonging the remainder of his life) wished me to compose a suitable, solid and complete discourse on the disease, because there has not appeared up to this present time, either among the ancients or the moderns, an accurate and satisfactory account of it. And therefore I composed this discourse, hoping to receive my reward from the Almighty and Glorious God, and awaiting his good pleasure."

After this, his work contains a most excellent description of the symptoms of smallpox and suggestions for its treatment which—perhaps excepting the place given to venesection—are quite on a level with the therapeutics of our day.

Rhazes asserts that Galen referred to this disease in certain passages in some of his works. Its first presence in Europe was described by Gregory, of Tours, who wrote near the end of the sixth century, and the term "variola" was first employed in the sixth Century by Marius, Bishop of Averche. The term "variola" is probably a diminutive of the Latin "*varus*," a pimple, or it may be derived from "*varius*," meaning spotted. The word "pox" is derived from *pokke*—plural *pokkes*—an old English word which signifies a pustule. When syphilis began to be known, the term smallpox was used to differentiate the latter from it. About the time of the Crusades smallpox spread very rapidly through Europe, so that at the end of the middle ages it was distributed almost over the whole of the Continent and the British Isles.

The earliest effort to protect the community against smallpox, after that already spoken of in China, and the traditional uses of inoculation among the Brahmins in India, is credited to Avicenna in the tenth century, who is said to have practised protective inoculations among the Mohammedans of Arabia and Persia, who carried the method into the East of Asia. After this the practice obtained in Circassia—perhaps to preserve the beauty of the women—and in the Turkish Dominions, where the procedure was so well known in the early part of the eighteenth century that it attracted the attention of Dr. Kennedy, in 1715, and of Lady Montagu, the wife of the English Ambassador at Constantinople, in 1717, who introduced it into England, the first operation in that country being done in April, 1721, by Doctor Maitland upon the infant daughter of Lady Montagu. In June, 1721, Dr. Zabdiel Boylston, of Boston, a physician of high character and standing, practised protective inoculations upon a son and two negro servants of his. This he did independent of what had been done in England and at the suggestion of the Rev. Cotton Mather, who called his attention to a communication on the subject in the Philosophical Transactions. This protective method is called "variolation," and it consisted in inoculating a healthy person with virus derived from one suffering with the smallpox, and was unlike the modern method of vaccination, in that it was expected to produce the disease "variola" itself, its special advantage being that a time was chosen convenient to the patient for incurring the risk of acquiring a fatal disorder with the expectation that this risk was relatively small and that those who escaped it would be unlikely to contract the disease in the natural way. As to the risk, it was said to be so small that in Constantinople, out of 2,000 inoculated, only two died, so that in 1715 Kennedy wrote that "it need be no more minded than giving or taking the *Itch*." In doing this operation it was usual to select the material from a person who presented a rather mild form of the disease, which was introduced into small wounds made just through the skin with needles or with a lancet. In some cases special preparation of the body for this operation was made. Among those who wrote upon this subject was Dr. Adam Thomson, of Philadelphia, who in 1750 recommended for this purpose the administration of mercury and antimony before the inoculation—a method which was largely adopted and was known as the "American method."

Although the plan of inoculation with smallpox virus was very extensively employed in Europe and in this country, after a while it fell into disrepute and disuse, because it was believed to increase the number of cases of smallpox by creating new foci of the disease; so that, although the invidual was a gainer by the process, the community, in which only a limited number were protected, suffered.

This point as well as the real danger to persons so inoculated was admirably discussed by Baron van Swieten in the Commentaries upon Boerhaave's Aphorisms. From his own experiences in Vienna he shows that out of 355 persons having smallpox only 7 died, and three of these from causes other than the disease itself, so that the proportion of deaths in this series—nearly 200 years ago—appears to be only 1 to 89. In regard to one set of these patients he says: "Thus, therefore, the whole number of those seized with the smallpox in the Theresian College from the 23d of November, 1749, to the year 1765, was fifty-one; of which but one died; and he, which I cannot think of without tears, a son of mine." On the other hand, he calls attention to the fact that artificial inoculations are uncertain, and that inoculations of a healthy person from a mild case of smallpox may produce the most violent confluent form in the second person, and does not hesitate in his commentary to question the assertion of Boerhaave: "Inoculation seems to be sufficiently certain and safe," quoting on this subject Tralles, "that inoculation never fails to wear different aspects, in different points of light; that it is no easy matter to behold the mild and promising or the severe and threatening side of this double-faced disorder, without being allured by the smiles of that or equally terrified by the frowns of this; and that the happy moment is not yet arrived in which we may determine for certain to which of these faces we are to give credit."

The practice of vaccination consists in introducing into the human system a disease of cattle, accompanied with an eruption, which has long been known under the name of "cow-pox."

Although others had observed it, Edward Jenner, of Berkeley, in Gloucestershire, England, first made practical use of the fact that persons accidentally inoculated with the cow-pox considered themselves protected against smallpox; and, after a study of the matter and a scientific consideration of the features it presented, deliberately inoculated a healthy boy with matter taken from a vesicle on the hand of a dairy-maid who had been infected while milking cows. The efficacy of this attempt at protection was afterward tested and proved by inoculating the same boy with smallpox virus, which failed to produce any evidence in him of infection. Jenner's first inoculation, which may be regarded as scientifically and practically the birth of vaccination, took place on May 14, 1796, and his experience and views on the subject were made public in 1798 in a small pamphlet entitled "Inquiry into the Causes and Effects of the Variolæ Vaccinæ." Although Jenner received and deserved the credit of founding the practice of vaccination, it became known after he made the method public that two years before his first experiment in this method an English farmer, named Benjamin Jesty, had deliberately inoculated his wife and his two sons, aged two and three years respectively, with vaccine matter taken from cows in order to protect them against smallpox. This incident in the history of vaccination was considered of such importance by the Royal Jennerian Society in England that it sent for the plain and blunt old farmer to come to London at its expense, and there had his portrait painted, and presented him with various testimonials of its esteem.

Jenner, in a conversation which he had in 1780 with his friend Edward Gardner showed that he was quite aware of the fact, which has been repeatedly brought out in the subsequent study of cow-pox, that this disease is probably identical with the disease called "grease," principally affecting the feet of horses.

This fact led at a later period to the use of material derived from horses for preventive inoculations against smallpox; the name of "equinization" being suggested for this process. Material derived from the horse has also been used to inoculate heifers, so as to produce in them cow-pox, and Mr. Tanner succeeded in producing this disease in series, from the horse to the cow and from the cow to man. The goat and the sheep have also been used as a medium for the cultivation of a protective virus.

There has been much discussion as to whether or not cow-pox is smallpox of cattle. Many experiments have been made to determine this point without securing such conclusive demonstrations as to preclude a difference of opinion; but the fact that a number of competent observers have reported the production of cow-pox by inoculating cows with the material of variola, and the general opinion that inoculating human beings with cow-pox renders them to immune to variola, seems to show that the disease is the same, although presenting different features because of the species affected in each case.

A very striking feature of vaccinia as compared with smallpox consists in the fact that the former is not communicable in the same way as is the latter. In speaking of this matter it is usual to say that vaccinia is contagious but not infectious, while smallpox is both. It was at one time believed that, if persons were "variolated"—that is, inoculated with the matter from smallpox patients—the resulting disease was no longer infectious. This belief, however, was corrected by experience, for—as we have already seen—the practice of variolation was stopped because it was discovered that it had the effect of multiplying the cases of smallpox. It is certain that vaccination is not open to this objection.

The progress of vaccination over the world was very rapid, and the method of Jenner was made the subject of experimentation on the part of his colleagues in many countries; and it was not long before the observation of deviations in the phenomena following inoculation from what was supposed to be a typical vaccinia led to the statement that these were dependent upon the fact that there was such a thing as false or imitative cow-pox which might be mistaken for the genuine disease. It was also stated—especially by a Doctor Ingenhousz—that numerous cases occurred in which smallpox was acquired after vaccination. Others followed with serious criticisms of Jenner's statements and beliefs, so that the discussion of the subject soon acquired the character of a sharp conflict. In this the cause of vaccination was ably and successfully championed, among others, by Doctor George Pearson, who, after a full investigation, published in 1798 a book in which he defended the practice and maintained its scientific correctness and usefulness. About this time there was considerable difficulty in securing material for vaccination, because—notwithstanding the fact that Jenner's initial experiment was made with what we now call humanized virus—it was the custom then to use material derived directly from animals attacked with cow-pox; and, as this disease was rare, it was only occasionally that a new source of supply was discovered.

An important question in regard to the nature of vaccine virus concerns what is to be regarded as the active agent in the material used. The earliest notion on this subject was that the contagium was found in the various corpuscles contained in the serum or pus that was used. Afterward numerous experiments were undertaken in which—by filtration, by sedimentation and even by diffusion—the liquid or soluble parts of vaccine virus were separated from those which were insoluble. In this way it has been demonstrated that the contagium is particulate, and it appears that even the smallest quantity of these particles is capable of producing the constitutional condition called vaccinia.

Many eminent bacteriologists have most carefully endeavored to discover something which might be considered the actual and specific micro-organism of smallpox or vaccinia, but all in vain.* An admirable statement of the matter, founded upon a study of the work of others and his own very thorough work, is given by Doctor Buist, in a book called "Vaccinia and Variola," published in 1897, and illustrated with beautiful plates. He found that certain micro-organisms appeared with great regularity in vaccine or variolous matter, but he could not establish their specific character. He came to a curious conclusion, founded upon experiments made with yeast, namely that "vaccination is, in my opinion, the artificial growth of a ferment on the human skin, the products of which are absorbed and grow in the blood until the whole of the blood is affected, after which it is impossible, for a time at least, to repeat the process in the same person, who is then said to be protected."

In the early days of vaccination some variety of results must have been produced, because it was so long before the time when there was any knowledge on the subject of what is now called asepsis, and a great variety of micro-organisms must have been unwittingly introduced into vaccination wounds. But these irregularities, so far as we can learn of them, were by no means such as would be suspected by one who founded his opinion upon the present excessive dread of micro-organisms. As a matter of fact, there is absolutely nothing in the history of vaccination in these early days which compares in suggestiveness of danger with the results which have sometimes been observed after vaccinations performed with lymph which was believed to have been prepared, collected, distributed and introduced into the system with proper aseptic and antiseptic precautions.

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*The recent announcement from Boston of the discovery of the germ of smallpox is interesting but is not as yet confirmed.

The particulate nature of the contagium of vaccinia has made possible its attenuation in various ways, and this has been carried out with the idea that with attenuated or diluted virus full protection could be obtained without exciting such severe symptoms as would follow the use of a stronger sort. The search for a germ-free material has led to the employment, on the one hand, of cultures such as were made with the contents of chickens' eggs by Copeman, and, on the other hand, by Freyer, of animal juices derived from the spleen, the liver and various glands. None of these, however, has taken the place of the material derived from the vesicle produced on cattle by inoculation.

For a considerable part of the history of vaccination the material used was that supplied by crusts taken from human beings who had been previously artificially inoculated. It was a natural thought that the disease vaccinia would be more likely to act kindly upon human beings after it had passed through the system of one or more other human beings in series; and for generations every family physician endeavored to have always on hand a vaccine crust which he believed to be thoroughly pure. This he used by separating from it a minute fragment, which he moistened with water and rubbed up upon a piece of glass and then introduced into abrasions or scratches made upon the skin with a lancet especially prepared for this purpose.

Another method of securing vaccine virus was to remove the covering of the vaccine vesicle and press upon the exudation found under this a small piece of glass to which the lymph then attached itself. This was covered with another piece of glass, and in some cases the edges were covered with wax. In this way the lymph was preserved for a long time. When it was to be used, the glasses were separated and the lymph was moistened with water or the steam from a kettle or, in some cases, by breathing on it. Doctor Warlomont, of Belgium, in his Manual of Animal Vaccination, in citing the description of these glass plates by Bousquet, says that many vaccinators found it easier to use their warm breath—often perfumed with spirits or tobacco, or perhaps impure for other reasons—to replace the drop of pure water.

Another method of preserving the lymph consists in the use of what are called points. These are small pieces of ivory, thin and flat, and sharpened at one end to a point. Such points are prepared by dipping them into the liquid contents of vaccine vesicles and afterward drying them. In order to protect such points against infection from the air they have been covered with a layer of mucilage or put into narrow glass or paper containers which are sealed around them with paraffin. In using these points, the virus is moistened, and the sharpened end of the point serves both to convey it to the skin and to act as a sacrificator. Another plan, suggested by Mr. Darke, of London, is to use a needle made with a flat head, upon which the vaccine material is placed and allowed to dry. Afterward the point is used as a scarificator, and the freshly moistened lymph is rubbed from the head upon the part chosen for inoculation.

In all of the recent discussions in regard to vaccination one feature of the subject seems to have been wholly passed by, namely, what it is that is called by this term—what is intrinsically the material that is now generally used and believed to furnish protection against the ravages of smallpox. In order that it should be believed on *a priori* grounds to have the properties claimed for it, it should be possible to connect it directly with that material which was recommended by Jenner, and approved by his contemporaries, and employed by their successors in a continuous, unbroken series. What Jenner proposed, and what was accepted by his contemporaries, was the employment of a material of this sort—and no other: First, the foul matter—for it could be nothing else but foul, in view of its origin and the total absence of aseptic methods in that day—obtained from the ulcers upon the heel of a horse affected with the disease called "grease." This material, conveyed to cows—and usually to their udders in the process of milking—produced in them what was called cow-pox; the contents of the vesicle or ulcers—of which one of the recognized features was a phagedenic character—found in cow-pox, when inoculated by design or by accident upon human beings, produced in them a condition to which was given the name "human cow-pox," which was marked by the manifestations of a local infection followed by sometimes very severe constitutional symptoms, including chills, fever, high delirium, general pains, and swelling, not only of the lymphatics directly connected with the point or points of inoculation, but also of those upon the opposite side of the body.

From a lesion appearing in this disorder, Jenner, in 1796, made his first vaccination upon a boy, eight years old. The material for this inoculation was obtained, not from a vesicle, but, as Jenner says in the first edition of his "Inquiry into the Causes and Effects of the Variolæ Vaccinæ," the matter was taken from a sore on the hand of a dairy-maid, while in the manuscript it reads "suppurated sore," and it has not escaped the eyes of the critics of vaccination that there is a marked difference between what Jenner published in the first edition of his pamphlet and what he published one year after, in his second edition; for this time had sufficed to produce a number of demonstrations that some of his premises, and naturally some of his conclusions, were totally erroneous, and he brought forward the excuse that the results of accidental and artificial inoculations of cow-pox were not uniform because there was such a thing as "spurious cow-pox" as well as a true one. Without stopping to discuss the merits of this line of defence, it may be said that it is not so unfair as might be supposed, because it is still, as it always was, proper to judge a tree by its fruits. As the practice of vaccination was tested and repeated in Europe it was found that apparently the material derived from the diseased heels of horses would also protect against smallpox, and that it could be experimentally transmitted to cows and from them to human beings. This process was called "equinization." and some of those who employed it thought that it might become a substitute for vaccination. But it was soon abandoned.

It is of interest to discover as nearly as possible the source of the material for vaccination which is now used. The material in this country is probably largely derived from what is known as the Beaugency stock, which was originally secured in 1866 from a case of spontaneous cow-pox discovered at that place. A descendant of this stock was brought to America in 1870 by Dr. Henry A. Martin, of Boston. This stock has been cultivated in various ways since that time, principally by propagation from calf to calf, or heifer to heifer, in order to maintain a supply. In this process use has been made chiefly of the lymph or serous fluid contained in the vesicles about four or five days old. For some years this mode of cultivating vaccine virus was carried out without the slightest regard for what is now called "asepsis," and yet this "bovine virus" supplanted almost entirely humanized virus, because of the fear entertained by the community that, in using the latter, human diseases could be conveyed, since it was known—as is fully established by scientific investigation—that in a considerable number of cases syphilis had been so transmitted. My own recollections, which cover more than twenty-five years, indicate that the use of this bovine virus was followed by a good many very sore arms; but, in the earlier years of this quarter-century I felt that such results were due to neglect of a matter which might have been understood even before Lister promulgated his antiseptic methods, namely, the securing of absolute cleanliness of the patient at the point chosen for the inoculation. Bovine virus was distributed in the form of points or quills or crusts or cones. Points were narrow and pointed pieces of ivory, sharpened on the edges in order that these might serve as a scarificator, which were inserted in the vesicle of the animal and then dried. Quills were small pieces of this material, sharpened like a pen and roughened a little on one side, and then similarly covered with the vaccinating material. Crusts were the dried scabs which formed upon the animals used for propagating the virus, and had nothing to recommend them except their relative cheapness, while they had manifest disadvantages due to the admixture of foreign material which might be dangerous. Cones were agglutinated masses of vaccine material. In this connection a curious discrepancy between theory and practice may be noted. In those days I was medical adviser to a number of charitable institutions, and, for the sake of economy, sometimes employed the crusts or cones, vaccinating sometimes a hundred inmates at a time; and I should say from memory that I did not see as great a proportion of bad sores as have been produced in this city with the most modern forms of virus during the past few years.

At the present time these rather rude methods have given place to more exact ones conducted with due regard to the principle of aseptic and antiseptic surgery. There is no producer of virus for commercial purposes who does not claim that the utmost care is exercised to secure animals free from disease, to install these animals in apartments constructed and maintained so as to exclude contamination of the vaccine material, and to prepare the animals for vaccination by thorough washing and by local shaving and antiseptic treatment. Upon the animals so prepared inoculations are made of the vaccine material derived from a preceding case, and the vesicles which appear in a few days—from four to six—furnish the material for continuing this supply. In certain establishments this vesicle is cleansed and the cuticle is removed and points are dipped in the serous fluid which is found upon the true skin, and which exudes for a certain time from its deeper layers. After this, these points are dried and then are put into small glass vials or packed separately in some impervious container of glass or of paraffin paper. In other cases the points are not dried but are immediately enclosed singly in an air-tight container, so that when used they shall not require to be moistened.

In this country the employment of points has been largely superseded by the use of "glycerinized lymph," which is usually distributed in glass tubes supposed to be aseptic, and is intended to be introduced by sacrification. A number of manufacturers also distribute points which have been prepared with "glycerinized lymph" instead of with the contents of the vaccine vesicle.

The fact that vaccine lymph undergoes within a short time changes that impair its purity and activity has led to various endeavors to find some material which would preserve it without injuring its efficiency. Müller first discovered that diluting lymph with glycerine and water did not impair its activity, and it was soon found that glycerine not only prevented the development and multiplication of extraneous micro-organisms in vaccine lymph but also exercised such an influence upon them that they progressively lessened in number until in time they wholly disappeared. This idea was elaborated by Dr. Copeman, of the National Vaccine Establishment of London, who demonstrated that, when several parts of a mixture of glycerine with an equal quantity of sterile water was added to manifestly impure vaccine lymph, the micro-organisms became fewer week by week, until at the end of about four weeks the material was practically germ-free. In his book on vaccination he has put plates that show the appearance of successive cultivations made from material so treated until not a single colony appeared in the attempted culture. The mixture just described was known as glycerinized lymph, but it was not lymph at all; it was made by utilizing practically the entire lesion on the heifer when it was in the papular stage and just about to develop a vesicle. Such a lesion was thoroughly scraped with a blunt scalpel or a curette, and the whole of the tissue thus forcibly and roughly dragged away, containing pus, serum, epithelium, fibrous tissue of the skin and any foreign matter in or on it, constituting what is called "pulp." This pulp was thoroughly triturated in a mortar or in a machine especially constructed for this purpose, and was then mixed with glycerine and water.

Copeman recommended the addition of six times the weight of vaccine material, using equal parts of pure glycerine and sterile water. This rule is not now followed implicitly by the purveyors of vaccine virus, some of whom use less and some probably a larger proportion of glycerine. In the institution which I have had the best opportunity to inquire about I find that vaccine lymph is prepared as follows: The cattle used are "milk-calves," six or eight weeks old, which are first examined by a veterinarian, then tested with tuberculin, then thoroughly washed and inoculated after a few days, if there has been no reaction. After a thorough washing the skin over the belly is shaved and long shallow incisions—so shallow that no blood is drawn—are made along the shaved surface, and some previously prepared glycerinized lymph is rubbed into them. The calves are now watched for five or six days, with frequent observations of their temperature, when they usually present a considerable crop of papules just about to enter the vesicular stage. The surface of these papules is macerated with warm sterilized water and the epidermis is removed with a cotton mop, after which the papules are scraped off with a curette and the pulp is ground in a special machine operating under a bell-glass, while there are added to it, drop by drop, three parts of a mixture composed of 75% glycerine and 25% water. This new mixture is stored away and examined bacteriologically every ten days after the fifteenth and is issued—so it is stated—after a period varying from thirty to sixty days, when "practically pure." Practically pure means that an attempt at culture produces only ten colonies in a two-inch plate of agar-agar. In order to determine the absence of specific germs, such as those of tetanus or erysipelas, the material is tested by injection into guinea-pigs. This presumably pure material is introduced into sterilized glass capillary tubes in a vacuum, the ends of the tube are fused, and they are then put upon the market.

Unfortunately for the claims of the producers of "glycerinized lymph," the recent results have been by no means so satisfactory in the hands of the profession as might have been expected from the claims of the manufacturers, and in the extensive inoculations in this country there have been many cases in which the sores produced have often been unlike the typical vaccinia familiar to those whose experience extends over twenty or thirty years, and there have been many cases in which excessively sore lesions were produced or severe constitutional symptoms, while in the seeming "takes" many have been so irregular in appearance that they have furnished no assurance to the mind of the physician that the inoculation has effected a full protection against smallpox. More than this, there have been so many case of tetanus in certain parts of the country that it has caused great alarm in the community.

The truth is that the recent extraordinary demand led to haste in the preparation of the virus for the market (as has been admitted to me by one manufacturing house), one of the results of which was demonstrated by an investigation that I made of a lymph advertised as "the purest and most active ever prepared," which, when diluted about a hundredfold, yielded after 48 hours 130 colonies on a single Petri plate. In an article published in the **Philadelphia Medical Journal**, December 7, 1901, I called attention to this to me surprising fact; and honesty to our patients and to the community requires that we should not blink its important significance.

After the publication of the article just referred to I received from Chicago a copy of the Monthly Bulletin of the Department of Health, containing an article by F. W. Reiley, M. D., Assistant Commissioner of Health, in which it is said that the unfortunate results of the use of glycerinized lymph in that city were recently so great that public vaccination was suspended for a time in order to permit the purveyors of "glycerinized lymph" to keep the material they furnished long enough to fulfil the conditions necessary to its safety. In this article the dangers of what is known as "unripe" glycerinized lymph are plainly stated; and it is easy to infer from what it asserts that the makers of lymph who furnish a material which does not conform to the well-known conditions of safety, should be held morally responsible for the unusual, and in some cases disastrous, results which have followed the employment of this form of vaccine material, and also for the opposition to vaccination which such results have produced. Furthermore, such methods are responsible for the uncertainty which exists in the minds of many medical men as to the degree of protection they are giving to those who trust them with their lives and health. During the smallpox epidemic of 1901 I made many inquiries among my friends to supplement my own experience, and what I gathered showed that many of those who had practised for 25 or 30 years had never seen such a variety of lesions produced by vaccination. There had been violent inflammations, deep and long-lasting ulcers, extensive inflammations, violent constitutional symptoms and even tetanus. On the other hand, there have been irregular vesicles with very little evidence of constitutional disturbance, papular local manifestations, or papulovesicular lesions followed by a curious mammellated lesion somewhat suggesting the appearance of a nearly ripe blackberry, but no typical sore, and there have been persistent, congested and indurated local lesions continuing for long periods after the vaccination, while one case of keloid has come under my notice.

In spite of the fact that all these things suggest disquieting thoughts in regard to vaccination as practised in this country, it is fortunate that medical men whose experience most thoroughly warrants them in expressing an opinion, hold that vaccination to-day is a practically perfect protection against variola, and that honest, effective and safe vaccine material is available in this country.

In conclusion, there are those who do not admit the value of vaccination, who do not see convincing evidence in what convinces others that this practice has been useful in the past or is desirable for the future. Let us not be too sharp in our criticism of these. Any one who will carefully consider what they have to say will find that some of it is not to be dismissed with the contempt which so ill becimes an honest disputant.

As van Swieten said two centuries ago about variolation: "The physicians who differ in opinion with regard to the expediency of inoculation must all, notwithstanding, be allowed to have the same thing ultimately in view, namely, the good of mankind; and this was enough to entitle them all to my love and respect. Should there be any others, who have endeavored to defend their way of thinking by any wicked tricks, I leave them to the indignation, or at least contempt, of all honest men."

Original Articles.

THE TREATMENT OF FRACTURE OF THE NECK OF THE FEMUR AT BELLEVUE, ST. VINCENT'S AND NEW YORK HOSPITALS.*

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of New York.

The treatment of fracture of the neck of the femur is a subject of considerable practical interest. The results of the treatment of this injury, no matter what methods may be used, are, as a rule, far from satisfactory. All of us are more or less disappointed with the condition remaining after weeks of confinement of the limb, and alarmed at the dangers at times produced by it. The disappointment is greater still to the most interested individual in the case—the patient. If he escapes with his life, he has to be contented with loss of function, loss of symmetry and equipose, and is often obliged to go about permanently crippled. The active surgeon is occupied more or less constantly with operative and diagnostic as well as pathological work. He has little time to consider the treatment of such a traditionally hopeless sort of condition as a fracture of the neck of the femor. He knows that there will be shortening, that there may be or may not be union of the bone, depending upon the age of the patient and whether or not it is impacted. Further than that, excepting to anticipate the well-known dangers of keeping these old people in bed, he cares little. The busy New York surgeon does not, as a rule, give much time or thought to this injury. If he sees a patient in consultation, he gives a few general directions, and his responsibility and further care of the case ceases. Not so with the general practitioner and our colleagues in country work. To them the subject is a most practical one. These cases are not infrequent. They are not uncommon in country practice, perhaps, in some well-known person in whom the community is deeply interested. The care and skill with which the case is treated is commented upon continually, and the patient is constantly in the minds of the community, and the fame, reputation and future of the physician in charge may rest greatly upon the comfort of such a patient and the result produced. Moreover, of much greater importance is the result to the patient. If after weeks of weary confinement and pain life is sacrificed, or even the future well-being and comfort of the patient is hampered by a deformed or a painful and useless leg, the excuse must be a substantial and valid one that will satisfy a critical and exacting public opinion that even with the best possible methods and modern surgical devices we were able to obtain no more satisfactory result. With these thoughts in mind it occurred to the writer that the manner and the results of treatment of a large number of such cases would be of interest.

In no way can this be studied so well as in the wards of a large general hospital. I have, therefore, taken a series of cases as they entered three of the largest hospitals in this city.

The three hospitals selected are those having the largest ambulance services in the most active and thickly populated parts of the city, and also having the largest daily hospital census—Bellevue, New York and St. Vincent's.

In St. Vincent's, during the whole year of 1900, there were but two cases of fracture of the cervix femoris in twenty-one cases of fracture of the femur. The reason for so few in an active ambulance hospital is that the house surgeon was unwilling to fill his beds with patients who required weeks of treatment to the exclusion of active and acute operative cases. In the two years following, 1901 and 1902, the histories were rather defective, but the number of cases are nine in 1901 and thirty in 1902, making for the three years forty-one cases. The youngest patient was 34 years of age, the oldest 71 years. The treatment in this hospital is entirely routine and left pretty much to the house surgeon. It consists of a fracture board under the mattress, a Hamilton long side splint, Buck's extension with a weight, usually rather heavy, fifteen to twenty pounds, but enough, if possible, to reduce the shortening, if not completely, down to about one-half inch or under. Thirty pounds were used in one case, that of a sailor who was first treated on board his ship for supposed subluxation which was reduced under chloroform. He came to the hospital several days afterward with 2½ inches of shortening, a false point of motion below the joint and great pain and tenderness over the greater trochanter. The thirty-pound weight was left on six weeks, and the shortening was one-quarter of an inch. Forty pounds was the heaviest weight used, and that in a woman. Frequently a certain number of pounds were found by experiment to overcome, or nearly to overcome, the deformity. This then regulated the amount.

The Hamilton splint was removed frequently comparatively early, often at the end of the fourth or fifth week. In a few instances sand-bags were employed. In these patients the Hamilton long side splint was omitted and long sand-bags were adjusted to keep the leg from rotating, and also to keep the patient from moving it. No cutting operations are recorded as having been done for this trouble at St. Vincent's Hospital. No plaster-of-Paris dressings have been used during these three years. Of these forty-one cases there were no deaths recorded.

In Bellevue, from January 1, 1900, to January 1, 1903 —three years—241 cases are recorded in the various wards.

The large number of cases in this hospital is accounted for from the fact that the other emergency hospitals of the city remove such patients as quickly as possible to Bellevue, where, for the most part, they have to be kept and treated. The ages of these persons were from the youngest, at 38 years of age up to 81 years of age. Of the 241 patients treated, only three died from intercurrent diseases—one from pneumonia and two from nephritis with alcoholism. In no case was there a shortening recorded of over three inches, and in most the shortening was from ¼ to 1 inch. This record was made at the time of the admission of the patient. When recorded at the time of the discharge of the patient in cases called "cured" or "improved," the shortening was usually ¼ to ½ inch, but in many cases, both in these and in the cases in the other hospitals, the record showed simply that the patient was discharged "cured," and for that reason is a questionable record, in that respect at least.

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*Read before the New York Celtic Medical Society at the Academy of Medicine, February 26, 1903

The average time of keeping the patients in bed with dressings applied was eight weeks. Some were retained in bed as long as fourteen weeks, and the shortest time of keeping them on their backs was six weeks. The large majority was from eight to nine weeks. Fracture boards, Buck's extension and long Hamilton splints were the usual means of dressing the fracture in this hospital. This was done immediately upon the admission of the patient, and was, as a rule, kept up during the entire time of the patient's remaining in bed. The weight adjusted was from twelve to twenty pounds—depending upon the amount it took to reduce the shortening. If the shortening could be entirely removed by a small weight, of say from eight to ten pounds, that was attached. In a few cases the sand-bags were used in the place of a Hamilton splint, and in a large number of cases the Hamilton splint was removed at the end of four to six weeks and the sand bags adjusted in its place. In one case only was plaster-of-Paris spica used in place of the usual dressing, from the beginning of the treatment to the end. That one was a failure, for it did not in any way reduce the shortening. However, in a number of cases, in several of the wards of the hospital, plaster-of-Paris was applied after the Hamilton splint had been removed, and after the shortening had been reduced as much as possible, and when no amount of weight seemed to reduce it further. This was in most of the cases after the fourth or fifth week. It was usually left on about two weeks. It was then removed because of failure to accomplish its purpose, and the Hamilton splint re-applied.

In the New York Hospital, for the three years from January 1, 1900, to January 1, 1903, were found thirty-four cases of fracture of the neck of the femur. The age of the patients ranged from 34 to 83 years. The usual treatment in almost every case was to apply the Hodgen splint. Fracture boards for the bed and occasionally Buck's extension were used with sand-bags and a moderately heavy weight, the weight being usually applied until the shortening was reduced as much as was possible to be done by traction. The longest period in which the patients were kept in bed was sixteen weeks, and the shortest was six weeks. The histories were very defective in not giving the amount of shortening at the time the patients were discharged. Of the thirty-four patients treated, fifteen were discharged as "cured," four as "unimproved," fourteen as "improved," and one died. The fatal case was due to pneumonia and occurred within twenty-four hours after admission. In none of these three hundred and sixteen cases was an operation performed either to unite the fractured surfaces, to remove a detached head or to carry on or assist in any manner the treatment.

The above cases are not selected ones and have been under the care of no less than sixteen well-known surgeons, some of them eminent teachers of surgery connected with the medical schools of New York, others no less skilled but not teachers. The interest, or lack of it, shown in these cases is quite typical. In some of the beds the visiting surgeon, regarding the treatment as more or less routine, barely gives them a passing glance, treatment being left entirely to the house surgeon, who, as a rule, turns them over to an assistant. The case may excite a mild interest from a diagnostic standpoint as to whether it is really a fracture or a dislocation, and, if a fracture, whether it is within or without the capsule (a point, by the way, apparently of no importance whatever in its relation to treatment).

Otherwise this wealth of clinical material lies fallow. On the other hand, in some of the services a certain amount of interest is shown by attempts to make the general condition of the patient comfortable as well as by endeavoring in every possible way to promote the healing of the disability with a serviceable limb.

No other treatment except that mentioned above is recorded in any of the three hospitals under consideration. The same treatment seems to have been applied without regard to whether the fracture was intracapsular or extracapsular, or whether or not it was impacted. In none of these histories is it recorded that any effort was made to relieve the patient from the possibility of a congestive pneumonia or nephritis. This was probably due, however, not to the fact that such cases did not occur but that the histories were kept—if one may say so—somewhat inefficiently. It is to be seen, too, from a consideration of these statistics that no special effort was made to obtain union of the fragments or restoration of function, or to prevent any intercurrent disease, or, aside from the perfunctory application of the apparatus, to obtain comfort for the patient. I do not believe, however, that these statements are true as facts. As to those cases that are recorded as "cured"—they are open to question as to whether the visiting surgeon entered such a statement on the discharge cards and also what "cured" meant. If it meant restoration of the fragments, with normal length of the leg, it would seem that this is again open to question, excepting, of course, in the impacted fractures. In all the younger patients—cases of young adults—when the X-ray picture was taken, the fracture was found to be impacted in every case in which a good history was given; it was found also in these young adults that the fracture was due to direct injury. These were the patients who were kept in bed the shortest time, who had on the lightest weights and in whom recovery may be presumed to be fairly complete. Yet one case is recorded in the New York Hospital list of a man, 71 years old, who had 1¼ inches shortening and who was treated by means of a Hodgen's splint and kept only six weeks in bed and discharged from the hospital "cured." He came to the hospital in June, 1901.

In the New York Hospital alone is a satisfactory conclusion as to the treatment to be drawn from the history records. By far the largest percentage of cures was at this hospital; 44% of all the cases treated there were discharged "cured," and 41% "improved." The routine treatment was by means of the Hodgen splint almost exclusively. A direct inference would be that this apparatus is much more valuable than the commoner methods in use—the Hamilton splint and Buck's extension.

In all three of the hospitals it seems to me that the patients were kept in bed either much longer than was necessary or not long enough. If the broken neck would not unite at the end of six weeks under treatment while confined to bed, it is hard to be convinced of the possibility of its uniting at the end of eight or nine weeks, especially as these splints do not in most cases prevent motion between the fragments and do not secure perfect co-aptation, neglecting in this way the two essentials—immobilization and firm co-aptation—without which a splint is not only useless but of positive harm. When the fracture is impacted, extension is contra-indicated, but fixation is imperative; yet, as a rule, exactly the same treatment is used for these cases as for those of nonimpaction. Another disappointing conclusion to be drawn from these 316 cases is that plaster-of-Paris is useless and almost never of value.

It is not recorded in any of the history blanks—probably because it was considered a matter of small interest—but it is the personal experience of the writer as well as of many others that, in elderly people especially, great pain and discomfort are present most of the time through their period of confinement, and that the pain is excruciatingly worse when motion is beginning to be made at the end of the splint period or when the patient first begins to use the leg.

The experience of the writer, again not confirmed by the histories of these three hundred and sixteen cases, has been that bed-sores are a common intercurrent trouble. These ulcers have been most extensive and very painful, and the older the patient the larger and more difficult they are to heal. The longer the patient is kept in bed, the greater the tendency to the sores. It is a rather curious fact, according to the records, that so few of these patients taken as they are from the lower portions of society, have developed any congestive disease like hypostatic pneumonia or Bright's disease, conditions such as the text-books are continually warning us of. Of course, the age of the patient and the constitutional feebleness predisposing to this injury, with the coincidental diseases or troubles of old age, are constant factors increasing the difficulties of treatment and decreasing the chances of recovery. It would seem from these facts that there is much to be gained by earlier removal of the splints and in getting the patient out of bed even before the classical period of osseous union is over. It is well known that this period in fractures of the neck of the femur is an extraordinarily long one. Dupuytren estimates the time at from one hundred to one hundred and twenty-five days. Gurlt gives a wide choice of from fifty-six to two hundred and seven days, and the patients in the Hôtel Dieu are kept in bed from eighty to one hundred days. Dr. Senn keeps his patients in his retentive apparatus for exactly that length of time, stating that, if it is removed earlier, secondary displacement may occur.

The reason why the results in fracture of the cervix femoris are so unsatisfactory is because of the difficulty of meeting the indications for treatment; perfect co-aptation and uninterrupted immobilization of the fractured bone together with attention to the comfort, health and nourishment of the patient. That these indications are not fulfilled by the treatment as carried out in the three hospitals under consideration is plain. As to the first two indications, an approximation is obtained possibly by means of the Hodgen splint. But in order properly to treat these patients it is necessary to give as much attention to the relief of pain, to the prevention of bedsores and of the tendency to the diseases arising from the long-continued recumbent position, as it is to immobilize and co-apt the fragments and restore the leg to its normal position. The use of a hip splint which will allow the patient to be up and about, such as is used in tubercular disease of the hip-joint, and the fixation by means of a plaster-of-Paris are the only alternatives, to the last, or better to the first, resort of the surgical mind—an open operation down to the seat of the fracture and an accurate securing of the fragments by mechanical means, such as is often done in other joint fractures or when bony union has failed. The inaccessibility of the injured part is a great objection to operative procedures. The class of patients in whom this injury is common are, from the very cause of the accident, just the patients on whom it is most inadvisable to operate. Obesity, general debility, arteriosclerosis, atheroma and very old age are the predisposing causes to the injury and are contra-indications to operation which cannot be ignored.

The plaster-of-Paris splint, to be efficient, must be extensive. To secure perfect immobility, according to Senn, "it must include the fractured limb and the entire pelvis, and also the opposite leg to the knee and extend above to the eighth costal cartilage, and it must also include an adjustable compress for making lateral pressure over the greater trochanter. This apparatus must remain on for months, but it has a vast advantage in that it allows the patient to be up and about and out of doors, an important influence in the prevention of a number of the fatal complications."

The Thomas hip splint, or some similar apparatus, which has been suggested for use in the treatment of fracture of the neck of the hip, is familiar to most of us, and we can all appreciate that it would be extremely difficult to fulfil the indications for treatment by this means in these aged patients.

Clinical experience convinces us that some direct and more certain method of exact fixation must be sought for and applied. Operative interference for this condition is feasible, practicable and obligatory in many instances. The risk from old age and feebleness is present, but is not as great as is the risk incurred by the time-honored methods of the troublesome and dangerous side splints and plaster-of-Paris apparatus combined with the tedious and depressing weeks of confinement in bed.

The operation is simple. It can be quickly and satisfactorily performed, whether it be to remove a displaced and broken-off head of the femur or in order to unite the fractured bone. A number of such cases with good results are on record. At the worst it is a choice of evils with the advantage vastly in favor of operative treatment. At the best, and it is at the best we ought to look, cutting down upon the break and making firm fixation of the fractured ends can be done almost with impunity in spite of the age and poor constitutional condition of the sufferer. Thus we can hold out hope to a class of patients the vast majority of whom medical literature, and medical opinion and practice as well, have heretofore given over as hopeless.

The experience of the writer has led him to a much more optimistic view than is usually held, and he would suggest that the best treatment for this injury would be an open operation with the pegging or wiring of the fragments, or the application of whatever other method or means may be necessary to retain them in a correct position until bony repair takes place.

A CASE OF ULCERATIVE ENDOCARDITIS INVOLVING THE PULMONARY VALVE AND CAUSING PERFORATION OF THE VENTRICULAR SEPTUM, GANGRENE OF THE NOSE AND EARS, MULTIPLE INFARCTS IN THE KIDNEYS, ETC.*

By HENRY M. FISHER, M. D.,
of Philadelphia.

Dominick C., aged 20, an Italian barber, consulted me first in the autumn of 1901. He had for some years suffered from cough and dyspnea on violent exertions, but had otherwise apparently enjoyed fairly good health until a few weeks prior to the date of his visit. His brother told me that, while he had never considered him very strong, he had had a good color and was not often incapacitated for work by illness. He had, however, suffered from several attacks of subacute articular rheumatism. For a few weeks before this visit, however, his cough had become more troublesome, and he had had excessive sweating at night. He was rather pale, but was a fairly well-nourished youth. Upon examination the heart was found to be a good deal hypertrophied, particularly in its transverse diameter, and there was a loud systolic apex murmur which was transmitted to the back. A diastolic murmur, the point of maximum intensity of which appeared to be over the aortic cartilage, was also present. It did not occur to me to ask him whether he had suffered from gonorrhea or other form of venereal disease. I did not see him again until April 23, 1902, when I called to see him and found him suffering from a moderately severe attack of facial erysipelas. One week later the erysipelas had disappeared from his face, but he complained of feeling very weak and of exhaustive sweating at night. At this time the systolic and diastolic murmurs, above noted, appeared to be louder and rougher than before. His pulse, however, was regular and not very frequent, but a little jerky. On October 14 he reported that he had recovered his strength sufficiently during the summer to be able to return to his trade, but that he had not been able to work at it for more than two or three weeks at a time. At this time his chief complaints were of excessive sweating, weakness and painful micturition. His urine was, however, normal in appearance, and I failed to detect albumin. I unfortunately did not examine it for casts. Examination revealed extremely loud systolic and diastolic murmurs over the base of his heart and very loud aud harsh presystolic and systolic murmurs at the apex. He complained of difficult digestion and also painful defecation, and his bowels were somewhat loose. On October 20 he still complained of excessive sweating and, for the first time, of a great deal of palpitation. At least I have no recollection of his having before complained of this. November 12, much cough still was complained of, but a careful examination of his lungs revealed nothing abnormal except rather harsh breathing. November 14, knee and ankle joints swollen and painful. December 14, complained greatly of cough and had for some days refused all nourishment except small quantities of milk, as he maintains that everything but milk causes epigastric pain and discomfort. December 27. One or two days ago spots of dusky redness appeared on the tip of his nose and also on the outer lower portion of the helix of each ear. These extended somewhat and formed patches from the size of a dime to that of a silver quarter of a dollar, which were distinctly black and cold. He was in a state of profound nervous depression and very pale and so rigid that any attempt to move him caused pain. His pulse, however, was regular and fairly full, and dyspnea was not marked. He lingered for 4 or 5 days in this condition, refusing all medicine and nearly all nourishment. Two days before his death he complained of severe frontal pain, which may perhaps have been due to embolism of some of the superficial cerebral vessels, but there was at no time any actual paralysis, unless it occurred during the last day of his life, when his mother informed me that he lost the power of utterance. He died very early during the morning of January 1.

The autopsy was performed under some difficulties in a badly lighted room, and the examination was limited to the thoracic and the abdominal cavities. The body was extremely emaciated. The pleural cavities both contained a considerable excess of fluid, quantity not measured, but approximately about one pint. The lungs were pale and bloodless and crepitated throughout (I neglected to examine them for infarcts, but am sure that if any such existed they must have been small). The pericardium was not thickened, but it contained a slight excess of clear serum. The heart showed considerable hypertrophy of the right ventricle, the walls of which were much thicker than normal, but little if any hypertrophy of the left ventricle. Its tissue appeared soft and flabby. There was no evidence of pericarditis, old or recent. On opening the pulmonary valve, I felt a mass of friable tissue, which I at first thought was a partially organized clot, but, being struck with the granular texture of the mass on examining more closely, I found that it consisted almost wholly of an enormous growth of vegetations, which had almost filled the lumen of the valve. The vegetations extended into the artery above the sinus for at least an inch and downward below the valve into the right ventricle for some distance. A larger thrombus was found extending through the septum just below the pulmonary valve into the left ventricle immediately below the aortic valve, showing where the septum ventriculorum had been completely ulcerated through. There was an old lesion in the pulmonary area involving the conus arteriosus. The pulmonary valve cusps had been completely destroyed. The valve itself showed some evidence of stenosis, which was probably congenital. The aortic cusps showed marked thickening of a chronic nature, and one of them had been badly damaged by ulceration, apparently from the extensive ulcerative process from the right ventricle, as above noted. The mitral valve showed chronic thickening and had evidently been incompetent, but no recent vegetations were seen upon it. Both kidneys showed typical parenchymatous nephritis, and their external surfaces were covered with minute hemorrhages. Their capsules were somewhat adherent, and in the cortex of each were found several old and more recent infarctions. The spleen was fully double its average size, but I unfortunately failed to examine this organ for the presence of infarcts. The liver appeared somewhat fatty and showed evidences of capillary hemorrhages. The stomach and intestines were not opened. Their external surfaces were pale and there did not appear to be any marked evidences of disease about them.

This case is, it seems to me, interesting from the point of view of its etiology. Dr. Longcope suggested to me that the acute endocarditis may have owed its origin to the invasion of the gonococcus, there having been several cases recorded lately in which gonorrhea appears to have been the origin of ulcerative endocarditis.

Unfortunately, fresh cultures were not made from the vegetations, and the coverslip preparations made later showed a great variety of organisms.

The duration of the ulcerative process can also be only rather vaguely guessed at.

At no time did the patient have any fever. Judging from the symptoms, I should be inclined to think that the acute ulcerative process was of not much more than two months' duration, but the fact of his having been refractory to all treatment from about the middle of November till the date of his death induces me to believe that it had lasted at least six weeks.

From a clinical point of view the case is interesting also. I regret to say that the possibility of pulmonary stenosis did not occur to me, and I, therefore, did not examine into the condition of his pulmonary valve with as much care as I should have done. I do remember, however, hearing a very loud and rough systolic murmur over the region of the pulmonary valve a few days before his death, but this did not attract my attention at the time as it should have done.

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*Specimens presented at the meeting of the Philadelphia Pathological Society, January 8, 1903.

His severe and distressing cough was, I think, entirely due to pressure of the vegetations on some of the cardiac filaments of the pneumogastric nerve, as no evidences of disease of the lungs could be detected.

Considering also the gravity of the obstruction, the maintenance of a fairly slow, regular pulse of moderately good volume during the whole course of his illness appears to me very curious.

A REPORT OF A CASE OF MALIGNANT GONORRHEAL ENDOCARDITIS, WITH SPECIMENS.

By C. J. HABHEGGER, M. D.,
of Watertown, Wis.

Since the discovery of the gonococcus by Neisser, in 1879,—investigation has shown that, while it, in the majority of cases, is responsible for a purely local affection, it may at times cause a general infection. It has not only been found in the organs neighboring to the primary site of localization, as the epididymis, the bladder, the prostate, the uterus and adnexa, but also in joints, bursæ, the pelvis of the kidneys, the peritoneum, tendon-sheaths, and, during the last few years, on the valves of the heart, on the pericardium, myocardium and in the blood. Sometimes it is found alone, but more frequently with other microbes. Again, in a certain class of cases, due undoubtedly to the gonococcus, such as the multiple neuritides and the skin eruptions which occur during the course of a gonorrhea, no microbes have been found either in the circulation or in the tissues affected, and we must, therefore, assume that the changes are due to the toxins of this organism. Thus, we distinguish three classes of general gonorrheal infection: (1) Those in which only the gonococcus is found, a true gonorrheal infection; (2) mixed infections and (3) those in which no microbes gain access to the circulation, but in which the changes are due to the toxins of the gonococcus, a gonorrheal toxemia.

It is easy to understand how, by extension along contiguous anatomical structures, the gonococci can migrate to organs some distance from the orginal site of infection, but how they can gain access to the circulation is not exactly known. According to Wertheim, the gonococcus forces its way into the connective tissue, there sets up a capillary thrombophlebitis and thus gets into the circulation. The atrium of infection in women probably is through the uterus or adnexa, and in men through the posterior urethra or prostate. Though the gonococcus is frequently found lying within a cell, it is still a question whether it is carried away within the cell or without it. If once in the circulation, it can excite metastases like any infectious disease.

The causal relationship existing between endocarditis and gonorrhea had long been suspected. Brandes, in 1854, reported two cases of gonorrheal rheumatism complicated with endocarditis. Later, in 1862, Traube reported a case without joint involvement. Of course, this was all conjecture, and it was not until 1893 that Leyden was able to demonstrate the gonoccoccus on the endocardium. Since then about fifty cases have been reported, and not only have the gonococci been demonstrated on the valves or on the vegetations of the heart and also in the blood, but they have been cultivated from these sources on artificial media and successfully inoculated in man.

Rosenthal states (*Berliner klin. Wochenschrift*, Nov. 26, 1900,) that a gonorrheal endocarditis usually makes its appearance about the fourth or fifth week, possibly because previous to this time the gonococci are confined to the anterior urethra. The morbid process can affect one or more valves; most frequently the aortic and mitral valves are the seat of the pathological changes. These changes consist in the formation of small, unequal, soft vegetations which are friable and can be scraped away. The valves themselves may be attacked, producing ulcers and even perforations. These small vegetations consist of red bloodcorpuscles and polymorphonuclear leukocytes, in which or between which the gonococci are found. According to the same writer, one must distinguish between two forms of gonorrheal endocarditis, a malignant and a benign type. The latter may heal with perfect restoration of the valve, or the valve may become deformed.

The following report of a fatal case consists of a brief history, together with the notes made at the bedside from time to time, and the post mortem findings:

Mr. Gustave B., age, 27; occupation, painter; family history good. The patient's general health had always been good up to about six months previous to his present illness, at which time he was confined in a Chicago hospital with typhoid fever from which he fully recovered in about three months. About a month later he contracted gonorrhea, which was complicated in about the third week by an epididymitis. The present trouble came on insidiously. Following the epididymitis he never fully recovered his strength, though he dates his illness from a few weeks after this, when he was using an injection, the use of which he ascribes as the cause of his trouble. The first symptom he noticed was a feeling of lassitude and weakness which gradually became more marked. At the same time his appetite began to fail, and any exertion would cause dyspnea and a distressed feeling over the precordial region. A little later a cough set in, which was accompanied with expectoration of a large amount of yellowish sputum streaked with blood. Patient stated that he had had but little pain,although at times he complained of an uneasy feeling in the precordium and of painful cramps in the extremities and of severe headaches. His bowels were somewhat constipated, as a rule. During the third week of his illness he began to have chills followed by sweating. At first these chills amounted to only chilly sensations, but later they became very severe and lasted for five to ten minutes. From day to day after this his strength declined rapidly, and his relatives noticed the pallor and great prostration. About this time, when the patient was still able to be up part of the time, he came under my observation.

November 27. Physical examination: Urine: Specific gravity, 1030. Reaction, acid. Color, dark brown and clear. Albumin, absent. Sugar, absent. No casts. Temperature, 98.8°. Pulse, 80. General appearance: Complexion sallow. Mucous membranes were pale. The skin was dry and harsh and had a yellowish tinge. The patient's appearance was that of intense sepsis. The muscles were soft and flabby and wasted. Pupils reacted to light and accommodation and were equal. The movements of the eyes were normal. The ears were negative. The tongue was coated with a thick, grayish-white fur; it was broad and moist. The breath was foul, and there were sordes on the teeth and lips. The patient's mentality was good. The examination of the circulatory system revealed a pulse of good volume, soft and compressible. It was regular, but at long intervals intermitted a beat. The temporals were not tortuous, nor was there any evidence of arteriosclerosis in any of the other arteries. The vessels of the neck pulsated very strongly. On inspection of the chest a wave-like pulsation in the third, fourth and fifth interspaces of the precordial region was visible. The apex of the heart was situated in the left mammillary line about the fifth interspace. The size of the heart at the time of the first examination was as follows: Right border coincided with the right border of the sternum, upper border with the lower border of the third rib and the left border with a curved line with its convexity outward from a point one and one-half inches to left of sternum and on the lower border of the third rib to the apex-beat in the fifth interspace. The size of the heart can be seen at a glance by referring to Fig. I. On auscultation a soft, blowing, systolic murmur was heard. This murmur was not transmitted to the left nor heard over the vessels of the neck. The point at which it was heard best was over the apex, and its intensity disappeared as one approached the base of the heart. In the second left interspace near the sternum a sharp diastolic click was heard. His chest was fairly well developed. A little increase in the rate of the respiratory movements, which were 30, was present, but the expansion was good, being about three fingerbreadths on each side. There was no dulness or impaired resonance anywhere. Moist rales, large and small, could be heard universally over the chest, but were most marked over the lower lobes behind. Abdomen: There was no tenderness or rigidity present anywhere. The abdomen was somewhat distended and was tympanitic everywhere. The spleen was palpable, and the liver was also uniformly enlarged, extending about three fingerbreadths beneath the costal arch. Extremities, negative. Genitalia: There was no discharge from the urethra. In the epididymis of the left testicle several small, tender nodules could be felt.

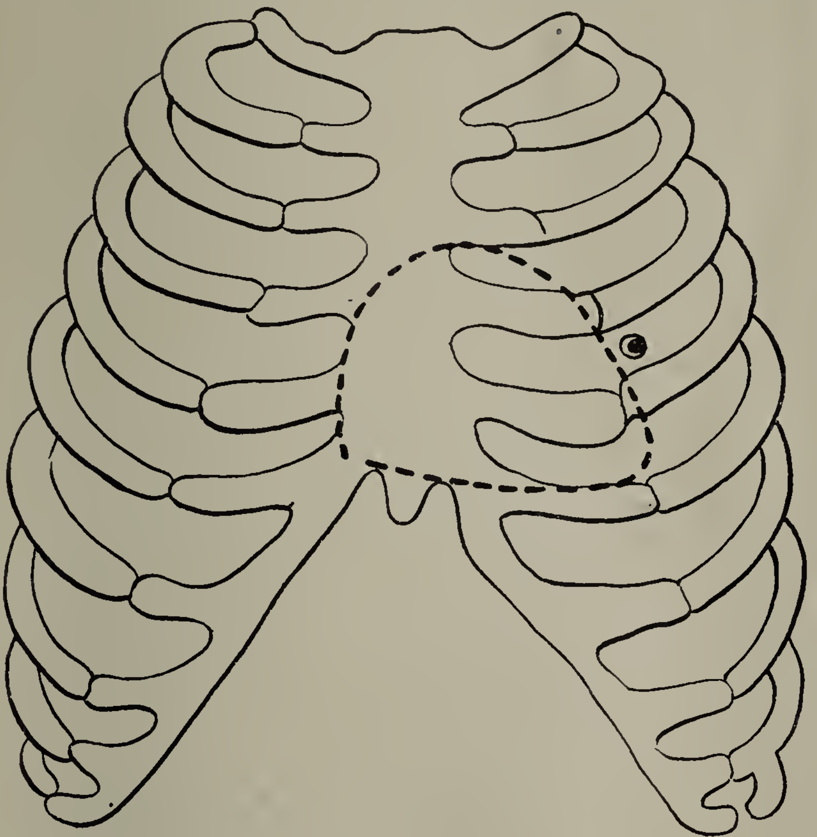

Fig. 1. Size of heart, Nov. 27.

November 29. Patient's condition had not changed materially since the 27th. inst. His temperature during this time oscillated between 98.8° and 102° and was very irregular, remaining normal for twenty-four hours. Pulse varied between 80 and 105. During the night of the 29th., however, he had a very severe chill, followed by a temperature of 105.6° and severe sweating. Shortly after the chill he was seized with severe pain and cramps in the left calf, the skin over which became discolored by red blotches. The calf itself became very much swollen and tender to the touch.

December 1. Following the chill on the 29th. the patient became somewhat delirious at times. He complained of a great deal of pain in the left calf, which continued to swell and later became very tense and painful. Sleep was very much disturbed, and his bowels were constipated. He had had several quite severe hemorrhages from the nose, and the cough, with mucopurulent expectorations, annoyed him a great deal.

Examination: The patient appeared more prostrated than at the first examination. His delirium was of a low muttering type from which he could be aroused, and he then answered questions intelligently, though he was very apathetic Temperature, 101°. Pulse, 100. Tongue coated as before, but not as moist. Eyes negative. His breathing was rapid and somewhat labored. The vessels of the neck pulsated very markedly. The heart's action was more tumultuous than at the first examination, and the wave-like pulsation in the third, fourth and fifth interspaces had given place to a heaving motion of the entire precordium. The size of the heart was somewhat increased, and the murmur was louder and harsher and transmitted to the left. The closure of the pulmonic valves could be plainly felt as could also a systolic thrill in the region of the apex. Abdomen: Somewhat more distended than at previous examination. Extremities: The calf of the left leg was very much swollen, tense and painful to the touch. Beginning about two inches below the knee, the skin was discolored by large bluish-red blotches. The toes were cold, and no tibial pulse could be felt. At this examination the white bloodcells were counted and a moderate leukocytoses ascertained. Cultures were also made from the blood.

December 6. Since December 1 no very marked change had occurred in the patient's condition until to-day, except that he had grown weaker and become more prostrated. He was somewhat delirious at all times and would not sleep except when under the influence of an opiate. He had had several chills at irregular intervals, followed by fever and sweating. Between these chills the temperature would be normal or slightly subnormal for the greater part of the time. On this day a small, round, blackish-red discoloration made its appearance over the right heel. The left leg of the patient was not as painful as it had been.

Examination: Temperature, 101°. Pulse, 110. Face, apathetic. Patient was in a stupor but could be aroused. On account of the dryness of mouth and throat, speech and swallowing were difficult. Pupils were dilated, but reacted to light. Sclera had a yellow tinge. The tongue was dry, cracked and covered with a brownish fur. The pulse was not as full as it had been, and its rate was somewhat increased. It was also somewhat irregular. The heart's action was very tumultuous, causing the whole precordium to heave with each beat. The size of the heart was as follows (Fig. 2): The right border was located about one inch to the right of the sternum. The upper border corresponded with the upper border of the third rib. The left border with a

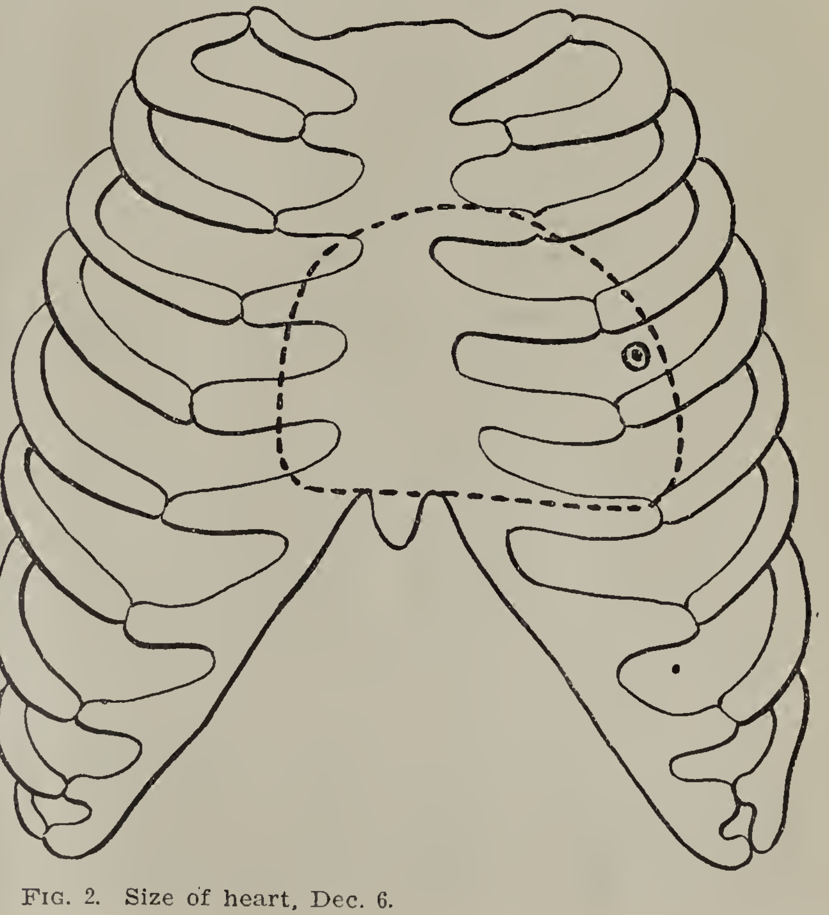

Fig. 2. Size of heart, Dec. 6.

curved line with its convexity outward from the upper border of the third rib, one and one-half inches to the left of the sternum to apex-beat on the fifth interspace and about ¼-inch to the left of the left nipple line. On auscultation the same systolic murmur was heard, not only at the apex, but all over the precordium, and it was transmitted to the left and also heard behind. The second pulmonic sound was very much exaggerated and could be felt and heard as a distinct click over the base of the heart. A systolic thrill could be felt over the apex. The rate of respiration was 40. It was rather superficial. As at the previous examinations numerous large and small moist rales could be heard which somewhat obscured the heart sounds and murmur. Over the lower lobes behind, the percussion note was not as resonant as elsewhere, and here the vesicular murmur was very faint. The abdomen was still distended and somewhat tender on pressure. Extremities: About two inches below the left knee the skin was discolored a dark purple. At this point a sharp but irregular line of demarcation separated the dead or gangrenous part of the leg from the living. The calf, which was still very much swollen, was as tense as it had been and in some places seemed to be breaking down. Here and there large bullæ had formed on the skin. The feet and toes were discolored a purplish-red, felt cold and looked shriveled and dry. Over the surface of the right heel a round, well-defined, blackish-red area about the size of a half dollar was noticed.

The cultures which had been made on December 1 remained sterile.

From December 6 until the time of his death, the patient failed gradually from day to day. The temperature would rise a degree or two at irregular intervals. There were no more chills. The pulse varied between 120 and 140. Toward the end it became weak and irregular. Breathing was rapid and labored during the last few days of his life. The patient, with cold and clammy skin, would lie in a stupor most of the time with open mouth and eyes. At times he would sweat very freely. Owing to the labored respiration, a careful examination of the heart was impossible. It was noted, however, that the murmur could be heard shortly before death, though not very distinctly. The heart also continued to increase in size. The bowels were constipated, and a great deal of abdominal distension was present, but tenderness could not be ascertained on account of his mental condition. The soft tissues of the gangrenous left leg were breaking down, over the posterior aspect the skin had broken, and through an opening in it a large amount of foul-smelling and dark grumous material was discharged. Death took place on December 12.

The clinical diagnosis of this case was as follows: Septic endocarditis, mitral regurgitation, dilatation of the heart, emboli of the left popliteal artery and a superficial artery of the right foot, gangrene of the left leg, edema of the lungs, hydrothorax and bronchitis. The diagnosis of septic endocarditis was based: (1) On the evidence of sepsis, viz.: The fever, sweating, chills, the anemia, the emaciation with the flabby condition of the muscles, the yellowish tinge of the skin and the leukocytosis; (2) on the cardiac changes which were of a progressive character. That the morbid process produced an incompetency of the mitral valves was shown by the systolic murmur heard best at the apex, transmitted to the left and not heard in the vessels of the neck, the right heart enlargement, the accentuation of the second pulmonic sound and the character of the pulse. The emboli in the two locations corroborated the diagnosis of septic endocarditis. The presence of bronchitis was shown by the cough with mucopurulent expectoration and the universal large and small rales. The hydrothorax and edema were inferred from the nature of the general trouble, the dyspnea toward the end and the local findings, the dulness over the lower lobes behind, the faint vesicular murmur and the numerous rales in that region.

Post mortem was made on December 12, two hours after death.

Anatomical diagnosis: Septic endocarditis. Vegetation and ulceration of the mitral valves. Incompetence of the mitral valves. Dilatation of the heart. Acute degeneration of the heart muscle. Milk spots on the pericardium. Hydrothorax. Edema of lungs. Bronchitis. Embolus of the left popliteal artery causing gangrene of the left leg. Embolus of a superficial artery of the right leg. Anemic infarct of the spleen. Acute splenic tumor. Acute degenerative changes of the liver and kidneys.

External examination: The body was that of a young man, about 25 years of age, fairly well developed but greatly emaciated. It was still warm. Rigor mortis was absent. The skin had a yellowish tinge. Post mortem lividity of the dependent parts was not present. The left leg was gangrenous from about two inches below the knee. At this place there was a sharp but irregular line of demarcation extending up higher behind than in front. Below this line the skin was a dirty brownish-red, and in places was raised in large bullæ. The superficial layers of the skin peeled off very readily. The calf of the leg was swollen and soft, and a large amount of grayish, foul-smelling material containing shreds of tissue could be squeezed out of an opening on its posterior aspect. The skin of the foot was discolored a dark purplish-red, looked shriveled and dry, especially over the toes where it had almost a blackish color. Over the outer aspect of the right heel was a blackish-red, round, well-defined area of about the size of a half-dollar. The abdominal cavity contained no fluid. The peritoneum was smooth and shiny everywhere. There were a few friable adhesions in the region of the spleen. The pleural cavities contained a large amount of clear, dark-yellowish fluid. There were no adhesions between the lung and the pleura. The pericardial cavity was empty. The pericardium was smooth everywhere. Over the anterior surface of the heart were two slightly raised grayish-white areas. The heart weighed 290 gm. It was somewhat larger than the fist of the individual. Both ventricles were filled with yellowish, goosefat-like clots which formed a mould of the cavities and extended into the large arteries. These clots were somewhat difficult to dislodge, but were not adherent and could be removed, leaving the endocardium smooth. The endocardium lining the left ventricle was smooth everywhere. The mitral valve admitted four fingers. The anterior cusp of the mitral valve was the seat of a perforation the size of a five-cent piece. About the margin of this opening, which was irregularly round in shape and springing from the auricular surface of the valve, were numerous cockscomb-like elevations differing somewhat in size, some of them being ¾ of an inch in length and very friable, so that even in the careful handling of the specimen, before hardening, a number of them were torn away. The vegetations were reddish-yellow in color. Their general appearance can be better seen than described by referring to Figure 3. The aortic valves

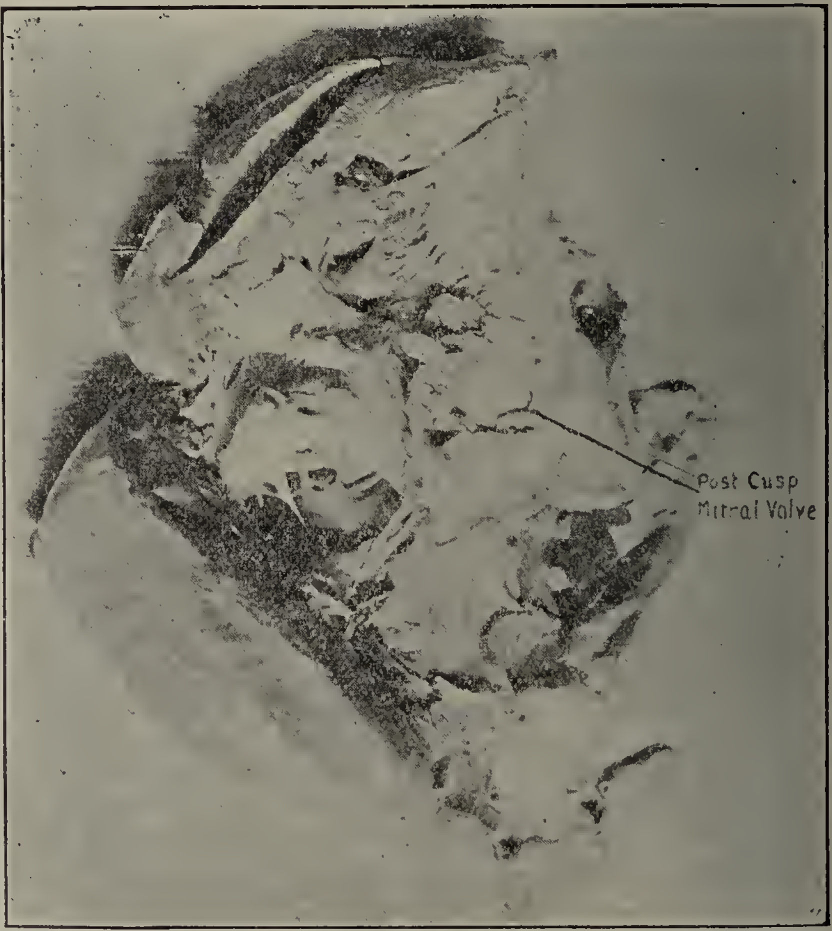

FIG. 3. Showing perforation of mitral cusp with vegetations.

were negative. The aorta itself was smooth and uniform. The tricuspid valves admitted four fingers. The pulmonic valves were negative. The endocardium lining the right side of the heart showed no changes. The heart muscle was grayish-red in appearance, and its texture was loose. The left ventricle measured 5/8 of an inch in thickness, while the right ventricle measured 2/8 of an inch. The beginning of the coronary arteries was smooth. Both lungs were small and compressed. They crepitated everywhere, though feebly at base. On cutting, a large amount of fluid could be expressed from cut surface. Here and there a small amount of mucopus oozed from the bronchi. The liver was somewhat enlarged, extending some distance below the costal arch. The surface was smooth and shiny. It cuts with normal resistance. From the cut surface a large quantity of blood oozed. On section it had a pale yellowish-red opaque appearance. The lobular markings are distinct, showing a somewhat dark red center with a lighter periphery. The gall-bladder was normal. The common duct patent. The spleen was very much enlarged and soft. On its posterior surface a large, dirty-yellowish, slightly depressed area was seen. Near its inferior border close to the notch was another similar area but somewhat smaller. Over the larger area were the remains of some torn friable adhesions. The capsle was very tense. On cut section the splenic pulp was dark and very soft, so that it could be easily scraped away with a knife. The Malpighian follicles stood out as grayish areas. The yellowish depressed areas, which were seen on the external surfaces of the spleen, extended into its substance. The larger one measured about two and one-half inches in its largest dimension. The smaller one about one-half inch. They were both irregularly wedge-shaped, uniformly yellow throughout and well defined. Kidneys: Both kidneys weighed 348 gm. The left one was pale; the capsule stripped readily, leaving a smooth surface. On cut section it had a pale, yellowish-pink color. The cortex was very much swollen, and the ratio of cortex to medulla was 1:1. The cortical markings were obscured. The glomeruli stood out as small glistening pin-point dots. The differentiation between medulla and cortex was not very distinct. The mucous membrane of the pelvis of the kidney was smooth. The right kidney corresponded to the same description, except that it contained more blood. The examination of the pancreas, intestines and bladder revealed no changes. The urethra, testes, cord and brain were not examined.

Bacteriological examination: Cultures made on agar-agar, bloodserum and gelatine from the vegetation of the heart, the heart's blood, the spleen, liver and kidneys, remained sterile.

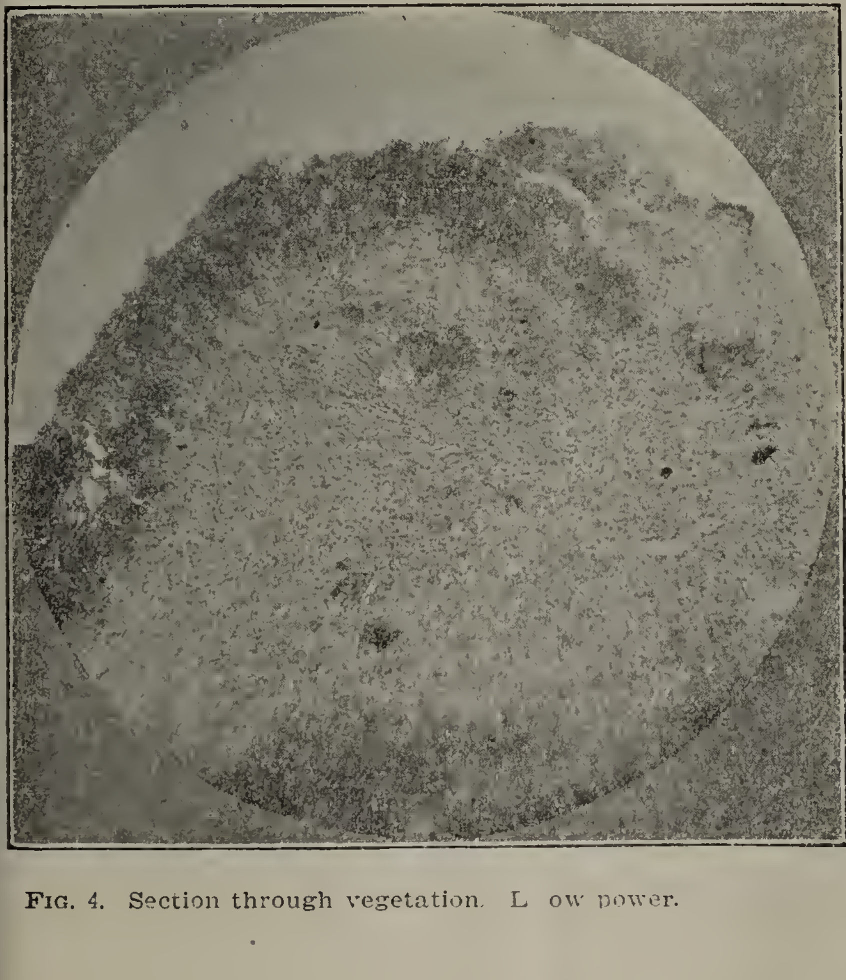

FIG. 4. Section through vegetation. Low power.

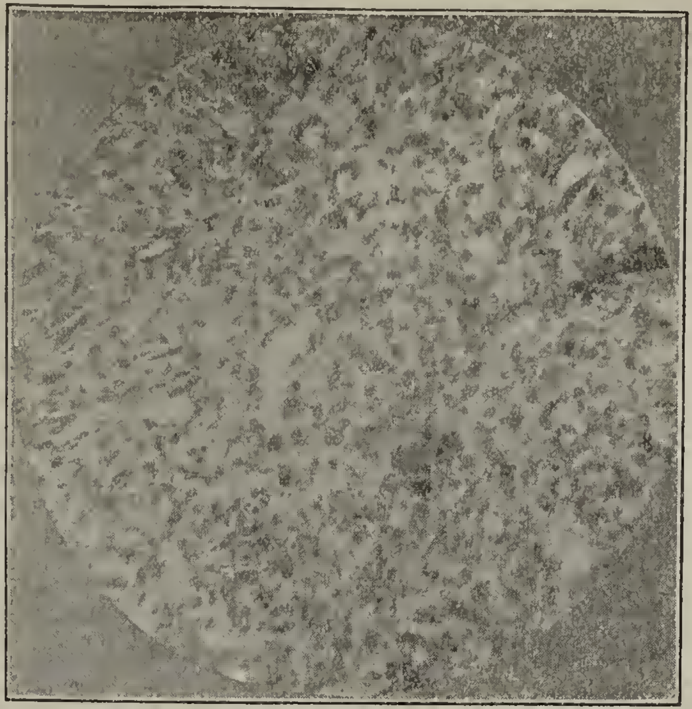

FIG. 5. Section through vegetation. High power.

Histological examination: Pieces of the vegetations of the heart, the heart muscle, the spleen and liver were fixed in alcohol, cut in celloidin and stained with hematoxylon and eosin. Sections of the vegetations, Figures 4 and 5, show them to consist of organized fibrinous coagula. Forming the surface was a layer of structurless, brownish-red fibrin. Beneath this in places was seen a dense infiltration of small round cells, some of which had undergone degeneration. The greater part of the growth was formed of fibrous strings and strands of connective tissue growing from below upward, thus constituting a true endocarditic vegetation. Within this newly organized tissue, the formation of new bloodvessels could be traced. Scattered about, especially near the surface of the vegetation, were small homogeneous, reddish-brown areas, the remains of the thrombi. Heart muscle: Some of the muscle cells were granular, their striations were obscured, and their nuclei were stained feebly. The fibers also in some placed showed transverse fissures and were separated from each other. Sections from the lower lobe of the left lung showed many of the alveoli filled with desquamated epithelial cells containing carbonaceous material, also red bloodcorpuscles and granular detritus. The vessels were dilated and filled with blood, and there were scattered throughout the section small extravasations of blood. The bronchi were filled with mucus and pus cells. The cells lining the bronchi were in places desquamated, and the walls themselves were infiltrated with small round cells. The liver showed no increase in connective tissue. The central veins were dilated, and the liver cells near the center of the lobule contained a great deal of pigment, were widely separated and somewhat atrophic. The cells themselves appeared somewhat granular. Near the periphery of the lobule were many vacuoles. Spleen: Sections of the spleen were made so as to include part of the infarct and part of the splenic tissue. There was quite a sharp line of differentiation between the two. On the one side of this line was seen the necrotic material of the infarct, composed of the broken down splenic cells and other granular detritus which did not stain. The reticulum of the spleen could still be traced in some places. Scattered here and there were the trabeculæ undergoing fatty changes and very much swollen. In a few places were seen collections of round cells. Near the margin of the infarct was a dense infiltration of round cells and some young connective tissue, presumably inflammatory and reparative processes tending to replace it with scar tissue. On the other side the splenic tissue showed an increase in the cellular elements, some of which were swollen and granular. The vessels were very much dilated and contained a large amount of blood and pigment.

Regarding the etiology of this case it may be said that though a gonorrheal origin had not been proven by cultures, it was, nevertheless, assumed for the following reasons: The disease occurred during the fourth or fifth week of a typical gonorrhea and at a time when the gonococci had migrated to the posterior urethra, as shown by the complicating epididymitis. Cultures from the various organs on ordinary media remained sterile. This fact may be taken as negative evidence, for it is well known that the gonococcus is cultivated only with difficulty. It grows very slowly, requires a special medium and is readily killed by slight changes of temperature, while the microbes ordinarily responsible for septic endocarditis are not difficult of cultivation on bloodserum, agar-agar or gelatine.

The diagnosis of septic endocarditis was made practically at the first examination. In the differential diagnosis malaria with an old endocarditis was excluded by the blood examination and the exhibition of quinine. Septic processes originating in some other organ were excluded by the history and a careful physical examination. One interesting feature which was of considerable moment in the diagnosis, showing, as it did, an acute process involving the heart, were the rapid changes that took place in the size of the heart, the character of the murmur, sounds, pulsations and pulse. These changes could be made out almost from day to day and depended upon the damage done the heart-valve by the vegetations and ulceration.

The status of our present knowledge of the relation of an acute gonorrheal urethritis and gonorrheal infection of the heart is well shown by the conclusions of Thayer and Lazaer (*Journal of Experimental Medicine*, 1899, Vol. IV) which are: (1) An acute gonorrheal urethritis may be the starting point of a grave general septicemia with all its complications; (2) the infection may be mixed or pure; (3) endocarditis is an occasional complication; (4) this endocarditis may be transient or fatal; (5) the endocarditis is commonly due to the gonococcus, but may be a mixed infection; (6) pericarditis may be a complication; (7) grave myocardial changes due to the gonococcus are not uncommon; (8) cultures may be made from the blood and a positive diagnosis made during life.

The method of making cultures is of practical importance and is performed as follows: Blood is withdrawn from the median basilic vein by means of an aspirating syringe under aseptic conditions and mixed with twice as much agar-agar and then plated.

PRELIMINARY REPORT OF AN OPERATION FOR ABDOMINAL PREGNANCY OF TWENTY-ONE MONTHS' DURATION.*

By CHARLES P. NOBLE, M. D.,
of Philadelphia.
Surgeon-in-Chief to the Kensington Hospital for Women.

I wish to report the history of a case of abdominal pregnancy. The report of the pathologist concerning the microscopical study of the specimen not having been received, the clinical side of the case only will be discussed.

Mrs. S., aged 30 years, nullipara, has enjoyed good health until her present illness. She has been married three years. Her general health has been excellent, her only previous trouble having been rheumatism at the age of fourteen. The family history is negative. At the present time she complains of backache, flooding at her periods and of being easily fatigued.

Her present illness dates from the early part of March, 1901, when she missed a period. Two weeks later she was taken with a sudden pain at one o'clock in the morning. The pain was sharp, severe and lancinating and located in the right iliac quadrant. The physician who was called in consultation made a diagnosis of appendicitis and gave morphine. The severe stage of the pain lasted fifteen minutes, and left a good deal of tenderness, which persisted for one day. She was in bed three weeks. Vomiting was then present, but subsequently it did not recur. For six months her condition was that of a normal pregnancy. Fetal movements were felt, the abdomen progressively enlarged, the breasts increased in size; and a physician was engaged to attend her in confinement.

In the last week of August she was taken with an attack of dull, dragging pain in the lower part of the abdomen, vomiting, chills and fever. This attack came on suddenly and lasted four weeks. It was accompanied with bearing down pains and with flooding. The latter condition persisted for two weeks. At the end of four weeks the patient improved in health, the breasts and abdomen became smaller, and the uterine bleeding took on more the character of menstruation. Until the time of the expected confinement she was well and not at all anxious about her condition. Two months after the expected date of labor she became anxious about herself and about the nonarrival of the baby, and, therefore, she applied for advice at a dispensary for diseases of women. She was told that she had a "tumor," and was given medicine "to dissolve it." She was in attendance three months at the dispensary. In March, 1902, she was in bed three weeks with diarrhea and vomiting. During this time she was attended by a woman doctor, who made a diagnosis of typhoid fever. In August, 1902, another physician was consulted, not because of the patient's bad health, but because of the persistence of the abdominal mass. A consultation was held, and a diagnosis of fibroid tumor was made, and the patient was sent to the Kensington Hospital for Women on November 23, 1902, for operation.

Physical examination showed that the respiratory system was normal. The heart dulness was increased. There was a mitral presystolic murmur, accentuation of the pulmonary second sound, and the pulse was small and weak. The urinary examinations were negative.

Upon examining the abdomen and pelvis a tumor, about the size of a seven months' pregnancy, was found in the left half of the abdomen, which was firm in consistency and had much of the "feel" of a fibroid tumor. Upon vaginal examination the cavity of the pelvis was found to be occupied by a hard mass, having the characteristics of a fetal head, except that neither suture nor fontanel could be distinguished. The uterus was pushed to the right.

A presumptive diagnosis of the abdominal pregnancy was made, based upon the physical examination and upon the history, more espcially the fact that in a young nulliparous woman the ordinary evidences of pregnancy had been present, including enlargement of the breasts as well as of the abdomen, and that since a date shortly before the expected delivery the abdominal tumor had progressively diminished in size.

Operation, November 26. The abdomen was freely opened and a tumor was disclosed occupying the left side of the abdomen and extending into the pelvis. The uterus was pushed to the right and elevated out of the pelvis. The round ligament and tube ran over the face of the tumor, the tube disappearing in its walls. The sigmoid and omentum formed the upper limit of the tumor mass. Upon passing the fingers into the pelvis from the right the anterior fontanel could be made out, and the diagnosis was thus confirmed. The sac of the tumor was so thick that it was not possible to outline any fetal parts, hence the diagnosis of abdominal pregnancy was only possible by recognizing the fontanel.

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*Read before the Philadelphia Obstetrical Society, January 2, 1903.

Careful exploration demonstrated that the outer end of the left broad ligament had its normal anatomical conformation, so that I was satisfied it would be feasible to do a preliminary ligation of the ovarian and uterine arteries. It seems probable that the tumor mass received a blood-supply from the mesenteric vessels as well as from below. It seemed to me that, if the ovarian and uterine vessels were ligated, and then the fetus and sac elevated out of the pelvis and the lower end of the mass turned upward, by getting at the mesenteric vessels from below and behind, it would be possible to control bleeding without difficulty. As the patient was young and childless, it was decided not to do a hysterectomy, but to split down the broad ligament to the left of the uterus. This was done, the uterine artery was ligated, then the ovarian artery, then the broad ligament was torn across above the round ligament, the hand was passed under the head in the pelvis and the fetal head elevated into the abdomen. The lower part of the sac was then separated from the peritoneum and the mass turned upward. By pressure with gauze it was feasible to detach the sac from the peritoneum on the posterior wall of the abdomen. In some parts this was detached and in other places torn through, opening up the retroperitoneal connective tissue. This was especially true when the mesentery of the sigmoid was reached. In detaching the tumor from the mesentery, numerous vessels were caught and ligated. When the mass was removed, a large cavity, extending from the bottom of the pelvis to a point above the umbilicus, was left. There was no active bleeding in this cavity, but there were numerous small oozing points. The operation was completed by suturing various rents in the mesosigmoid, and by sewing the edge of the greatly elongated sigmoid and rectum to the upper border of the broad ligament and uterus, so as to shut off the cavity, left by the removal of the mass, from the general peritoneal cavity. This was done without special difficulty. Before the final suturing, the pelvic portion of the cavity was filled with gauze, the lower part of which was drawn into the vagina through an incision in the posterior vaginal wall, which was made after the conclusion of the abdominal operation. The toilet of the peritoneum and the closing of the abdominal wound were completed in the usual way. There was considerable oozing, but no active bleeding through the drainage incision made into the vagina.

Convalescence from the operation was satisfactory, but was interrupted by suppuration in the pelvic portion of the drained space. The source of infection doubtless was the vaginal opening. The original vaginal incision was reopened and drainage instituted, after which progress to complete recovery was uninterrupted. Mrs. S. was discharged January 7, 1903.

The most interesting point in connection with the operation was the method adopted to avoid hemorrhage. I am quite certain that, had the operation been begun at the top of the mass, pushing off the sigmoid and coming down from above and behind, there would have been much hemorrhage from the mesenteric vessels.

The pathologist has not completed his examination, so that the microscopical study of the sac throws no light upon the exact nature of the pregnancy. It is my own opinion that this was not a case of broad ligament pregnancy, because the outer end of the broad ligament was found in its normal anatomical condition, whereas the posterior layer of the broad ligament and probably the peritoneum of the lateral wall of the pelvis would have been elevated by the developing mass, had the pregnancy occupied the broad ligament itself. Moreover, toward the uterine side of the mass there was no evidence of separation of the peritoneum from the posterior surface of the broad ligament or from the posterior surface of the uterus. I believe a more rational explanation of the conditions present is that the ruptured tubal pregnancy occupied the space behind the left broad ligament, and that this space was roofed in by adhesions between the upper border of the broad ligament, the sigmoid and omentum.

The fetus is in an excellent state of preservation, having the following measurements: Biparietal, 8 cm.; occipitofrontal, 9½ cm.; occipitomental, 11 cm.; bitemporal, 7 cm.; bisacromial, 11 cm.; length, 36 cm.; length when folded in the sac as removed, 21 cm. The skull was distinctly depressed from its relation with the sacrum. It was adherent to the membranes at various points, otherwise there is nothing special to remark about the specimen.

I would like to direct the attention of the Society especially to the diagnostic points present in the case, more especially the characteristic "feel" of the fetal head upon vaginal examination, and the history of shrinkage of the mass after the death of the fetus; also to the method adopted to avoid hemorrhage during operation.

UTERINE FIBROMA NEAR THE MENOPAUSE.

By GEORGE ERETY SHOEMAKER, M. D.,
of Philadelphia.,
Gynecologist to the Presbyterian Hospital.

Among the medical heresies which are fast fading away is the idea once popular that fibromata of the uterus are likely either to diminish in size or to cease to bleed and to grow about the time of the menopause. This idea appears to have had its origin in the inability of surgeons safely to remove such tumors, and in their effort to give to the patient the only hope in their power. An experience of many years in gynecological dispensaries and of eleven years as gynecologist to city hospitals has failed to bring to the notice of the writer a single case which has had such a termination. He has, however, operated upon many who have been deluded with this hope up to the age of fifty to fifty-five years, finally coming to operation on account of severe and increasing hemorrhage, growth of tumor, recurrent attacks of peritonitis or salpingitis; while by the degeneration of heart or kidneys and other indirect consequences of anemia the patient's vitality has been forever impaired. Many of these cases have been reported by the writer; three more will serve as additional examples.

CASE 1.—Illustrating the onset of severe symptoms after the age of forty-four. Mrs. W., sent by Dr. J. W. Fithian, of Camden, N. J., married ten years and a widow for ten; never pregnant. Her menses had been regular but scant until within three years, when they became less painful but more profuse. The flow gradually increased, until it became severe and almost constant. During the two months before coming under observation she spent much of the time in bed, greatly weakened by several sharp hemorrhages. The hemoglobin was 45%. There were no organic lesions, the dyspnea present being probably due to anemia and weakened heart action. A large, very hard nodular fibroma reached three inches above the navel; the cervix uteri was nearly obliterated in the mass which firmly choked the pelvis. By vaginal packing, tightly placed, with the patient in the knee-chest position, and the administration of mammary extract, with rest in bed, the hemorrhage was controlled long enough to gain slightly on the anemia. The tumor was removed by abdominal section and the cervix left in, the operation proving very difficult owing to the irregularity of the base of the growth. Aseptic and complete recovery, patient grateful and sent another tumor patient for operation. A year later reports herself "splendidly well."

CASE 2.—A single woman, sent by Dr. Joseph Tomlinson, of Bridgeton, N. J. She was extremely stout, weighing 215 pounds, and not tall. At the age of 47 she found herself bleeding freely and getting worse in spite of medical treatment. For two years the hemorrhage had been severe and now reached ten to twelve large and completely soaked napkins on each of the days of her frequent periods. She had dyspnea and a chronic interstitial nephritis. There had been severe phlebitis of the legs and thighs. Her tumor choked the pelvis tightly, was intraligamentary on both sides, and about five inches in diameter, with many nodules. The ligation of such a pelvis-bound fibroid tumor in a short stout woman is not easy, but it was accomplished. The wound healed by primary union, the recovery being complete. Vomiting without disturbance of pulse or temperature, and with free bowel movements, gave some annoyance for the first few days. It was due to the chronic nephritis and the impaired kidney action. Degenerations of the kidney are among the sequelæ of prolonged hemorrhage.

CASE 3.—A widow who had three children. Age 51. About seven years ago a growth was noted in the abdomen, and at the same time the flow increased while the interval decreased. Recently there had been almost constant bleeding with occasional sharp hemorrhage. The fibroma of the uterus, which was readily diagnosed, reached three inches above the umbilicus. At the operation, which, like the others, was by ligation and supravaginal amputation, the tumor was found intraligamentous on the left side, but otherwise free. Recovery aseptic and without complications.

Many cases of a similar character could be enumerated, but the lesson to be learned from them is the same. The danger from operation in cases of this class, while greater than in the simpler forms of abdominal sections, is not very great, and the mortality should not exceed 6%, which is largely made up by complications, such as pyosalpinx, recurrent peritonitis or the effects of hemorrhage, all due to delay.

These are part of a consecutive series of nineteen hysterectomies at the Presbyterian Hospital, the patients all recovering. They are also a part of sixty-one consecutive abdominal operations in my service at the same institution, with one death; that death following operation for partial intestinal obstruction, the patient having vomited nearly two weeks before coming into my hands. She had had a panhysterectomy done for fibroma about a year before at another hospital. Among the sixty-one patients more than one operation was sometimes done on one individual, so that the number of operations was greater than the number of individuals. The list includes among other items:

Porro Cesarean section,	1	
Hysterectomy, abdominal,	11	
Hysterectomy, vaginal,	3	15
Extra-uterine pregnancy		2
Gall-bladder, typhoid infection		1
Kidney		3
Appendix, primary	6	
" removed for minor disease accompanied with other abdominal conditions	14	
" Total		20
Dermoid cyst		1
Ovarian cyst		2
Intestinal obstruction, due to adhesion bands		2
Disseminated sarcoma		1
Exploratory, enormous ascites, suspected malignancy		1
Salpingitis requiring removal of one or both tubes with or without the ovaries		19
Suspension of the uterus		1
(Combined with plastic)		
Hernia (abdominal)		3
Pus present, cases		18
Extratubal pelvic abscess not appendiceal		6
Deaths		1

Femoral hernia, recovery, not included in the list of abdominal operations. These results reflect in some degree the influence of the new ward for clean laparotomy cases, though 20% of them were in private rooms.

Health Reports.

Health Reports.—The following cases of smallpox, yellow fever, cholera and plague, have been reported to the Surgeon-General, Public Health and Marine-Hospital Service, during the week ending May 16, 1903:

SMALLPOX—United States.

			C.	D.
CALIFORNIA:	Los Angeles	Apr. 25-May 2	2	
	San Francisco	Apr. 26-May 3	6	
COLORADO:	Denver	Apr. 11-25	53	
DISTRICT OF COLUMBIA:	Washingotn	May 3-9	1	
FLORIDA:	Jacksonville	May 3-9	3	
GEORGIA:	Atlanta	Apr. 29-May 6	1	
ILLINOIS:	Belleville	May 3-9	5	
	Chicago	May 3-9	14	4
	Galesburg	May 3-9	4	
INDIANA:	Indianapolis	May 3-9	7	
IOWA:	Des Moines	May 3-9	4	
KANSAS:	Wichita	Apr. 26-May 9	1	
LOUISIANA:	New Orleans	May 3-9	18	
MAINE:	Biddeford	May 3-9	1	
MARYLAND:	Baltimore	May 3-9	4	
MASSACHUSETTS:	Holyoke	May 3-9	1	
MICHIGAN:	Detroit	May 3-9	12	
	Flint	May 3-9	1	
	Grand Rapids	May 3-9	4	
	Port Huron	May 4-11	1	
NEW HAMPSHIRE	Manchester	May 3-9	2	
	Nashua	May 3-9	3	
NEW YORK:	Buffalo	May 3-9	3	
	Rochester	Apr. 30-May 7	1	1
PENNSYLVANIA:	Johnstown	May 3-9	3	
	McKeesport	May 3-9		1
	Philadelphia	May 3-9	26	2
SOUTH CAROLINA	Georgetown	May 18	1 patient from Charleston	
TENNESSEE:	Memphis	May 3-9	2 cases imported	
UTAH:	Salt Lake City	May 3-9	3	
WISCONSIN:	Milwaukee	May 3-9	2	

SMALLPOX—Foreign.

			C.	D.
BELGIUM:	Brussels	Apr. 18-25		7
	Ghent	Mar. 28-Apr. 25		6
BRAZIL:	Rio de Janeiro	Apr. 5-12		3
CANARY ISLANDS	Las Palmas	Apr. 4-18	44	
COLOMBIA:	Bocas del Toro	Apr. 21-28	present	
GREAT BRITAIN:	Birmingham	Apr. 18-25	7	
	Dublin	Apr. 18-25	8	1
	Liverpool	To April 25	69	6
	London	Apr. 18-25	9	
	Newcastle-on-Tyne	Apr. 18-25	2	
	South Shields	Apr. 18-25	2	
	Sunderland	Apr. 18-25	7	
INDIA:	Bombay	Apr. 7-14		67
	Calcutta	Mar. 28-Apr. 18		7
	Madras	Mar. 28-Apr. 3	1	
ITALY:	Palermo	Apr. 18-25	1	
MEXICO:	City of Mexico	Apr. 12-26	21	11
RUSSIA:	Moscow	Apr. 4-11	5	4
	Odessa	Apr. 11-18	4	
	Warsaw	Apr. 4-11		8

YELLOW FEVER.

			C.	D.
BRAZIL:	Rio de Janeiro	Apr. 5-12		29
COLOMBIA:	Panama	Apr. 30-May 7	3	1
COSTA RICA:	Limon	Apr. 23-30	2	
ECUADOR:	Guayaquil	Apr. 11-18		2
MEXICO:	Tampico	May 2-9	2	2

CHOLERA.

			C.	D.
INDIA:	Calcutta	Mar. 28-Apr. 11		206

PLAGUE.

			C.	D.
AUSTRALIA:	Perth	To Mar. 23	16	8
	Rockhampton	To Mar. 28	2	
	Townsville	To Mar. 28	3	
BRAZIL:	Rio de Janeiro	Apr. 5-12		2
INDIA:	Bombay	Apr. 7-14		1.360
	Calcutta	Mar. 28-Apr. 11		1,779
	Karachi	Mar. 29-Apr. 5	195	161

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See Advertising Page 8

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Medicine as a Profession.—Some thousands of young men have, or will, become physicians during the present season; some because they have successful physicians for relations; others because they believe that the profession offers an opportunity for a livelihood, or confers a certain degree of distinction; others because they have—or imagine they have—a real liking for medical pursuits. The question is, what opportunities have these young men of becoming successful practitioners? All, of course, cannot succeed, for the proportion of practising physicians to the population throughout the United States is so great that it is not possible for all of them to earn a living wage; in fact, the average income of the practising physician must be comparatively small. The opportunities for earning a livelihood in other directions are not great. The teaching physicians are, as a rule, poorly paid or not paid at all. The rewards of medical literature are very slight, unless one has written a successful book. Various institutions provide for a considerable number of men, but pay, on the whole, pitiable salaries. The insurance companies are somewhat better. The army and the navy offer a certain livelihood, and the large drug firms employ a small number of experts in their laboratories, After all, the average earning of the practitioner of medicine in the United States must be comparatively insignificant. It is impossible to obtain actual figures, but presumably it is not over $1500.

The question naturally arises whether any other career offers, on the whole, greater financial inducements. The maximum earnings of a man in a business career are unquestionably vastly greater. Few physicians by the mere practice of their profession can acquire a million dollars in a lifetime; indeed, it is doubtful if any make so much, and yet the achievement of this sum is, comparatively speaking, quite common in the business world. In the industrial professions the average earnings are fairly good. A man of any ability is almost sure of a good position, and there is always the possibility that he may be transferred to the executive department, after which there is no limit to the amount of success he may attain. In law the maximum earnings are vastly greater than the maximum earnings in medicine, and the law, moreover, offers what medicine does not, a stepping-stone to a dozen other careers, but the average lawyer makes no more, if as much, as the average physician. In theology there is practically no career in this country; that is to say, for a man whose sole ambition is to be rich, which is the point of view we are considering just now. The American clergyman, no matter what his creed, as a rule works hard for a small salary.

There is, however, one point of difference that we have not considered. Granting that medicine, on the whole, offers as much financial inducement as a career as does business, law or theology to the average man—and we must remember that the average earnings of business must include the salaries of bookkeepers, clerks and all others employed in the myriad commercial pursuits—we must not forget that the preparation for a medical career is long and expensive, and that during that period of preparation almost no opportunities are offered for earning money. The average time required for this preparation cannot be far short of 5 years, when one includes the hospital career, and perhaps; for a few, a trip to Europe. The average cost cannot be much less than $500 per year; in our better institutions it is much more, and for a man to fit himself in what nowadays is regarded as a thorough manner, not much less than 7 years can be needed: four in the medical school, two in the hospital and one abroad.

Then the remuneration of the young medical man is poor. He can expect to wait 3 or 4 years at least before he begins to earn expenses, largely on account of the ruinous competition of dispensaries in all our large cities. It can fairly be said that he is well on toward middle age before a fair competence begins to come to him.

So much for the conditions. What is likely to be the result of them? There can be little doubt that the same qualities that lead to success in one career will lead the same man to success in another, and the question is, will a sufficient number of the best men continue to study medicine when other careers offer at least as good, and certainly much prompter, rewards? This is a question in which the public is more vitally interested than the medical profession.

The Condition of the Pelvic Lymphatics in Uterine Carcinoma.—To one who has studied the pelvic lymphatic system, its complexity and enormous ramification must appeal as most important elements in the prognosis of pelvic malignant disease. The immense numbers of individual glands, their frequent groupings and close intercommunication must act as a rapid means of infection when there has been once established a focus of carcinomatous change in the cervix uteri. That this glandular extension is rapid and ineradicable is amply proven by the published statements of such eminent pelvic surgeons as Baldy, Frederick, McMonigle and others. These men claim that sooner or later after hysterectomy for cervical carcinoma a recurrence will inevitably take place, and they regard the condition as a fatal one. McMonigle publishes a remarkable record of 481 vaginal hysterectomies with 478 deaths occurring either primarily or, for the most part, from recurrence in the pelvic glandular structures. A noteworthy feature of the recurrence is that in the vast majority of cases it takes place below the cervix, thus showing the inefficacy of the attempt at eradication of the pelvic glands.

To the magnificent work of Emil Ries, of Chicago, must be attributed most of our present knowledge of the changes that occur in the pelvic glands in uterine carcinoma. This distinguished gynecologist has made this field of the pelvic morbid anatomy his special domain, and has elicited much valuable information for general use. During the past 8 years he has endeavored to remove the pelvic glands in carcinomatous cases, and has always subjected the extirpated glands to careful microscopical examination. His investigations have covered 10 cases of cervical carcinoma and over 20,000 sections, the work having been a personal one. He concludes that invasion of the glands occurs early and inevitably. An interesting discovery is that the invasion does not proceed from gland to gland consecutively, but that the carcinomatous emboli overleap some of the glandular links and lodge in glands well beyond the primary seat of the disease. There may accordingly exist a number of absolutely healthy glands between the primary and the secondary foci of the disease. Again, it has been found that glandular enlargement does not necessarily indicate a cancerous change. The enlargement may be purely irritative in origin.

Another feature discovered by Ries, and one that has not been adequately explained, is the frequent presence of a large-cell hyperplasia. Large, clear cells with distinct and prominent nuclei may be noted among the thickly crowded leukocytes in the glandular tissue. The same condition has been observed in tuberculosis, and is not, therefore, pathognomonic of carcinoma. Ries has also concluded from his studies that a constant fluctuation is taking place in the lymphatic system during pathological processes. As certain of the glands lose their function because of the development in them of pathogenic changes, new glands are formed at any point in the connective tissue. The logical deduction of these investigations is that in all cases of cervical carcinoma the pelvic glands should be totally extirpated. The practical conclusion of most gynecologists is that this much to be desired result is impossible. It is futile to endeavor to remove the glands *in toto*; some more or less remote will be left behind, and in these glandular vestiges sooner or later recurrence is bound to take place.

The Day-Dreams of a Therapeutist.—Dr. A. F. A. King contributes a paper in the last volume of *International Clinics* in which he holds that the beneficial action of valuable therapeutic agents, as well as the beneficial effect of suitable hygienic conditions, is to be explained by the theory of functional reversion to ancestral conditions. We confess our surprise that the theory of evolution should be called upon to furnish us with an explanation of the special manner in which certain drugs affect the economy. Some of the instances which Dr. King brings forth to bear out his theory show us the dangers which attend the effort to make universal any explanation whatever of the ultimate cause of pharmacological action. No one knows, he says, why we like to hear the sighing of wind through trees, its distant moaning through the pine, and the pattering of rain upon the roofs of our houses. This is a racial taste to be explained, according to Dr. King, because our very remote ancestors lived in one-storied huts. They were lulled to slumber by the dropping of the rain and the brushing of tree branches upon the roofs of their dwellings and the sighing of the wind. To us it is the pleasing vibration in the harp of our ancestral memory, a temporary reversion to feelings of an age long past and gone. So the innate love for hunting, fishing, shooting; and when the business man of today breaks down from overwork and is ordered to the woods, the mountains or the seashore, to spend his time in fishing or hunting, this does him good because it is a temporary reversion to the occupation of his ancestors. The strongest man, when he becomes the victim of acute disease, must be treated as if he were a child, there must be a reversion to the habits and the routine life of infancy. The author explains the action of such drugs as opium and alcohol by the statement that these medicines produce, artificially, bodily conditions that naturally existed during that remote period in our history when our ancestors lived continuously in the highly carbonized atmosphere of the so-called carboniferous era, in which only animals requiring a low grade of respiration could exist. Opium and alcohol have the effect of inhibiting respiration, not occasioning dyspnea and distress, but rather giving pleasure and enjoyment. The man is luxuriating in that reduced sensibility to pain due to his highly carbonized venous blood which was enjoyed by his ancestors of the carboniferous epoch. The haloid salts are beneficial because by resorting to them we are reverting to the use of proximate principles of nutrition that were largely and constantly used in a period far preceding the carboniferous era, at a time when our remote ancestors were inhabitants of the sea, when they swam in a solution of sodium chloride and fed constantly on sea-weed and sponges! Space forbids that we should furnish our readers with more excerpts of this remarkable paper. To our minds it is a curious phenomenon that such ideas should be seriously entertained and published among scientific contributions. There is one explanation; the summer time is upon us, and light reading is a pleasant sort of recreation.

Death From Drowning.—Professor E. A. Schäfer, F. R. S., read a paper before the Royal Medical and Chirurgical Society, London, May 26, on the phenomena attending death from drowning and the means of promoting resuscitation in the apparently drowned. This embodied the report of the committee appointed by the Royal Medical Society in 1902, to investigate the phenomena attending death from drowning. Experiments were made on dead bodies with a view to determining the amount of air that could be taken in and forced out of the lungs by various methods of artificial respiration. Rigor mortis, however, prevented the observation of any trustworthy results. Then experiments were made on a living subject who remained absolutely passive, making no attempt at natural respiration, not even involuntarily closing the glottis, thus preventing the free passage of air out of, and into the, lungs. Ten methods of artificial rspiration were tested in this manner, including the traction method recommended by Silvester, consisting in increasing the space within the thorax by raising the ribs, the arms being dragged forcibly forward and upward alongside of the head; the compression method recommended by Howard and Marshall Hall, depending on the principle that the air is squeezed out of the thorax by pressure on the parietes, allowing fresh air to pass in during the period of elastic reaction following the removal of pressure; and many combinations of the above methods with other methods, modifying the position of the patient. The results of these experiments showed that all of the methods effected a sufficient change of air to maintain oxygenation of the blood. The smallest amounts of air were yielded by the traction method alone. The combination of the traction and alternating pressure method gave much greater results in some cases than in others; in fact, in some cases the amount of air was nearly as large as the amount in tidal air. Intermittent pressure alone proved an inadequate means of effecting respiration. Rolling, combined with pressure on the back, was also found to be strikingly efficacious. This and the even simpler methods of rhythmic pressure upon the back of the subject lying prone, should hold a prominent place among the methods recommended for the resuscitation of persons apparently dead from drowning. These results are in accord with the practices commonly taught in America, where the method of rolling, combined with pressure on the back, is known to most of the inhabitants even of the smaller towns in the United States.

Freak Legislation.—We have in this country more than forty Congresses, Parliaments, or, as they are popularly called, State Legislatures; and we have accordingly forty and more kinds of legislation. The varieties and follies of some of this provincial law-making are altogether past belief. In medical matters especially the provincial law-maker, as he disports himself in the State Legislature, is a subject for cartooning rather than for serious criticism. We speak only of medical matters and not of libel bills, such as the State of Pennsylvania has recently been indulged in, and with which we believe this **Journal** is not particularly concerned.

In Minnesota recently the State Legislature passed a bill legalizing the practice of "osteopathy," according to which the "osteopaths" are given all the rights and privileges of practitioners of medicine. According to the *St. Paul Medical Journal* the new law will make little difference, so far as the practice of "osteopathy" is concerned, for "osteopaths" have practised in that State without restraint, and would doubtless have continued to do so, even had they not been legalized by the State Legislature. But the act gives the "osteopaths" all the privileges of physicians, while in one section of the act "osteopathy" is declared not to be the practice of medicine or surgery. Consequently, while these fellows may treat all diseases and sue for their bills, they cannot be sued for malpractice. We leave this specimen of provincial law-making to the consideration of future generations. It is useless to ask the present age to redress such a wrong.

As though not to be outdone by Minnesota, the great State of New York by its rural law-makers has enacted a law which, according to Dr. Knopf, practically prohibits the establishment of a sanatorium for consumptives anywhere in the State. This is the so-called Goodsell-Bedell bill. Under the present law, cities of the first class are authorized to erect sanatoriums for consumptives outside the city limits, but the effect of the Goodsell-Bedell law is to prohibit the erection of such sanatoriums. In other words, a large city like New York will have power to erect such sanatoriums only within its own limits. At least this, we suppose, is the effect of the law.

Such legislation is the direct result of the alarming agitation about the infectiousness of tuberculosis, and in that respect it is not to be wondered at. But what can be said of the wisdom, not to speak of the humanity, of a set of rustic politicians who deliberately pass a law by which open-air sanatoriums in available spots are practically prohibited in a great State? The legislators, however, are not alone responsible for this law. Governor Odell, by signing the bill, has made himself a co-partner in the perpetration of this folly; but Governor Odell has always shown a wonderful facility for getting on the wrong side of medical and hygienic questions.

The Statistical Fiend.—Our attention has been called to what seems to be a growing abuse on the part of some medical and surgical writers. We refer to the practice of collecting statistics by dunning busy practitioners to go over their case-books and make out elaborate tables of statistics on some given subject for the benefit of the searcher after figures. We have been informed, for instance, by one prominent surgeon that it is not uncommon for him to receive requests, accompanied with printed blanks, for elaborate statistics, and these statistics are to be based not only on the records of his own case-books, but also upon published cases of which he may have information. In other words, the busy practitioner is expected not only to make out tables of his own cases—which may be a work of great pains—but also to institute a search of the literature for similar cases. We have seen some of the printed blanks that are sent with such requests, and we find that to fill them properly would require much labor and research. We submit that this is hardly fair, and that it may even amount to a great imposition.

We would not for a moment be understood as decrying the value of statistics, but we think that there are some things even as valuable—for instance, the preservation of professional amenities. The scientific worker, no matter how ardent and unselfish he may be, should not endeavor to unload a part of his own disinterestedness upon his professional brother. Let him search the literature of a subject for himself, if he wishes to gain the credit for it. The sources of information are open to all scientists in our large cities, and if they are not open to any one particular person, he should not attempt to do work for which he has not the facilities. Certainly he has no right to enlist the services of others to search the literature for him. As to private case-records, they are not always available for statistical treatment, and the busy practitioner cannot be blamed if he declines to supply to others the material which he has not put in shape for his own use.

Emerson and the Christian Scientists.—We should not consider it within our province in these columns to discuss the philosophy of Ralph Waldo Emerson (the centennial of whose birth has just been celebrated), were it not for a curious estimate of the Concord transcendentalist which has just been published by Mr. Paul E. More in the *Independent*. Mr. More thinks that Emerson was largely responsible for the "faded and vulgarized transcendentalism" which, among its other popular effects, has borne such unwholesome fruit as Christian Science. Hawthorne told us that many bats and owls, which were sometimes mistaken for birds of angelic feather, were attracted by the beacon light of the spirit which Emerson set up in our midst. We believe that there is deep psychological significance in this criticism.

Transcendentalism, at its best, is a sort of nebulous hypothesis in the spiritual life, and means much or little according to the mental caliber of the disciple. But in the case of uncultivated and undisciplined minds it means erratic thinking and a dangerous tendency to mistake dreams for realities. It is essentially unwholesome for most people. The doctrine that spiritual good can rise superior to physical evil, leads logically to the position of Mrs. Eddy that physical disease is not a reality, but only the ignoble conquest of matter over mind. Mrs. Eddy has indeed reduced the philosophy of Emerson to some of its logical conclusions. She has "hitched her wagon to a star," but the wagon looks suspiciously like a peddler's cart, and the star is only an *ignis fatuus* which Emersonian transcendentalism is dancing before the gaze of her followers.

This is a hard-headed age—a "materialistic" one, as some critics choose to call it—and the revolt from its so-called materialism takes many curious forms, but none more curious than the debased transcendentalism which Mrs. Eddy seems to have fabricated out of her conception of the Emersonian philosophy.

Medical Advertisements in the Religious Press.—There is no lack of material upon which to write flamboyant editorials against the religious journals which carry quack advertisements. Consumption "cures," cancer "cures," and "cures" for Bright's disease still show their repulsive heads in the columns of journals that are supposed to be pre-eminently the organs of truth and righteousness. It is refreshing, however, to read the following announcement, which we suppose to be authentic, although we have not investigated it, and it sounds almost too good to be true. The announcement purports to have been sent out by Mr. A. E. Dunn, advertising manager of some Methodist Episcopal journals.

"On the first day of January the Methodists will enter upon a new departure. No advertisements of a medical nature will be accepted for our columns. We propose to exclude all of this class of advertising and will only carry out such contracts as may be in force at that time. The contracts, after having expired, will not be renewed at any price. We feel that the religious paper ought to be the medium that would have nothing but the most desirable and reliable advertisements in its columns, and therefore we will take this course, which, as a financial venture, may possibly be a losing one to us for the time being, but it is our opinion that advertisers who remain with us will be so much benefited that they will be disposed to increase their space and renew their contracts, and many advertisers that we do not now have in our columns will come to us when they know that there is nothing but the most desirable advertising accepted for our publications."

Reviews.

Neurasthenie und Hysterie bei Kindern. Von Dr. Alfred Saenger. Berlin, 1902.

One of the marvels of medical literature is the docility with which the author of one text-book copies from the author of another text-book. As a result many long-exploded statements crop up in the best and most carefully prepared modern text-books; statements that the authors know to be at least exceedingly doubtful, and that they would never think of inserting in articles to be read before their colleagues in their special line. We suppose that there is a certain amount of natural timidity that leads an author to believe that he is taking too great a risk in omitting some venerable idea, even although it is in a state of senile debility. Dr. Saenger calls attention to the infrequency with which the occurrence of neurasthenia and hysteria in childhood is mentioned in the text-books upon neurology and children's diseases. He quotes from some of the most famous of these, for example, Oppenheim and Henoch, in support of his contention. There can be little doubt, we think, that every practitioner has seen at least a few cases of neurasthenia and of hysteria in childhood. There can be little doubt, also, that the majority of practitioners have the possibility of the existence of these diseases in children constantly in their minds, and are prepared to diagnose them when they appear, and yet, because in the early days of our knowledge concerning them they were supposed ot be diseases of adult life, the authors or compounders of text-books have been timid about stating what they undoubtedly know to be facts. Saenger's monograph is chiefly valuable because it insists upon the frequency of these conditions in children. He presents a large amount of material that he has observed, and, although his case-histories might be more complete, still they are at least fairly decisive as far as the diagnosis is concerned. We can commend the monograph to the attention of all neurologists and pediatrists. [J. S.]

A Manual of Practical Hygiene. For Students, Physicians and Medical Officers. By Charles Harrington, M. D. Second edition, revised and enlarged. Illustrated 8vo., 748 pages and index. Lea Bros & Co., Philadelphia and New York.

This is an eminently satisfactory book. The literary style is brilliant, but avoids the highly ornate form to which we had occasion to refer in reviewing a work of similar scope and emanating from the same city. Dr. Harrington does not overlook the historical relations of hygiene, but the allusions are limited and instructive. Among these allusions we note, as one of the most interesting, the description of the construction of a water-closet several centuries ago. The author of the description, and presumably the original constructor, is Sir John Harington; the date of the description is 1596. The working drawing given is quaint in comparison with the forms used in present-day shops.

The book covers the whole field, including military, tropical and occupational hygiene. On most of the disputed points the author takes a conservative stand. The alcohol question is not entered into at length, except in connection with the ration of the soldier and the conditions of tropical life. On the former phase of the question Dr. Harrington takes decided stand in favor of the post-exchange, commonly called the canteen. In his view he follows entirely the statements of those army officers who believe in the post-exchange, and seems to have no practical experience of the system nor to have attached any weight to the statements of officers who oppose the method. It seems to the reviewer that those who favor so radical a piece of paternalism as the post-exchange, should be armed with data based upon extended personal observation. If it is legitimate for the government to set up a shop for the sale of so-called wholesome liquors, it appears also proper for it to maintain colonies of prostitutes under strict medical supervision, as an annex to the post-exchange, for it is established that the venery of soldiers is a source of invalidism more serious than indulgence in intoxicants. The whole subject of the hygiene and morals of the soldier is so intricate that it is practically impossible to solve it. The military authorities look at the questions from an entirely different point of view than the civilian, and it is a mistake for the latter to take his guidance from the former. As a matter of fact, the military man usually has a contempt for civilian opinions, except when they agree with the military view.

The general make-up of the book is excellent. It is well printed, and the illustrations are numerous, well executed and appropriate. The printing and paper are high class. The work reflects credit on all concerned in its production. The index seems rather brief for so comprehensive a book. [H. L.]

Uterine and Tubal Gestation. By Samuel Wyllis Bandler, M. D., Instructor in Gynecology, N. Y. Post-Graduate Medical Scool. William Wood & Company, New York.

This book is a compilation of a number of papers by the author on the etiology, histology and usual course of ectopic gestation which appeared in the *American Journal of Obstetrics and Gynecology*. Some interesting new topics are touched upon, such as the secretory function of the placenta, the origin of the syncytium, the formation of the villi, and the blood-forming function of the trophoblast. The material is scientific in nature and is in a class with the other writings of this able investigator. Numerous illustrations of microscopical sections enrich the work which is a valuable addition to the literature of ectopic gestation. [W. A. N. D.]

The Light of China. The Tâo Teh King of Lâo Tsze; 604-504 B. C. An accurate Metrical Rendering, Translated Directly from the Chinese Text. By I. W. Heysinger, M. A., M. D. Research Publishing Co., Philadelphia, 1903.

This book is one of the Chinese classics. It is the basis of the Tâoist religion. It is essentially the philosophy of the common people, while Confucianism is that of the literati. The translator tells us that the great philosophers have always been the Tâoists, and on looking over the translation we are filled with surprise at the large number of philosophical couplets which fill the pages. The only relationship between the book and the medical profession is its translator, a medical man. It is interesting reading, however, and the time thus taken is not lost. [W. A. N. D.]

News and Notes.

AMERICAN

PHILADELPHIA AND PENNSYLVANIA.

Phipps Institute for the Study, Cure and Prevention of Tuberculosis.—After much delay, the second ward in this hospital was opened for the reception of patients, May 30 last. This new ward is on the third floor of the hospital, and work has already been begun on the third ward, to be equipped on the second floor. Since February 1, when the hospital was opened, 955 patients have been treated in 4 months. There are now 32 beds in constant use.

University of Pennsylvania Medical Department.—The twelfth annual meeting of the Philadelphia Alumni Association of the Medical Department of the University of Pennsylvania was held at the Hotel Chelsea, Atlantic City, May 28, over 300 members being present. The trip to Atlantic City was made on a special train; a reception was given to the medical men on the Steel Pier; a visit was then made to Young's Pier, after which the business session was held at the Chelsea Hotel. A banquet was held after the meeting at which a number of speeches were delivered. The physicians left for Philadlphia on a special train at 10 o'clock. At the business meeting the following officers were elected for the ensuing year: President, Dr. H. H. Whitcomb, of Norristown; vice-presidents, Drs. Philip Marvel, B. A. Randall, J. W. White and G. E. de Schweinitz; treasurer, Dr. H. B. Carpenter; recording secretary, Dr. W. S. Wadsworth, and corresponding secretary, Dr. B. F. Stahl.

Medico-Chirurgical College, Philadelphia.—By the will of the late Dr. Spencer Morris, of Morgantown, W. Va., $12,500 were left to the Medico-Chirurgical College of Philadelphia. The interest from this sum is to be paid annually as a prize to the medical student who passes the best examination for the degree of M. D.

Another Frankford Hospital, Philadelphia.—Meetings were held May 27 and June 3, at Corson Hall, Frankford, at which active steps were taken for establishing a new hospital in Frankford. Physicians were present from Frankford, Bridesburg, Wissinoming, Fox Chase, Tacony, Holmesburg, Torresdale, Bustleton and Somerton, who definitely decided to begin immediately to devise ways and means for securing funds for the proposed institution. They decided that an infirmary, large enough and properly equipped to care for all patients in the thickly populated districts north of the city of Philadelphia, ought to be established without delay. All cases occurring now have to be sent to the Episcopal Hospital and St. Mary's Hospital, both of which are far distant. Three sites are at present under discussion, the favorite being the old Wilbraham mansion and grounds, at Main and Wakeling streets. Dr. B. Pennebaker is president and Dr. J. F. Emery secretary of the new organization.

Jefferson Medical College.—The 78th. annual commencement exercises were held at the Academy of Music, Philadelphia, May 28. Degrees of M. D. were given to 166 graduates, and the honorary degree of LL. D. was conferred upon Dr. Johann von Mikulicz-Radecki, professor of surgery in the University of Breslau, Germany. Dr. von Mikulicz was introduced by Dr. W. W. Keen, and the degrees were conferred by William Potter, president of the Board of Trustees. The address to the graduates was delivered by J. Hampton Carson, Attorney-General of Pennsylvania. A number of prizes were also awarded.

Department of Health and Charities.—The director of this new department is soon to appoint 4 additional milk inspectors, for which appropriations have been made by City Councils. This will make 8 milk inspectors in the city of Philadelphia. In the future inspection of milk will be rigid. An ordinance will probably soon be enacted raising the required standard of the city's milk. At the coming meeting of the Pediatric Society, June 9, suggestions will be made by the milk commission of that society to aid the city in procuring a pure milk-supply. The chairman of this commission, Dr. J. P. Crozer Griffith, will probably make the report of the commission at this meeting. It is said, also, that a roof-garden will be fitted up for phthisical patients at the Philadelphia Hospital. The other reforms instituted by the new director show that the rules and regulations of the department in the future are to be on a scientific plane, kept up to a high standard.

Society Meetings Next Week.—The following societies will meet next week at the College of Physicians, Philadelphia, at 8.15 P. M.: Tuesday evening, June 9, Philadelphia Pediatric Society; Wednesday evening, June 10, Philadelphia County Medical Society, and Thursday evening, June 11, Philadelphia Pathological Society.

College of Physicians, Philadelphia.—At a special meeting, held May 29 last, it was decided to purchase a lot on the east side of Twenty-second street, south of Ludlow street, upon which to erect a new building. The ground to be purchased measures 130 by 184 feet and costs $80,000. It has been stated that the present property at 13th. and Locust streets is particularly desirable as a site for an apartment house, and, in the event of the corporation deciding to sell it, a sufficient sum could probably be obtained to pay for the new site and building.

The Health of Philadelphia.—During the week ending May 30, 264 cases of typhoid fever, with 27 deaths, were reported as compared with 262 cases, with 31 deaths, during the week previous. The hospitals of the city report that they are overcrowded and that the number of typhoid fever cases is far in excess of what it ever has been before. Cases of the disease are more numerous and more severe in the southern and western parts of the city. Many of the cases are unusually malignant, and almost all of the rare complications have been noted during this epidemic. There was a marked increase in all of the other infectious diseases reported; 60 cases with diphtheria, with 7 deaths, against 39 cases, with 11 deaths, during the preceding week; 50 cases of scarlet fever, with 5 deaths, against 23 cases, with 4 deaths, during the previous week, and 41 cases of smallpox, with 7 deaths, against 18 cases, with 4 deaths, in the week before.

A Strange Smallpox Hospital.—Dr. Halberstadt, State Quarantine Officer, discovered, May 31, that a smallpox patient at Coal Castle, near Pottsville, was being treated in a mine breach or cavern. These caverns are numerous in that vicinity, and are large and roomy. The improvised hospital is the most unique of its kind in the State, as the sulphurous water emanating from the coal veins effectually kills all germs and acts as a fumigator. By making use of the cavern the authorities saved the expense of erecting a hospital.

NEW ENGLAND.

Stillman Infirmary Harvard University, Cambridge, Mass.—Mr. James Stillman, of New York City, who built this institution for Harvard College, recently gave the sum of $50,000 for establishing a ward, in the infirmary, for the treatment of contagious diseases. For the erection and equipment of this splendid hospital, Mr. Stillman has given almost $200,000.

Smallpox in Boston.—After a number of weeks without any cases of the disease, a sergeant of the artillery stationed at Fort Strong, Long Island, developed the disease last week. His case is said to be very mild in type, and there is no epidemic on Long Island.

Suicide Satistics.—Professor W. B. Bailey, of Yale, has just published an interesting collection of statistics upon suicide. He finds that married men are more prone than married women to take their lives. On the other hand, the figures show that more single, widowed and divorced women commit suicide than men in like conjugal conditions. The period covered by Professor Bailey's investigation is from 1897 to 1901. He has found 29,344 cases. In order to take a more convenient unit, 10,000 cases were taken by Professor Bailey for computation in his statistics. Of these 7,781 were found to be males, 2,219 females, indicating that in general the ratio of suicides of males to those of females is 3½ to 1. The tables show that the most popular suicide period is between 30 and 40 years, followed closely by the period between 20 and 30 years. Nearly two-thirds of the suicides are found between the periods of 20 to 50 years. This table shows the relative proportion of suicides among married and unmarried persons:

	Total.	Males.	Females.
Singles	4,054	3,129	926
Married	4,807	3,817	990

Widowed	679	496	183
Divorced	198	137	52
Unknown	262	202	68
Total	10,000	7,781	2,219

Shooting is found to be the favorite method of suicide, followed closely by poison. The table summarizing the causes follows:

	Total.	Males.	Females.
Drowning	800	490	310
Shooting	3,247	2,980	267
Poison	2,750	1,831	919
Cutting	810	695	115
Gas	666	466	200
Jumping	473	350	123
Hanging	952	750	202
Miscellaneous	302	219	83
Total	10,000	7,781	2,219

Despondency is the leading motive, claiming about 20% of the victims. Business loss, ill health and insanity follow in order, with about 13% each, disappointment in love coming next. Suicide on account of alcoholism is 17 times as common among the males as the females, while from business loss the number is 13 to 1. Between the ages of 20 and 30 is reached the maximum of suicides from grief, chagrin and being crossed in love. Monday is the favorite day for committing suicide, followed closely by Sunday. From Monday down to Friday there is a gradual falling off, but on Friday there is an inexplicable increase, and then a drop on Saturday, the lowest of the week. Professor Bailey says: "For those who have endured throughout the week there is pay day at hand, followed by a day of rest. Among the males Monday is preeminently a day for suicide. Females prefer Sunday to Monday. Religious excitement may have something to do with this, but nearly a third of the domestic troubles leading to suicides comes on Sunday. More than one-fourth of the suicides from financial trouble and ill health among females occurs on Monday. They apparently lack the courage in their weak, impoverished condition to take up the struggle of a new week. Of 10,000 cases, 3,687 occurred in the 12 hours before noon and 5,848 during the remaining 12 hours. Beginning with midnight there is a continuous increase until 6 P. M. The three hours from 6 to 9 P. M. show a falling off, while from 9 o'clock till midnight is the period of greatest frequency."

Society Meetings in June.—The Maine Medical Association met at Portland June 3 to 5; The Rhode Island Medical Society met June 4 at Providence, and the Massachusetts Medical Society will meet, June 9 and 10, at Boston.

WESTERN STATES.

St. Joseph's Hospital, Chippewa Falls, Wis.—An addition is soon to be made to St. Joseph's Hospital, to contain 20 rooms for private patients. The new building will cost about $15,000.

University of Michigan.—It is said that Dr. J. P. McMurrich, professor of anatomy, has accepted a commission from the Royal Academy of Prussia and the Government of Holland to examine and identify certain species of animal life.

Pure Milk in Milwaukee.—Under the new law a rigid milk inspection is soon to be started in Milwaukee. Power has been given the Health Department of the city to inspect the dairies in and about the city, and even those situated outside of the county, thus making the unsanitary handling of milk almost impossible.

Society Meetings in June.—The Ohio State Medical Society met at Dayton, June 3 to 5. The Indian Territory Medical Association met June 2 and 3 at McAlester, and the Indiana State Medical Society met June 4 and 5 at Richmond. The Wisconsin State Medical Society will meet at Milwaukee, June 8; the Michigan State Medical Society will meet at Detroit, June 11 and 12; the International Association of Railway Surgeons will meet at Indianapolis, Ind., June 10-12; the Colorado State Medical Society will meet at Denver, June 16; the Minnesota State Medical Society will meet at St. Paul, June 17; and the Medical Association of Montana will meet at Helena, June 17 and 18.

SOUTHERN STATES.

Cambridge Hospital, Cambridge, Md.—The corner-stone of the new Hospital of the United Charities in Cambridge was laid on the afternoon of May 26 with masonic ceremonies. Short addresses were delivered by Rev. Henry Branch, Dr. Henry M. Hurd, Rev. Dr. E. C. Macnichol and Hon. Phillips Lee Goldsborough, who expressed the thanks of the hospital directors to all who have taken an interest in this benevolent work. Mr. Goldsborough acted in the place of Judge Henry Lloyd, president of the board, whose public duties in court took him elsewhere. The contract to build the hospital was awarded April 15, to J. Benjamin Brown, for $35,000. Of this sum Mr. John E. Hurst, of Baltimore, has given $25,000. The site selected for the hospital, on which building operations have begun, is in East Cambridge on a bluff immediately on the Great Choptank river, with an unobstructed water view of many miles, and is an ideal spot for a hospital. It is expected to be finished and ready for the reception of patients by June 1, 1904. The State has appropriated $5,000 and the town of Cambridge $5,000, which, with the money given by Mr. Hurst, will complete the fund of $35,000 necessary for the building. The plans for the house were made by the architect, Mr. George Archer, of Baltimore. The plans provide for the construction of a brick building in Colonial style, with stone trimmings. It will be 136 feet long, 51 feet wide in the center, with wings at each end 36 feet wide. There will be a basement and three stories. The first floor will contain a reception room, office, compounding room, examining and nurses' room, parlor in the center, a ward for colored males in the west wing and one for white males in the east wing. Each wing will contain three special rooms for patients requiring separate apartments. There will also be duty rooms and tea kitchens. On the second floor will be five rooms for private patients, a ward for white women and another for colored females, as on the first floor. There will also be two rooms for children, duty rooms and tea kitchens. On the third floor will be an operating room, etherizing and sterilizing rooms, bandages, instruments and doctors' rooms. The east wing will contain nurses' apartments and the west wing quarters for the servants. There will be linen closets on this floor. The basement will contain nurses' dining rooms, pantries, kitchen, boiler room, laundry, storerooms, fumigating and autopsy rooms and a trunk room. The hospital will comfortably accommodate about 35 patients. It will be heated by steam and lighted by gas, and have a covered driveway at the front entrance. The medical staff consists of Drs. Brice W. Goldsborough, Nathan R. Gorter, John Mace, Herbert Harlan, E. Wolff, H. O. Reik, Guy Steele, William Osler, Thomas S. Cullen and Howard A. Kelly.

Oil Exterminates Mosquitoes.—Dr. Walter Wyman, Surgeon-General, U. S. P. H. and M.-H. S., is said to have made the following statement, May 28: "Experiments in Southern Italy and New Orleans have shown beyond the least doubt that the mosquito is a pest breeder, carrying malaria and even yellow fever from patient to patient. They also show that it is possible to kill the larvæ of the insect by means of the oil process. On Long Island Sound the tests instituted present the identical result, I believe the use of oil on streams would do much good in destroying the mosquito and keeping down malaria."

Health Department, Baltimore, Md.—The annual report of the Department of Health of Baltimore for 1902 has recently been issued. It contains a comprehensive statement of the health condition of this city. The smallpox situation is dwelt upon at length, and a comparative table giving the number of cases of smallpox that have developed in Baltimore and the much larger number in other cities for the same period, is set forth. The authorities also point out the supreme importance of vaccination as a preventive of the disease. A table showing the number of cases in each month for the past four years is included. A portion of the report is devoted to the Municipal Hospital for Minor Infectious Diseases in contemplation, and the necessity for such a institution is strongly urged. The need of a general sewerage system and the general sewerage conditions are also dwelt upon. Drainage and the free use of petroleum are advocated as a sure prevention for mosquitoes, and the cow stable ordinance is commended. The condition of the paving of many of the streets and alleys of the city is declared to be a menace to the public health. The work done in connection with the inspection of food and milk as well as plumbing and drainage is pointed out, and the fumigation and disinfection of houses in which cases of infectious diseases have been discovered, is alluded to.

Leprosy in the U. S. Army.—Captain J. C. Gilmore, U. S. A., at Savannah, Ga., says that the United States Army is threatened with many cases of leprosy as a result of service in the Philippines and Cuba. He wrote recently to the War Department for information as to how he was to pay his first sergeant, who is suffering from leprosy at Tybee, Ga. At present, however, this case of Sergeant Mix is the only case in the Army, and he is kept isolated so that there is no danger of the contagion spreading. The Acting Surgeon-General does not believe that leprosy is as contagious as smallpox. The War Department has refused to remove this private soldier, now confined at the military station at Tybee, to the Sapalo quarantine station. No fear is entertained that leprosy will spread among the U. S. soldiers.

Maryland School for the Blind.—The 50th. anniversary of this institution was celebrated May 19. Among the addresses made was one by Dr. Michael Anagnos. The great growth of the institution and the good work done was commented upon.

Medical Society of Delaware.—The next annual meeting will be held at Dover, June 9.

MISCELLANY.

Bubonic Plague in Peru.—In spite of the official announcement, May 20, that Peru was free from bubonic plague, the 2 employés of the Milnes flour mill, where the disease originated, died in the isolation camp at Callao, May 29, from bubonic plague. They had been under treatment in the isolation tents 22 days. The special medical commission appointed by the Government has reported that there is no danger of the disease spreading from the flour mill on account of the methods adopted for sterilizing the wheat.

Bubonic Plague in Japan.—Under date of May 26, the American Consul General at Yokohama cabled the Department of State, Washington, that bubonic plague had appeared there.

Bubonic Plague in Chile.—Bubonic plague appeared at Iquique, the principal seaport of Chile, 2 weeks ago and 10 cases, with 6 deaths, have thus far been reported. Three of the deaths occurred in the same house. The disease was brought to Iquique in a cargo of rice from India. A number of physicians declare that the disease at present under treatment is not bubonic plague. Strict measures have been taken to prevent its spread. The Governor of Iquique formally announced that the plague had disappeared June 1.

Cholera in the Philippines.—Reports received May 27, from the Health Commission in the Philippine Islands, show the ravages made by cholera during the past year. The total number of cases that have appeared since the beginning of the epidemic last year is 131,617 with 83,282 deaths, a mortality of 63%. In the city of Manila 4680 cases occurred with 3471 deaths. Smallpox and plague appeared in January, and since that time 38 cases of smallpox have been reported. Twenty of these cases appeared in March. Since January 84 cases of bubonic plague with 71 deaths have been reported. Governor Peck, of Benguet, says that the disease spread rapidly throughout his province. The Igorrotes, in time of sickness, have always gathered about the afflicted, holding a feast, sacrificing birds or animals, believing that there were curative properties in their blood. This religious custom naturally resulted in widely spreading the disease. He gave orders that all such meetings were to be stopped, which were promptly and thoroughly complied with. After a long and tedious fight against the cholera, smallpox broke out.

Obituary.—Contract Surgeon Robert M. Enders, at Manila, Philippine Islands, May 24.—Dr. P. H. Keyser, Jr., at Boulder, Col., May 24, aged 31 years.—Dr. Florence Hunt, at Milwaukee, Wis., May 24, aged 45 years.—Dr. John Gosman, at Doylestown, Pa., May 25, aged 70 years.—Dr. E. Charles Wendt, at Paris, France, May 25, aged 45 years.—Dr. Octavius A. White, at New York City, May 26, aged 78 years.—Dr. A. S. Wilson, at Wilkesbarre, Pa., May 27, aged 39 years.—Dr. T. C. Rich, at Williamsport, Pa., May 27, aged 60 years.—Dr. J. B. Forbes, at Chicago, Ill., June 1.—Dr. W. O. Davies, U. S. A., at Philadelphia, Pa., May 26, aged 37 years.

FOREIGN.

GREAT BRITAIN, ETC.

Bubonic Plague in India.—The deaths from the plague in the Punjab from January 1 to May 2 numbered 141,879, according to a statement made by Lord George Hamilton, the Indian Secretary, in the House of Commons, May 27.

University College, London.—Dr. G. V. Poore, professor of clinical medicine and physician to the University College Hospital, has been obliged to resign his appointment on account of ill health.

Open Air Treatment of Phthisical Patients.—Colonel J. H. Wilkinson, of Sutton Coldfield, has presented the Staffordshire County Council with 34 acres of land at Berry Hill, Lichfield, valued at $12,000, as a site for a hospital for the open air treatment of patients suffering from phthisis.

University of Birmingham.—W. F. Haslem, F. R. C. S., surgeon to the General Hospital, Birmingham, will deliver the Ingleby lectures at the University of Birmingham, Tuesdays, June 9 and 16, on the "Surgery of the Pancreas."

CONTINENTAL EUROPE.

International Congress of Hygiene and Demography.—The following Committee of Organization for the United States, for the Eleventh International Congress of Hygiene and Demography, to be held in Brussels, September 2-8, 1903, has been appointed, at the request of the Belgian government, by the State Department: Dr. E. A. de Schweinitz, Columbian University, Washington, D. C.; Dr. A. B. Richardson, Columbian University, Washington, D. C.; Dr. John Marshall, University of Pennsylvania, Philadelphia, Pa., and Dr. Harrington, professor of hygiene, Harvard University, Boston, Mass. The Committee desires to secure the co-operation of all engaged in hygienic work in this country, both in attendance at the meeting in Brussels, and in sending papers to the Congress. The Congress will be divided into two sections, hygiene and demography. The subjects which will be considered are the relation of bacteria and parasites to hygiene, the hygiene of foods, the treatment and prevention of communicable diseases, etc. The important subject of the communicability of tuberculosis in its various phases will be discussed by prominent men. The fee for membership is 25 francs ($5), which may be sent to the Secretary-General, Dr. Felix Pulzeys, Rue Forgeur, 1., Liège, Belgium. Those proposing to attend or send papers will please notify Dr. E. A. de Schweinitz, Washington, D. C.

The Autumn Courses for Physicians, Berlin.—The regular "Ferien-Curse," courses given especially for physicians, will be held in Berlin from September 28 to October 24, 1903. The separate courses to be given are announced in a pamphlet which will be sent to any physician on application to Herr Melzer, Langenbeck-Haus, Ziegelstrasse 10/11, Berlin.

In Memory of Dr. Gerhardt.—On May 5 last, the 70th. birthday anniversary of the late Dr. Carl Gerhardt, services in his memory were held at the Charité Hospital, Berlin. An address was made by Dr. Martius, of Rostock, who presented to the hospital a portrait of the late Dr. Gerhardt, which is to be placed in the ampitheatre of the new Second Medical Clinic of the University of Berlin. Thanks for the portrait were expressed by Dr. Schaper, in the name of the hospital.

Recovery of the Hindoo Twin.—Radica, the living half of the Hindoo twins, formerly with Barnum's circus, separated by Dr. Doyen when the other twin fell mortally ill, has just returned to Paris from the Riviera, fully recovered from the operation and threatened consumption. She has been adopted by some nuns, who have placed her in an orphanage in the Latin quarter. She is now quite accustomed to individual life.

Bacilli of Bubonic Plague in Warfare.—The Sofia correspondent of the *Daily News* says he learns that the revolutionary leaders in Bulgaria have obtained a quantity of Indian plague bacilli, and are determined, unless the Powers interfere in their behalf, to infect Constantinople, Salonica and even Berlin.

The Latest Literature.

BRITISH MEDICAL JOURNAL.

May 16, 1903.

1. Reports to the Scientific Grants Committee of the British Medical Association: (No. LXXV.) On the Physiological Action of the Kenyah Dart Poison and its Active Principle, Antiarin. C. G. SELIGMANN.
2. Drug Eruptions. GEORGE PERNET.
3. Datura Poisoning in the Federated Malay States. JOHN D. GIMLETTE.
4. Experimental Hemoglobinuria in a Case of Blackwater Fever. Under the Care of Patrick Manson. Reported by W. G. ROSS and GEORGE C. LOW.
5. Hodgkin's Disease and Arsenical Poisoning. WALTER BROADBENT.
6. Case of Severe Belladonna Poisoning. GEORGE R. LIVINGSTON.
7. Case of Chlorodyne Poisoning, with Recovery. K. R. DALAL.
8. A Case of Acute Alcoholic Poisoning in a Child, Aged 4 Years: Treatment by Saline Injection: Recovery. FREDERICK C. FORSTER.
9. Cases of Angioma of Synovial Membranes and of Muscle. FREDERIC EVE.

1.—The Kenyahs use the **inspissated juice of the antiaris toxicaria** to poison their darts. Seligmann has studied **the physiological action of this substance and of its active principle, antiarin.** He finds that it acts as a poison of the digitalin group on the ventricles of the heart. It causes paralysis of the central nervous system and clonic spasms of the voluntary muscles. When mammals are subjected to its influence, marked gastro-intestinal symptoms are produced. Antiarin is a crystalline glucoside which lacks the convulsive effect of the crude substance. [J. M. S.]

2.—Pernet divides **drug eruptions** into 9 classes. (1) Erythematous, urticarial, papular and desquamating rashes are produced by belladonna, chrysarobin, mercury, arsenic, iodoform, copaiba, quinine, salicin and borax. (2) Vesicular and bullous eruptions are produced by the majority of the drugs already mentioned, particularly by iodoform, salipyrine, arsenic, potassium iodide and antipyrine. (3) Pustular eruptions are produced by the bromides and the iodides. (4) Furnucles may be produced by arsenic, the bromides and quinine. Abscesses may be due to self-administered hypodermic injections of morphine. (5) Purpuric rashes may be due to antipyrine, arsenic, iodoform when given internally, quinine and sulphonal. (6) Gangrene sometimes follows the use of arsenic, the iodides, quinine and orthoform when applied locally. Purpura has followed the use of sodium salicylate. (7) Pigmentation may follow the use of arsenic, antipyrine and silver nitrate. (8) Keratosis and hyperkeratosis have been known to result from the use of arsenic. (9) Tumor-like lesions are especially prone to occur in the bromide eruptions. Arsenical poisoning has led to the loss of both the nails and the hair. In the treatment of the drug eruptions the first thing to do is to stop the offending drug. [J. M. S.]

3.—The Malays often use the seeds of native species of **datura** for the purpose of criminal **poisoning.** The plants which furnish the seeds for this purpose are the datura fastuosa and datura alba. The seeds are mixed with the food or with tea. The natives also use them medicinally for asthma and as local applications for the relief of painful swellings and bruises. The 3 most characteristic symptoms of poisoning by datura are: (1) Paralysis of the salivary nerves, leading to dryness of the mouth; (2) paralysis of the third nerve, causing dilation of the pupil with imperfect vision; and (3) paralysis of the inhibitory fibers of the vagus, causing very rapid action of the heart. The active principle of datura, daturine, is a mixture of atropine and hyoscyamine. In the treatment of datura poisoning implicit reliance cannot be placed on emetics, and the early administration of a purgative is often advisable. The use of a decoction containing tannin is indicated to precipitate the alkaloid. There is no chemical antidote; but there is reason to believe that potassium permanganate is an efficient antidote when introduced into the stomach in a solution not stronger than one grain to the ounce. Daturine is excreted by the kidneys. The histories of 4 cases are reported. [J. M. S.]

4.—Inability to take quinine is a bar to residence in highly malarious countries. In the case of an Englishman, aged 25 years, who had had 4 or 5 attacks of malaria in the Gold Coast Colony, an opinion was asked of Manson as to the fitness of the patient for future service in West Africa. He was admitted to the hospital and his blood was examined, showing 3,635,000 erythrocytes; 7,000 leukocytes and 65% hemoglobin. At 9 P. M. he was given 10 grains of quinine by the mouth, and at 1 A. M. he had a slight rigor, nausea, diarrhea and passed a large quantity of black water. He lost over ½ million erythrocytes in a few hours. This experiment, deliberately planned and carried out, is one more proof that in some individuals, under certain conditions, **quinine** produces **hemoglobinuria.** [J. M. S.]

5.—Broadbent reports a case of **Hodgkin's disease** in a patient who was peculiarly susceptible to **arsenic.** The glands diminished in size under arsenic with unusual rapidity, but the use of liquor arsenicalis produced alarming symptoms of poisoning. Later, sodium cacodylate was given, and the author thinks it was responsible for a pleural effusion, ascites and edema which developed in the course of the disease. The patient died. [J. M. S.]

6.—In the case of a man who had an attack of influenza followed by cardiac trouble, pain in the back developed, and his wife applied various domestic remedies. These included a mustard plaster, turpentine fomentations, a liniment of unknown composition, dry mustard and, finally, a belladonna plaster. A few hours after the application of the latter, serious symptoms were noted which included dyspnea, irregular, rapid pulse, fever, rigors, delirium and dilated pupils. The skin under the plaster was reddened and in 2 places slightly blistered. Livingstone believes that the belladonna was absorbed through this irritated skin area with unusual rapidity. The patient recovered. [J. M. S.]

7.—Dalal reports the case of a boy, aged 18 years, who was found lying unconscious in bed, breathing laboriously. He was drenched in perspiration, was cold to the touch, and his pulse was imperceptible at the wrist. He had taken chlorodyne. [J. M. S.]

8.—Forster reports the case of a boy, aged 4 years, who had taken 2 ounces of neat whiskey. His skin was cold and clammy, his respirations were shallow and sighing, his pulse was irregular and uncountable, and he was insensible. The child recovered. A rectal enema of normal saline was of marked benefit in the treatment of the condition. [J. M. S.]

9.—Eve reports 4 cases of **angioma of synovial membranes and of muscle.** All occurred between the ages of 10 and 25, when tuberculosis of the joints is common; some of the patients complained of symptoms highly suggestive of tuberculosis, such as pain increased by movement, and 2 complained of starting of the limb at night. Tenderness and limitation of movement were marked in 3 cases, and wasting of the muscles was noticed in 2. Pulsation was not observed. In one case the tumor increased in size when pressure was made on the limb above the swelling. Emptying of the tumor by pressure was not apparent. In 2 cases the growth involved the synovial membrane of the knee, and in 2 the synovial membrane of the elbow joint was invaded. [F. T. S.]

LANCET.

May 16, 1903.

1. A Clinical Lecture on Combined Congenital Defects and Organic Diseases of the Heart. THOMAS OLIVER.
2. A Lecture on the Uses of Paraffin in Plastic Surgery. STEPHEN PAGET.
3. Abdominal Hysterectomy for Myoma by Doyen's Procedures. WALTER G. SPENCER.
4. A Case of Acute Bullous Eruption Affecting a Butcher. ARTHUR S. MORLEY and G. H. RANSOME.
5. A Case of Bullet Wound of the Brain with Partial Motor Paresis and Hemianopsia. Experimental Determination of the Lesion. N. BISHOP HARMAN and A. A. BRADBURNE.
6. Case of a Man Blind From Congenital Cataract Who Acquired Sight After an Operation When He Was Thirty Years of Age. A. MAITLAND RAMSAY.
7. Some Observations on the Blood Gases in Diabetes. A. P. BEDDARD, M.S. PEMBREY and E.I. SPRIGGS.
8. Surgical Emergencies in General Practice. GEORGE A. CLARKSON.
9. Cessation of Respiration During Anesthesia; Recovery After One-and-a-quarter Hours. DAVID LAMB.
10. Note Upon the Use of Pilocarpine in the Treatment of Pneumonia. E. CURTIN.

2.—Paget discusses the **uses of paraffin in plastic surgery**, devoting particular attention to the technique and to the improvement of deformed noses and prolapse of the rectum. But one serious disaster has been traced to the use of paraffin, a case of pulmonary embolism. The greatest care should be practised in the preparation of the paraffin and in the selection of the syringe. A leak or crack in the syringe or the setting of the paraffin before the injection ruins the whole operation. Paget believes that the best paraffin is that which has a melting-point somewhere between 108 and 115 degrees F. When the paraffin has to stand heavy and immediate pressure, the higher melting-point is preferable. In the injection into the loose submucous tissue, an ordinary antitoxin syringe is satisfactory. But in the nose cases an especially well-made and tight syringe with its needle attached by a screw is to be preferred. It is also well to have two syringes in case of accident. Paget has operated upon 43 cases of deformed noses, and in no case has there been death, embolism, sloughing of the skin or wandering of the paraffin. The results have varied from very good to indifferent, but the large majority has been satisfactory. It must be remembered in these cases that only when the skin over that portion of the nose which is to be raised is fairly movable, is the paraffin injection possible. This bars, of course, those cases in which the depression is covered by cicatricial skin, which is tightly bound down. Just before injecting the paraffin the needle should be dipped for 6 or 8 seconds in water that is boiling or just off the boil, in order to prevent the setting of the paraffin in the needle. The greatest care should be exercised by the assistant to prevent the paraffin settling in the forehead, the eyebrows, the inner angles of the orbits and the sides of the nose. Paget makes the injection at the lowest point of the depression. The moulding should be vigorous, and, while it is being done, cold water should be allowed to trickle over the nose. The patient is, of course, etherized. Paget has had 3 cases of prolapse of the rectum in old people in whom he has obtained good results from paraffin injections. [J. H. G.]

3.—Spencer reports 8 cases of **abdominal hysterectomy for myoma performed according to Doyen's method.** By this method the structures are rapidly divided between clamp-forceps, a posterior flap is cut downward into the posterior vaginal fornix, then the cervix is seized and drawn up and the tumor is gradually made to turn a somersault over the pubis. The 3 points in favor of the measure are: (1) The certainty of the procedure in spite of inflammatory complications, or the main tumor obscuring details; (2) the certainty of securing the uterine artery at a good distance from its origin, and (3) the ease with which the bladder and ureters are pushed out of the way of the field of operation. [W. A. N. D.]

4.—Morley and Ransome report a **case of acute bullous eruption**, which occurred in a man, 26 years of age, a butcher by occupation. The patient frequently pricked his fingers in hanging up meat, which caused a suppurating wound on his left middle finger. On the back of the left forearm a circinate scaly area of about the size of a shilling developed. The ringworm fungus was not discovered in this lesion, although clinically the condition was indistinguishable from ringworm and was treated with pure formalin and dressed with white precipitate ointment. The wound on the finger was treated the same way. A few days afterward a dermatitis developed; blisters formed around the patch; the whole back of the left forearm was involved. The inflammation continued to spread up the arm and on the chest. The patient's temperature was normal. Finally there was a general eruption over the whole body, which resembled variola in the pustular stage. Later the vesicles dried, crusts formed and desquamation occurred. The patient made an uninterrupted recovery. The authors point out that they had some difficulty in arriving at the diagnosis, being at first inclined to attribute the dermatitis to the use of pure formalin, but, when the generalized eruption appeared, this view was not tenable. They also point out that Pernet and Bulloch have described similar cases occurring in persons whose occupation brought them into contact with recently killed animals, and in most of them there was some small septic wound. On looking over the literature they found reference to other cases. [F. J. K.]

5.—Harman and Bradburne report a case of **bullet wound of the brain with partial motor paralysis and hemianopsia,** and present drawings showing a method by which the probable track of the bullet was determined. The patient came into the hands of the writers several months after the injury. At this time he had recovered largely from the motor paralysis, but the hemianopsia was still present to some extent. [J. H. G.]

6.—Ramsay reports the case of a man who **was blind from birth, and who acquired sight after an operation** performed when he was 30 years of age. The patient suffered from congenital cataract. The report is minute and interesting. After the operation the patient rapidly learned the letters of the alphabet and figures. From the very first he saw everything in the actual position, showing that the retinal inversion of the picture is interpreted psychically without any education. [J. H. G.]

7.—Beddard, Pembrey and Spriggs contribute **observations on the blood gases in diabetes.** They have made estimations of the carbon dioxide in the blood and its alkalinity in 23 samples of blood from 15 patients; 8 being cases of diabetic coma, 3 of diabetes without coma, and 4 being from cases of edema of the lung, pancreatic disease, pernicious anemia and ascites, respectively. In all the cases of diabetic coma the quantity of carbon dioxide was one-half, or less than one-half, the normal, and in the blood of the noncomatose there was also less CO_2 than in normal blood, but more than in comatose patients. In the diabetic cases, diacetic acid and acetone were present in the urine. In 2 cases they found that the amount of total nitrogen excreted as NH_3 was high. They did not find the amount of gas in the urine in diabetes to be above the normal. They finally point out that, from their experiments and from others now in progress, they believe that in diabetic coma the respiratory symptoms are not entirely to be explained by the assumption of a chemical disability of the blood to combine with carbon dioxide. [F. J. K.]

10.—Curtis contributes a note on **the use of pilocarpine in the treatment of pneumonia.** He has used this drug in a number of cases; it was administered by means of the hypodermic method. He concludes that, from his limited experience of the action of pilocarpine, he believes that it will occupy a leading place in the treatment of pneumonia. He states that it relieves pleuritic pain and also relieves the difficult breathing within a few hours after its administration, and also seems to hasten resolution. A rise in the temperature of from one-half degree to one and one-half degrees usually follows its administration, and then a reduction in temperature follows within an hour or two. He further holds that it stimulates the flow of saliva and cleans the tongue. He has not seen any undesirable or unpleasant results follow its repeated administration. [F. J. K.]

MEDICAL RECORD.

May 30, 1903.

1. Primary and Recurrent Mammary Carcinoma Treated by the X-Rays. WILLIAM JONES MORTON.
2. The Treatment of Purulent Conjunctivitis. EDGAR S. THOMSON.
3. Notes on Cases Treated by Venesection. GEORGE PIERCE ANDREWS.
4. On the Active Principle of Rhus Diversiloba (Poison Oak). CARL SCHWALBE.
5. Reflex Symptom from Biliary Calculus. G. W. SQUIRES.

1.—Morton states that, whatever our early expectations may have been, later experience has shown that the treatment of cancer by the X-rays is, in many instances, a long and difficult one. Discussing the value of radiotherapy in malignant disease, he states that the future for X-ray and phototherapy in general should be one of extreme conservatism and desistance from the invasion of surgical procedures which offer an alternative to the patient of relief or cure superior to that of the radiation treatment. [T. L. C.]

4.—Schwalbe is of the opinion that the poison of **rhus diversiloba** (poison oak) is conveyed to persons by the lactiferous vessels found in the leaves, stem and stalks, even in the petals of the plant. [T. L. C.]

MEDICAL NEWS.

May 30, 1903. (Vol. 82, No. 22.)

1. Professional Discretion. The Medical Secret. PRINCE A. MORROW.
2. A Report Upon the Physics and Therapeutic Value of Cathode and Ultraviolet Rays; with References to the Electromagnetic Theory of Light. An Attempt More Clearly to Define the General Character of These Recently Introduced Agents in the Treatment of Cancer. ROSWELL PARK.
3. The Cure of Anal Fissure Without Operation; Report of Eight Cases. S. LEWIS.
4. The Therapeutic Use of Suprarenal Gland in Certain Diseases of the Skin. MARTIN F. ENGMAN and WM. P. LOTH.
5. On Simplicity in the Operation for Laceration of the Cervix Uteri. LOUIS KOLIPINSKI.
6. Tuberculosis of the Larynx and Aspiration Tuberculosis of the Lungs Following Dermatitis Blastomycetes.

2.—Park's conclusions are: (1) These agents afford methods of treatment for extremely new growths of limited areas and superficial character, which, while not exactly certain, are extremely promising. (2) They not only cause no pain, but tend to relieve pain, both superficial and deep, in a most pleasing and satisfactory way. (3) They are adapted to cases which can hardly be submitted to any other method of treatment, and they afford more hope in delayed or inoperable cases than does any other method of treatment. (4) It will be found that the odor of putrefaction may often be suppressed by their use and the putrefactive process itself checked. (5) Burns and intense dermatitis, so frequently noted when the treatment first came into vogue, may now be almost certainly avoided. (6) More than this, they afford a supplementary method of treatment after operation, by which the benefits of the same may be enhanced and enlarged. (7) It is not necessary to intermit such work as the patient may be engaged in, in order to carry out the X-ray or phototherapeutic method of treatment. [T. M. T.]

3.—Lewis says if treatment fails to give immediate relief there are probably other fissured areas present. Examine more thoroughly and if none found, cocainize and make the application "blindly." Enough improvement will follow to relax the sphincterial spasm and disclose the fissure. [T. M. T.]

4.—Engman and Loth recommend the use of **suprarenal gland in general pruritus, chronic urticaria and lichen urticatus.** As pruritus is often caused by the lack of tone in the capillary vessels of the skin, due to weak heart action, the suprarenal gland, from its influence upon the circulation, is an ideal remedy. In **chronic urticaria** the authors are inclined to attribute the good results from the use of the drug not alone to its effect in causing cardiac stimulation, or the increase of muscle and vasomotor tone, but to the probable neutralization of some poisonous or deleterious substance within the system. In **lichen urticatus** they think that the suprarenal gland seems to assist in the neutralization, or to prevent the production of the toxic agent producing this condition. [T. M. T.]

NEW YORK MEDICAL JOURNAL.

May 30, 1903.

1. Clinical Observations on Backache. ROBERT W. LOVETT.
2. Cocaine Herniotomy. ALEXANDER LYLE.
3. The Essentials for Aseptic Labor. ERNEST GALLANT.
4. The Eye in Its Relation to General Disease. NATHAN D. McDOWELL.
5. A Supposed Sarcoma of the Kidney Cured by X-Ray Treatment. CHARLES H. RICHMOND.
6. Notes on Two Cases of Urogenital Tuberculosis. CHARLES GREENE CUMSTON.
7. Heredity and Tuberculosis. MAURICE PACKARD and LESTER LAURENS ROOS.
8. Chronic Pneumonia. E. PALIER.

1.—Lovett presents some **clinical observations on backache.** From the viewpoint of the orthopedic surgeon there are certain well-defined types that present themselves for treatment. These Lovett divides roughly into those due to causes existing in the spine, and those due to causes existing outside of the spine. The first are either mechanical or occur as the result of inflammation or injury. Of the mechanical he mentions faulty spinal attitude, a condition frequently seen, in which the pain is generally localized at one or more points in the spine. If long-standing, the trouble may be difficult to differentiate from Pott's disease and arthritis deformans. The treatment of the condition is then set forth. Pain in lateral deviation of the spine is not a common symptom. It may exist as a neuralgia, but it is generally incidental and unimportant, except in neurasthenics. Causes in the spine of traumatic origin are recognized in the severer forms as "railroad spine." It is important that this should also be distinguished from Potts' disease. Of the inflammatory conditions causing backache he mentions Potts' disease and arthritis deformans. Causes of backache existing outside of the spine are: Real flatfoot, pronated foot and contracted foot. This latter condition is characterized by a shortness of the muscles of the calves. The treatment of these various conditions is described in detail. [P. B. B.]

2.—Lyle considers the various steps in the **radical cure of inguinal hernia by substituting cocaine anesthesia for general narcosis.** The writer has performed 15 herniotomies under cocaine anesthesia, with very gratifying results. In the performance of the herniotomy the usual incision is made and the technique of Bassini generally employed, the only exception being in the treatment of the sac, for which Macewen's method is used. After separating the fibers of the external oblique muscle, the iliohypogastric nerve will be exposed, and below this will be found the ilio-inguinal nerve. These are anesthetized by injecting 2 or 3 minims of ¼% solution of cocaine. The genital branch of the genitocrural nerve, more uncertain in its direction and distributon than the above, is searched for and anesthetized in the manner already described. By this method of treatment the author claims that shock is almost wholly avoided, because all afferent impulses are completely blocked. The advantages claimed for the operation are: All the dangers of a general anesthetic to the heart, lungs and kidneys are avoided; there has been no division of the nerves; the patient will be free from shock, nausea and straining. [P. B. B.]

3.—Gallant's paper on the **essentials for aseptic labor** emphasizes the importance of absolute cleanliness in the parturient chamber. He first describes the numerous agents that should comprise the outfit of the obstetrician. He then speaks of the importance of thoroughly cleansing the hands, and says that scrubbing is better than alluring, poisonous, antiseptic drugs. In most instances external examination by palpation and auscultation will reveal all the necessary information, and internal examintion should be avoided, if possible. Vaginal douching, he says, is unnecessary after normal labor. If, however, the lochia become offensive after the third day, a douche of normal salt solution should be employed. Intra-uterine douching need rarely be used, and this should never be delegated to the nurse. [P. B. B.]

4.—McDowell considers the **eye in relation to general disease.** Of the ocular manifestations occurring during diabetes he mentions paralysis of the ocular muscles, keratitis and iritis, but the most common, of course, is cataract. He says that the appearance of cataract before 40 years of age should always suggest an examintion of the urine for sugar. The fact that the eye is not affected by temporary glycosuria, would make it appear as though the mere presence of sugar is not the cause of the changes in the eye. Xanthoma has been found in association with diseases of the liver. The anemias he has found a most fruitful source of asthenopia. He believes that judicious treatment of the anemia will often render unnecessary the employment of glasses. Syphilis is one of the most prolific causes of ocular dsease. At least 50% of the cases of iritis are due to specific infection. Congenital ocular specific disease pursues a milder course than the acquired form. The eye complications occurring during pertussis are usually mechanical in origin. Diphtheria is a very frequent cause of paralysis of accommodation, and this is usually bilateral. Of the ocular manifestations resulting from tabes there are atrophy of the optic nerve, paralysis of the ocular muscles, and accommodation. Optic atrophy occurs in about 20% of all cases. The Argyll-Robertson pupil is one of the characteristic symptoms of tabes. [P. B. B.]

5.—Richmond reports the case-history of a woman, aged 40 years, who devloped a rapidly growing tumor in the right hypochondriac and lumbar regions. This growth was diagnosticated **as a sarcoma of the rght kidney,** and, from the unsatisfactory results obtained by operation, the patient was subjected to treatment with the X-rays. Exposures were made daily for 12 weeks, the patient's general condition improved, and at the end of this time the tumor had entirely disappeared. [P. B. B.]

6.—Cumston sets forth the notes on 2 **cases of urogenital tuberculosis.** The first patient was a young man, 30 years of age, who suffered from pulmonary tuberculosis for several years. Later he developed tuberculous disease of the right testicle and prostate gland. The patient died, and the autopsy revealed an ascending tuberculous process of the bladder, ureter and kidney. The second patient was a woman, 27 years old, who was operated upon for tuberculous adenitis. About 2½ years later she developed a tuberculous process in the left ureter and kidney. A primary nephrectomy was performed, and the patient died 12 days subsequently. The autopsy revealed tuberculous involvement of both lungs, the left ureter and bladder. The author thinks the infection of the urinary organs was caused by the primary disease in the axillary lymphatic glands. [P. B. B.]

7.—Packard and Roos discuss **heredity in tuberculosis.** The literature of this subject is first weighed. The authors believe that statistics as well as animal experimentation prove conclusively that hereditary transmission is not only a possibility but a reality. They then set forth evidence to disprove the theory of Cornet that tuberculosis is a nonhereditary disease. In favor of their argument they mention the celebrated case of Birch-Hirschfeld, in which a tuberculous mother died in the seventh month of her first pregnancy. Immediately after death the fetus was extracted by Cesarean section, and tubercle bacilli and tuberculous deposits were demonstrated in the blood of the umbilical vein as well as the liver, spleen and kidneys of the child. Numerous similar cases are also set forth. As to direct transmission through the sperm, this at the present time is considered by most authorities a very remote possibility, although the tubercle bacilli have been found in the seminiferous fluid of tuberculous patients whose genital organs were free from the disease. Friedman's experiment, they claim, has done much to establish the theory of spermatic infection. He injected small amounts of tubercle cultures into the vagina of rabbits directly after intercourse. Within six or eight days autopsies were held upon the animals, and the microscope revealed the bacilli not only in the genital tract, but in the ovum itself. [P. B. B.]

8.—Palier reports the history of a girl, 19 years old, who presented symptoms somewhat characteristic of the pulmonary form of grippe. The condition persisted unimproved despite treatment for 2 months, and pulmonary tuberculosis was, therefore, suspected. Fresh air, sunshine and the administration of agents to improve her general condition resulted in cure. The pulmonary condition, the author believes, was a form of **chronic pneumonia.** [P. B. B.]

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

May 30, 1903.

1. Medical Discoveries by the Nonmedical. GEORGE M. GOULD.
2. The Single Cuff Method of Circular Enterorrhaphy. A New Method. O. BEVERLY CAMPBELL.
3. Intestinal Resection, with a Report of Sixteen Cases; Nine with the Murphy Button and Seven with the Suture. JAMES H. DUNN.
4. Report of a Case of Pemphigus Chronicus. WILLIAM FRICK.
5. The Treatment of Emphysema by Continuous Aspiration. WELLER VAN HOOK.
6. Unilateral Disease of the Kidney Simulating Stone. JOSEPH RANSOHOFF.
7. Acute Suppurative Cervical Adenitis of Infancy. THOMAS S. SOUTHWORTH.
8. The Estimation of Urea by Mercuric Nitrate. J. H. LONG.

4.—Frick reports a **case of pemphigus chronicus,** which occurred in a married woman, 53 years of age. The disease had existed for more than two years when the patient came under observation. The mucous surfaces of the labia majora were first involved. In June, 1892, the eruption appeared on different parts of the body in the following order: Inside the thighs, on the legs, arms, breasts, abdomen, neck, outside the thighs, back of hands, feet, face, scalp, mucous membrane of mouth, and soles of feet. The palms of the hands were not involved. Erythematous patches were observed for a part of the time, but these seemed to have no influence on the bullous eruption. The patient's general condition was fairly good, except that rigors and heat flashes were frequent. The temperature ranged from 100° to 100-2/5° for a period of about 2 months. The urine contained a slight amount of albumin and a few coarse granular casts. A bacteriological examination of the fluid from the blebs gave the following results: The staphylococcus pyogenes albus was isolated and also a bacillus which resembled in its morphology the bacillus typhosus and grew readily on agar-agar, gelatine, potato and bouillon. The organism was motile and was decolorized by Gram's method. The period of profuse eruption was from June until late in August, and about September first the bullæ diminished rapidly and disappeared in all parts of the body except on the mucous surfaces of the labia. The patient also gained strength and appeared to be in normal health. The treatment consisted in giving the patient a nutritious diet, rest in bed, and the administration of tonics, especially arsenic. Antiseptic baths gave the patient much comfort; these consisted of bichloride and boracic acid, the former being used in 1-5000 solution. Weaker solutions were also employed. [F. J. K.]

5.—Van Hook refers to the unsatisfactory results frequently obtained from the open drainage of cases of emphysema, which are due to the want of expansion in the lung. **Continuous aspiration drainage** was first recommended by Buleau, but Perthes deserves the credit for establishing this form of drainage as a satisfactory treatment. Van Hook reports 2 cases in which he made continuous aspiration drainage after the method of Perthes, and he presents the illustrations of an improvised apparatus in a private house. In both the cases reported the result of the treatment was most satisfactory. [J. H. G.]

6.—Ransohoff shows the similarity in symptoms between **stone in the kidney** and other forms of **unilateral disease.** The X-rays have done much to differentiate between stone and other diseases of the kidneys, but their negative results Van Hook is not prepared to rely upon. He lays stress upon the value of continuous hematuria. The use of the wax-tipped ureteral bougie, as advised by Kelly, is not looked upon with favor for the diagnosis of stone in the kidney. An interesting case showing the difficulty in diagnosis is reported. Many cases in which the surgeon is unable to find the stone at the time of operation are relieved by the splitting of the kidney and the removal of a portion of its capsule. In all cases in which stone is not found Ransohoff urges the removal of a small portion of the kidney substance for microscopical examination, as he believes inflammatory changes will be found, which, although slight, are often capable of producing the severest symptoms. [J. H. G.]

8.—Long contributes an article **on the estimation of urea by mercuric nitrate.** He points out that, on account of the complicated procedure and corrections of Pflüger's method, the practical abandonment of this simple mercuric nitrate test has been in favor of other methods which are apparently more accurate. To simplify this procedure as far as possible he suggests the following: (1) The mercury solution is made in the usual manner and so adjusted that 20 cc. correspond exactly to 200 mg. of urea in 20 cc. when the end reaction is found as follows: Spread a number of drops of normal sodium carbonate solution (53 gm. Na_2CO_3 to the liter) on a glass plate with dark background, and as the end of the titration is neared bring a drop of the mixture in the beaker alongside one of the carbonate drops and cause the two to mix on one edge. Part of the beaker drop is thus drawn over the carbonate, giving a precipitate; as soon as this appears distinctly yellow, consider the process finished and dilute the mercury solution so that exactly 20 cc. should be required to produce this reaction, it being assumed that the standard solution in the beaker contained exactly 200 mg. of urea in 20 cc. If a paste sodium bicarbonate and water is used for the end reaction, or if the colored precipitate is obtained on mixing the drops by stirring, a different result will be reached, but, if the final reaction is always made as just explained, it will be found most satisfactory and readily observed. The urine titration must be made in the same way, starting with the volume of 20 cc. of clear filtrate. The article contains a table which shows the amount of urea corresponding to different volumes of mercury solution used as stated. [F. J. K.]

AMERICAN MEDICINE.

May 30, 1903.

1. Etiology and Treatment of Retrodeviations of the Uterus. CHARLES A. ROBERTSON.
2. Strongyloides Intestinalis in Texas, with Report of a Case. JOHN T. MOORE.
3. Streptococcus Infections. LEONARD K. HIRSCHBERG.
4. A Clinical Report of Nine Cases of Friedreich's Disease: Hereditary or Family Ataxia So-called, with Comments on Noteworthy Symptoms. JOSEPH COLLINS.
5. Present Status of Congenital Dislocation of the Hip and the Bloodless Reduction. VIRGIL P. GIBNEY.
6. The Forcible Reposition of Congenital Luxation of the Hip. GWILYM G. DAVIS.

4.—Collins presents a clinical report of 9 cases of **Friedreich's disease.** The most striking features of Friedreich's disease are (1) its occurrence in more than one member of the family and (2) its development in early life, usually about the time of puberty. Aside from these two factors nothing is known of its etiology. If the present-day conception of the genesis of the disease is correct, or approximately so (that it is an evolutionary defect or teratologic manifestation), then very little further can be known. The distinguishing clinical features of Friedreich's disease are: (1) Ataxia of all purposeful movements and of station; inco-ordination due to the loss of sense of equilibrium. (2) Loss of the tendon jerks; diminished myotatic irritability and muscular weakness which may amount to paresis of the lower extremities. (3) Deformities of the spine, usually scoliosis, lateral curvature and deformity of the feet, commonly pes cavus, with extension of the big toe. (4) Nystagmus, static and dynamic. (5) Disturbance of articulation and intonation. (6) Features that distinguish it from tabes or locomotor ataxia: Absence of lancinating pains, intactness of sensibility, normal pupillary reactions, no disturbance of vision and noninvolvement of the urogenital sphere. [T. L. C.]

5.—Gibney discusses the **present status of congenital dislocation of the hip, and the bloodles reduction.** He concludes with the following important deductions: (1) Do not rest content in a case of hip lameness in a young child until you have made a thorough examination of the patient and have obtained a full history of the case. (2) The diagnosis once established, aim to effect a reduction before the sixth or seventh year. It is fatal to postpone operation. (3) In patients beyond the age-limit, fortify yourself with a Röntgen ray picture in order to determine the exact position of the head, the shape of the same, and the relationship which the neck sustains to the shaft. (4) Do not make long attempts at reduction in patients over 10. (5) Bear in mind the dangers which Dr. Lorenz himself has warned against, namely, too extensive laceration of the soft parts, paralysis which may or may not yield to time and treatment, the fracture of the femur or the pelvic bones, rupture of an artery, sometimes the femoral. [T. L. C.]

6.—Davis states that the attempts at the **forcible reposition of congenitally luxated hips** have given rise to so many accidental traumatisms that the question has arisen whether it is not appropriate to advocate more conservative methods. He describes the methods of **Paci, Heusner** and Lorenz. Davis is of the opinion that rather than resort to the great force now, at times, employed, it would be much better to incise and clear a way for the head of the bone. [T. L. C.]

MUENCHENER MEDICINISCHE WOCHENSCHRIFT.

March 24, 1903.

1. Contribution to Traumatic Uncomplicated Dislocation of the Extensor Tendons of the Fingers. A. BECKER.
2. Colpeurysis in Retroflexion and Incarceration of the Pregnant Uterus. W. ALBERT.
3. Can the Addition of Sodium Sulphate to Chopped Meat be Regarded as an Adulteration? A. KRAUS and H. SCHMIDT.
4. A Case of Syphilitic Parenchymatous Nephritis. F. MUEHLIG.
5. Contribution to the Extirpation of Cystic Kidney. O. SEITZ.
6. Myopia Produced by Diabetes Mellitus. S. NEUBURGER.
7. The Treatment of Perforation and Rupture of the Gall-bladder. ENDERLEN.
8. Historical Remarks Upon the Method of the Surviving Heart of Warm-Blooded Animals. O. LANGENDORFF.

9. Influenza. W. EBSTEIN.
10. The Operative Treatment of Cancer of the Uterus. G. KLEIN.
11. The Medical Post-Graduate School in New York. C. BECK.

1.—Becker reports the case of a man who, in **attempting to grasp a large object, felt a slight crack** followed by pain in the region of the extensor tendon of the right middle finger. There was also some difficulty in the use of the hand. When the patient flexed the fingers the tendon could be seen slipping into the interosseous space on the ulnar side of the head of the metacarpal bone. Operation was performed, and the **attachments between the extensor tendons and the middle finger and the index finger were found torn.** It seemed impracticable to suture them, and therefore the attachments between the middle and ring finger tendons were cut. Permanent cure ensued. He also mentions 2 other cases that he observed, one that of a blacksmith, whose hand was struck by a horse's hoof, and the other that of a man upon whose hand a heavy board had fallen. The symptoms were essentially the same. [J. S.]

2.—Albert reports 5 cases of **incarceration of the pregnant uterus,** in all of which he secured reposition without serious consequences by means of the colpeurynter. The method is as follows. After catheterization of the bladder and, if possible, evacuation of the rectum, the rubber bag is introduced into the vagina and carefully filled with sterile water. It is allowed to remain in position, and if, after a half to one hour no improvement has occurred, more water may be introduced. The distended rubber bag supports and presses up the whole uterus. It may be allowed to remain in position over night, although sometimes a few hours are sufficient. Histories of the cases are appended. [J. S.]

3.—Kraus and Schmidt have studied **the behavior of chopped meat both with and without the addition of sodium sulphate,** and after a series of experiments they reach the conclusion that this salt deceives the buyer because it makes meat that has been kept some time, appear fresh. This meat can be mixed with fresh meat without detection, and, therefore, the addition of sodium sulphate should, under the German law, be considered adulteration. [J. S.]

4.—Mühlig reports the case of a man, 26 years of age, who was admitted to the hospital suffering from anemia and edema. There were albumin and casts in the urine. The patient did not improve under treatment, and it was found that the same year he had had a chancre. A diagnosis of **syphilitic nephritis** was made, he was given hypodermic injections of corrosive sublimate and rapidly improved. [J. S.]

5.—Seitz reports the case of a woman, 55 years of age, who had a large tumor in the left side of the abdomen. The quantity of urine was not diminished. Operation was performed, and a **multilocular cystic tumor** was found in the retroperitoneal space. This proved to be **a cystic kidney.** The cyst was apparently due to the presence of concrements. [J. S.]

6.—Neuburger reports 2 cases in which **myopia** occurred **in the course of diabetes mellitus.** The second patient also had some cloudiness of the lens. He calls attention to the fact that myopia occurring in old age is always a very suspicious symptom. [J. S.]

7.—Enderlen discusses **perforation of the gall-bladder.** He does not believe that transplantation of the serosa suffices to cover defects, but some experiments on dogs have shown him that pieces of tissue, such as the liver, will satisfactorily close them. There is little reason to believe that this is the case in human beings, and only when the omentum has become adherent to the gall-bladder is it likely that the defect in the serous membrane will not ultimately lead to perforation. [J. S.]

8.—Langendorff calls atention to the priority of his method of maintaining the mammalian heart alive by passing fresh blood through its coronary circulation. [J. S.]

9.—Ebstein continues his article upon **influenza.** He discusses the marked characteristics of the epidemic of 1890-1. The fever rose rapidly; in about 1/6 of the cases there was swelling of the spleen; fibrinous pneumonia appeared less frequently and catarrhal pneumonia more frequently than at other periods. Often the patient had headache, pain in the limbs, vertigo, drowsiness, insomnia, delirium, fainting and conditions of that kind. The kidneys were very rarely affected, although hematuria was occasionally observed. He reports a case. He gives a description of the influenza bacillus and mentions the epidemic which is apparently just beginning in Germany. [J. S.]

10.—Klein continues his article upon the **treatment of carcinoma of the uterus,** by discussing the statistics of different operators according to various methods. He believes that in general we can say that the mortality for a simple vaginal total extirpation is about 70%; for total extirpation with Schucharcht's vaginal incision, 15.5%, and for abdominal total extirpation, 20.7%. It is not possible, however, to show which operation is the best. The statistics of recurrence vary considerably. After 5 years recurrence appeared, according to different authorities, in from 19.3% to 58% of the cases. Probably about 13% of such patients recover. Klein's own figures were: 129 cases, upon 86 of which he did excochleation and cauterization, no deaths; upon 43 radical operations in which 27 were vaginal, with one death, and 16 were abdominal with 3 deaths. The percentage of recoveries cannot be calculated, because many of the patients were operated upon in the last 5 years. [J. S.]

11.—Beck describes the Post-Graduate Medical School in New York City. [J. S.]

RUSSKY VRATCH.

February 15, 1903. (Vol. 11, No. 7.)

1. On the Technique of Repeated Cesarean Sections. V. N. ORLOFF.
2. Endogenous Infection as a Cause of Diseases of the Eye. JA. V. ZELENKOVSKY.
3. On the Question of the Action of Adrenalin on the Animal Organism. P. P. BJELAVENTZ.
4. On the Diagnosis and Treatment of Aneurysm of the Abdominal Aorta. M. JU. GUREVITCH.
5. Further Observations on the Action of Soluble Silver. A. I. DVORETZKY.
6. The Negative Sides of Sterilization of Milk for Artificial Feeding. N. P. DANILOFF.

1.—Orloff reports the case of a woman on whom **Cesarean section was performed twice** at an interval of 15 years. At neither time were there any serious complications, living children having been delivered. The second operation was somewhat more difficult on account of many adhesions found as a result of the first. He quotes statistics showing that repeated Cesarean section is followed by much more favorable results than the primary operation, and he explains this on the ground that the second operation is undertaken at a much earlier stage of labor before the woman has become exhausted, and that the patient, confident of a successful issue, is in a much better mental condition. [A. R.]

2.—Zelenkovsky presents the following conclusions based on experimental data: (1) The normal metabolism of the aqueous humor, its unfavorable effect on the development of bacteria and the rapid phagocytosis are factors which prevent endogenous infection of the anterior chamber. (2) The posterior chamber as compared with the anterior presents more difficult conditions for the penetration of bacteria which circulate in the blood, but also more favorable conditions for their development. (3) Irritation and traumatism favor the penetration into the aqueous humor and lens of even slightly pathogenic bacteria which may circulate in the blood and which do not penetrate the aqueous humor and lens under ordinary circumstances. (4) Severity of the general infection favors penetration of bacteria into both chambers of the eye. (5) Greater or lesser severity of endogenous infection of the eyes during the same general or local infection is, in all probability, determined, aside from the virulence of the micro-organism, by the primary nidus of infection of the eye, i. e., whether the anterior or posterior chamber is primarily involved. If the first, the disease is mild, while, if the second, the affection is of a severe type. This supposition is supported by pathological findings. (6) From this standpoint it becomes clear why endogenous suppurative affections are so rare. (7) Endogenous infection evidently plays no rôle in the production of sympathetic inflammations. [A. R.]

3.—Bjelaventz concludes from his experiments on the **action of adrenalin on the animal organism as follows:** (1) Increased bloodpressure caused by adrenalin depends on the spasmodic contraction of the bloodvessels and stimulation of the heart. (2) The vascular spasms depend on the direct action of the drug on the vessel walls. (3) Adrenalin at first irritates and then paralyzes the centers of the vagi, but does not act on their peripheries. (4) The interchange of gases is increased by small, and markedly diminished by large, doses of adrenalin; in the last event the temperature is lowered. (5) Death from adrenalin is caused by paralysis of the respiratory center. (6) On the central nervous system adrenalin acts as a depressant. (7) Intravenous and subcutaneous injection of adrenalin should be employed with great caution, in view of the inconstancy of its action. (8) In view of the highly hygroscopic properties of adrenalin, it is best to employ it in the form of suspension or solution in water. (9) The solution of adrenalin does not lose perceptibly in its action with the change in color. (10) The increased frequency of the pulse following subcutaneous or intravenous injection of adrenalin should serve as a contra-indication to the repetition of the dose. The author's experiments were conducted with adrenalin hydrochloride prepared by Pel, and Takamine, of Parke, Davis & Co. Both preparations were in general similar in their action, although the latter was apparently the stronger. [A. R.]

4.—Gurevitch discusses the **diagnosis and treatment of aneurysm of the aorta** and reports 3 illustrative cases. From a perusal of the literature and his own observations he draws the following conclusions: (1) The beneficial effect of subcutaneous injection of gelatine in the treatment of aneurysm is far from having been established, and the present method of its employment is inconvenient. (2) Temporary improvement from the prolonged use of potassium iodide can be expected only in the earlier stages of aneurysm and that in patients with a history of syphilis. (3) The greatest benefit is derived from a regular hygienic and dietetic régime. [A. R.]

5.—Dvoretzky employed **Credé's ointment** in 10 cases of various local inflammatory affections, including one case of erysipelas and 2 of chancroids. From the observations of others and his own he draws the following conclusions: (1) Soluble silver applied externally in the form of an ointment is absorbed and acts through the circulation on the entire organism as well as locally. This is proved by the fact that, except in 2 cases of buboes, the ointment was applied to parts removed from the lesion, and yet a favorable result was obtained. (2) Colloidal silver destroys first of all the pathogenic germs which gain access through the skin, and may also neutralize the toxins ("metallic antidote"). The latter effect is shown by the immediate improvement of the subjective symptoms of general infection, lowering of the temperature and improvement of the pulse. (3) Colloidal silver is capable of arresting the local inflammatory processes caused by infection with the strepto- and staphylococci, such as phlegmons, infiltrations, erysipelas, boils, etc., except when considerable suppuration and necrosis of the tissue has occurred. (4) Colloidal silver produces its effect in a very mild and, owing to its nonpoisonous nature, harmless way. (5) Credé's ointment, when applied locally, is a good remedy for infectious enlargement of the glands. [A. R.]

6.—Daniloff discusses **the drawbacks to the use of sterilized milk for infant feeding.** Sterilization produces such profound changes in the milk of both physical and chemical nature as to render it difficult of assimilation. More or less prolonged feeding on sterilized milk lowers and disturbs nitrogenous metabolism and interferes with the formative processes of the organism, this being also due to the insufficient quantity and deficient assimilation of the mineral salts which undergo a change in the process of sterilization. The excess of poorly digested and nonassimilable material irritates the intestines and disturbs their function. All this leads to a poor development of the organism and prepares a favorable soil for various constitutional affections. Artificial feeding on sterilized milk, the author believes, should become a matter of the past. [A. R.]

THE PRACTITIONER.

January, 1903.

1. The Mimicry of Gastric Troubles by Spinal Disease. FREDERICK TREVES.
2. A Note on Salicylate of Quinine. JOHN MOORE.
3. The Rôle of Percussion in the Diagnosis of Early Pulmonary Tuberculosis. R. W. PHILIP.
4. On Certain Diseases of the Cornea Met With in Children. C. DEVEREUX MARSHALL.
5. Stammering and its Treatment by the General Practitioner. HAMILTON GRAHAM LANGWILL.
6. A Case of Gastric Dilatation and Tetany. Recovery. W. E. CARNEGIE DICKSON.
7. A Case With Comments. "A Case of Spontaneous Rupture of a Bicornuate Uterus During Pregnancy." A. DONALD and W. E. WALLS.
8. Some Recent Work on Surgical Affections of Joints. ALBERT CARLESS.
9. Diseases of the Upper Air-Passages; A Review of Recent Work. ST. CLAIR THOMPSON.
10. Public Health: (1) A Brief History of Cremation in England. HENRY THOMPSON. (2) The Relationship Between Voluntary Agencies and Sanitary Authorities in Public Health Work. GEORGE NEWMAN.

1.—See editorial comment, **Philadelphia Medical Journal**, January 31, 1903, page 187.

2.—Moore mentions the favorable results which have followed the use of **quinine salicylate** in rheumatism, diphtheria, influenza, pneumonia, enteric fever, the infectious diseases generally and chlorosis. He also mentions its use with success in a single case of herpes zoster. [T. L. C.]

3.—Philip contributes a paper on the rôle of **percussion in the diagnosis of early pulmonary tuberculosis.** He draws attention particularly to the **significance of the supraclavicular triangle** in relation to early changes. As a result of a large number of examinations of the apices of healthy persons by the percussion method, he is satisfied that lung resonance is to be traced from one and a half to two inches above the clavicle or about three fingerbreadths. It may frequently be observed that clavicular and infraclavicular percussion afford full resonance or hyperresonance in association with varying degrees of supraclavicular dulness; such complemental resonance is apt to deceive the unwary observer; it ought, rather, to direct particular attention to the supraclavicular area, in which the first signs of early infiltration may frequently be found. As to the **best line of percussion** for the determination of slight degrees of apical involvements he recommends the following procedure: The pleximeter finger of the left hand is placed across the apex of the lung from back to front, approximately in a plane at right angles to the vertical diameter of the lung. Percussion is practised with the middle finger of the right hand in the direction at right angles to the pleximeter. Philip believes that sufficient attention has not been directed to the significance of the results obtainable by what he terms **"tidal percussion;"** by this he means the practice of percussion more particularly at the apices—though it is no less applicable to the bases and the anterior edges—alternately during exploration (or easy respiration), and during full inspiration. [T. L. C.]

4.—Marshall mentions the various forms of keratitis that occur in childhood. He limits his consideration to the **phlyctenular form.** He believes that the routine administration of iron frequently does harm. A prescription which he employs consists of gray powder, 2 grains; powdered belladonna leaves, 1 grain; and sugar of milk, 2 grains. He usually prescribes half a powder twice a day. The eye should be bathed frequently with boric lotion, and atropine should be instilled. Later an ointment of 2 to 8 grains of yellow mercury oxide in an ounce of vaseline is useful, but in the acute stage it is far too irritating. One of the chief causes for the continuation of the photophobia is the development of fissures and excoriations at the outer canthi. The best treatment is to give an anesthetic, stretch the lids as widely open as possible, and apply a weak solution of silver nitrate. [T. L. C.]

5.—Langwill discusses the **treatment of stammering.** It is of the utmost importance that the patient should understand the method of production of normal speech. He should be shown that his difficulty arises from a want of the proper harmony or prompt co-operation between the functions of vocalization and articulation. The practical importance of this emphasizing of the vocal element in the prevention of stammering becomes strikingly evident when it is remembered that scarcely ever does a patient stammer in singing. Langwill presents the physiological alphabet of Wyllie and gives a large number of practical guides to assist the practitioner in the treatment of this condition. [T. L. C.]

6.—Dickson reports in great detail a case of **gastric dilatation and tetany, with recovery.** Before the onset of tetany the patient presented a typical clinical picture of old-standing atonic dyspepsia with gastric dilatation and retention. This was due, probably, to some form of pyloric obstruction apparently nonmalignant in nature. Previous to the attack of tetany the amount of urine was small. No urine at all was passed for a period 24 hours before and 16 hours after the onset, at the end of this period 16 ounces were drawn off with a catheter. A trace of albumin was found in the urine secreted during the actual tetanoid seizure. A number of bloodcounts were made; there was a considerable diminution of the red cells and hemoglobin both during and after the tetany, and there was a marked leukocytosis, mainly of the polymorphonuclear forms, the occurrence of which constitutes a strong argument in favor of the toxic origin of the disease. If the cause of tetany is a poison generated in the stomach it is to be expected that the injection of the gastric contents would reproduce in animals the muscular contractions typical of this disease. Experiments in this direction were negative, as numbers of others reported have been. [T. L. C.]

AMERICAN JOURNAL OF MEDICAL SCIENCES.

February, 1903.

1. Diseases of the Pancreas. JOHN B. DEAVER.
2. Tropical Abscess of the Liver, with Report of a Case. S. S. COHEN and J. H. GIBBON.
3. A Study of Some Cirrhoses of the Liver. B. ROBINSON.
4. A Case of Multiple Melanotic Sarcoma Unsuccessfully Treated with X-Rays. J. P. MARSH.
5. Mixed Tumors of the Thyroid Gland. LEO LOEB.
6. The Pathology of Nasal and Labial Herpes and of Herpes of the Body Occurring in Acute Croupous Pneumonia, and Their Relation to the So-called Herpes Zoster. W. HOWARD.
7. An Experimental Study of Lithium. C. GOOD.
8. Ureteritis in the Female. E. GARCEAU.
9. Gonorrheal Vulvovaginitis in Children. R. WOODS.
10. Memoir of J. M. DaCosta, M. D. MARY CLARK.

1.—Deaver gives an excellent discussion of the **diseases of the pancreas** and reports a series of cases that have come under his observation. A woman of 27 had had chronic constipation and pain and was a free user of alcohol. She had an acute attack in which she became jaundiced, had pain across the back, nausea and vomiting. This subsided, and several days later she had another attack with pain in the abdomen, most marked on the right side. The patient had leukocytosis, slight enlargement of the spleen and free vomiting. She gradually improved and 12 days later had no leukocytosis or pain, and was able to be up. A woman of 50 years was admitted to the hospital in a state of collapse, with subnormal temperature and cyanosis. The abdomen was distended, rigid and tender, and there was severe pain in the epigastrium. The history showed that the attack had occurred 24 hours before admission. She died 6 hours after she was admitted, and a sclerotic, hemorrhagic pancreas was found at the autopsy. A man, 52 years of age, had, in the course of 25 years, several attacks of colicky pain in the epigastrium with vomiting but without jaundice. In the last attack he was admitted to the hospital complaining of pain and tenderness in the epigastrium. There was a deep shadow over the region of the pancreas. The temperature was slightly elevated, a moderate leukocytosis gradually developed, and an operation was performed in which fat necrosis was found in the omentum and a chocolate-like material in the lesser peritoneum. This material was evacuated, and death occurred 3 hours later. At the autopsy the pancreas was found to be necrotic and gangrenous, with the exception of the head. There was extensive fat necrosis and numerous gall-stones in the gall-bladder. Deaver does not think that the differential diagnosis of pancreatitis from biliary calculus is of importance,because both conditions require operation and both present very similar symptoms. A man, 44 years of age, had had several attacks of severe pain in the epigastrium. Finally he began to grow weak, had pain in the epigastrium, colicky in nature, and severe diarrhea. There was no nausea or vomiting. No tumor could be detected, but chronic pancreatitis was diagnosed. An operation was performed, and a hardened and enlarged pancreas was found without fat necrosis in the surrounding structures. The gall-bladder was distended and was opened and drained, the patient rapidly recovering. A man, 55 years of age, had had malaria 20 years ago accompanied with jaundice. Six weeks before admission he had a severe attack of pain in the epigastrium, colicky in nature, and one week later became jaundiced. An operation was performed, the gall-bladder found greatly distended and therefore opened; the pancreas was enlarged, infiltrated and hardened. Cholecystoduodenostomy was performed, and the patient recovered. A man, 58 years of age, had weakness and anorexia for 6 months, became jaundiced and lost weight. There was a diffuse shadow around the head of the pancreas. An operation was performed and a large stone found in the cystic duct. The head of the pancreas was hardened. A choledochoduodenostomy was performed, but the patient died 24 hours after the operation. At the autopsy chronic pancreatitis and nutmeg liver were found; there was no fat necrosis. Deaver then discusses cysts of the pancreas and reports the following cases: A woman of 58 years had chronic constipation. There was distension of the veins on the anterior wall of the abdomen. A mass was felt below and to the right of the ensiform cartilage, and there was ascites. When the abdomen was opened and the ascitic fluid withdrawn, a large cyst was found in the upper portion of the abdomen, which was opened and drained. The fluid of this cyst was apparently altered pancreatic secretion, and digested albumin. A woman, 58 years of age, had a mass over the stomach just below the left costal margin, for 30 years. There was a large cyst extending from the umbilicus to the diaphragm. The blood showed excessive eosinophilia, and there was evidence of carcinoma of the stomach. Operation was refused. Deaver finally reports a case of carcinoma in which operation was performed at the patient's request, the diagnosis confirmed, but the patient died of persistent oozing from the wound. He gives the following 4 routes by which the pancreas can be reached for operation: Through the gastrohepatic omentum above the stomach; through the gastrohepatic omentum below the stomach; through the transverse mesocolon back of the colon and stomach; and from the loin behind the peritoneum. He believes that lacerated wounds should be treated promptly. After operation drainage is usually advantageous, chiefly because it favors the formation of a pancreatic fistula, rather than to allow the retention of the digestive secretion. In acute pancreatiis, surgical intervention should be postponed until the acute primary symptoms have abated. Chronic pancreatitis must be treated by section and cholecystostomy. The results are quite favorable. Cysts should be evacuated and drained. Malignant disease should not be disturbed. Wilbert discusses the value of the X-rays in the diagnosis of various conditions of the pancreas. In cases in which the organ is congested or hypertrophic, there is usually a comparatively dense shadow extending to the right of the median line, and about midway between the sternum and the umbilicus, but it is not movable with the motion of the diaphragm. It is readily displaced by change in the position of the body to a fluoroscopic screen. Some difficulty may be caused by an overlapping kidney, a floating right kidney or an enlarged cystic kidney. Masses of food or even water may interfere with the shadow. [J. S.]

2.—Cohen and Gibbon report the following case: A man, 30 years of age, had had an attack of dysentery 3 years before admission to the hospital. From time to time he had bloody stools. A mass was found occupying the right hypochondriac and umbilical regions in which there was a circular area giving a sense of cystic resistance. A diagnosis of probable **abscess of the liver** was made, operation was performed, the cavity opened and an enormous quantity of pus discharged. The abscess cavity was drained, and the patient made a satisfactory recovery. Gibbon believes that the best instrument for incising liver tissue is the Paquelin cautery. [J. S.]

3.—Robinson discusses **cirrhosis of the liver.** He recognizes 3 forms: The atrophic, the hypertrophic and the syphilitic. He thinks there are also some minor or undetermined forms. In the treatment of the atrophic forms he prohibits alcohol. He discusses the symptomatology of the hypertrophic and syphilitic forms. He believes that the hypertrophic and the atrophic alcoholic cirrhoses are distinct in different stages of the same disease. He then speaks of the unsatisfactory results often obtained in an attempt to relieve the ascites by paracentesis, and then speaks of the modern surgical treatment. He reports 3 cases in which omental anastomosis had been performed, one with no relief to the ascites; one with possibly slight improvement in the ascites; and one of a patient who developed erysipelas and died 25 days after the operation. [J. S.]

4.—Marsh reports a case of **multiple melanotic sarcoma** appearing in various parts of the skin. There were also evidences of tumor in the deeper structures. The patient was given X-ray treatment, in the course of which it was found that the leukocytes diminished, and that the tumors increased in size and number. The treatment was accordingly discontinued. Marsh believes that the X-rays, by diminishing the leukocytes, which are the natural defenders of the body, hastened the growth of the tumor. [J. S.]

5.—Loeb discusses **mixed tumors of the thyroid.** He believes that at present it is not possible to determine from what kind of embryonic cells the tumor is derived. Heterotopic forms are not of necessity produced by the displacement of the blastomeres. He calls attention to the experiments of Spemann, who showed that, by ligating the embryo triton, the anterior part would develop a head. That is to say ear vesicles, etc., were formed from cells that normally would not have produced anything resembling them. He discusses the reports of tumors of this class that he has been able to collect from the literature. There are only 4 certain cases of this type recorded, one in a woman, one in a man, one in a dog and one observed by Loeb in the thyroid of a white rat, which latter was the tumor he used in his inoculation experiments. This tumor was in 2 parts, the lower white and the upper part of a different color. Microscopical examination showed that the upper part was really an adenocarcinoma, and the lower part was a sarcoma. A small nodule was found in one lung which resembled the sarcomatous tissue, and probably represented the earliest metastasis. It was very difficult to determine from which part of the glandular structures found in the neighborhood of the larynx of the rat the adenocarcinoma was derived. In the other 3 cases examination showed practically a similar result, that is co-existing carcinoma and sarcoma, and Loeb suggests the name "carcinosarcoma" for this variety of mixed tumors. He was able to find only 2 other cases in which carcinoma and sarcoma existed together; one in which the tumor appeared in the left half of the nose, and the other in which it appeared in the liver. He calls attention to the fact that in the thyroid gland sarcoma as well as carcinoma usually occur during advanced life. There does not appear to be sufficient reason to believe in the embryonic origin of these mixed tumors, and, therefore, it cannot be said that because a tumor contains various forms of tissue, therefore it is of embryonic origin. Moreover, it does not follow that heterotopic tumor formation is produced by displaced blastomeres. [J. S.]

6.—Howard reports a very interesting case of **pneumonia** occurring in a woman, 63 years of age. She died, and at autopsy a peculiar eruption was found in the outer portion of the left lower quadrant of the abdomen, corresponding in distribution with Head's eleventh dorsal ganglion. Macroscopically the nervous system was not involved, but it was found that the eleventh dorsal ganglion of the left side contained some hemorrhagic areas, some cellular infiltration about the destroyed ganglion cells, and some amylaceous or hyaline bodies. A second case is reported as occurring in a woman of 41 years, who died on the sixth day of the disease. Before death she had herpes of the upper lip and nose, much more extensive on the left side. An autopsy was made one hour after death. In this case careful histological examinations of the Gasserian ganglion showed congestion, cellular infiltration and hemorrhage. However, the lesions were not extensive. The left ganglion was much more involved than the right. Howard believes that herpes zoster is a pathological condition with definite lesions in certain sensory ganglia. The primary lesions are probably due directly or indirectly to soluble toxins of various microorganisms. The skin lesions correspond to the ganglion affected. He recognizes the spontaneous herpes, and the herpes occurring as a sequel or complication of certain acute infectious diseases. In all these the lesions of the ganglia and of the skin are the same. Herpes simplex has not been sufficiently investigated to be classified. The skin lesions are marked, illustrating the inflammatory reaction and necrosis, and can probably be excited in a variety of ways. Herpes, however, should be classified according to changes in the nervous system. [J. S.]

7.—Good has performed a series of **experiments upon animal excretions** in order to determine how lithium is discharged from the body after it has been administered either subcutaneously or by the mouth. To a cat weighing 1650 gm. he gave one gm. of lithium, and the animal died in 4 days. The autopsy showed marked congestion of the stomach and intestines. Similar experiments were performed upon other cats and their excretions examined and tested carefully. It was found that the lithium was excreted in the saliva, was found in the vomit and feces, and was excreted in the urine. The kidneys are apparently the chief route of elimination. When the lithium salts are given either hypodermically or through the stomach, they usually cause a fatal gastrodiuresis. They have no diuretic action but merely render the urine acid. Dilute solutions are not solvents of uric acid or urates, and examination of the literature showed that large doses of the tablets may cause gastro-enteritis in human beings. [J. S.]

8.—Garceau classifies **ureteritis in the female** into simple ureteritis, ureteritis with obstruction, and tubercular ureteritis. Simple ureteritis may be acute or chronic. Parturition seems to be the commonest cause of the former. There are usually chills, fever and a condition of general sepsis, tenderness in the pelvis and over the bladder, and pain in the ureter. In a few days pus appears in the urine, and the prognosis may be grave if the kidney is involved. Diphtheritic ureteritis may also occur. Chronic ureteritis is usually secondary to inflammation of the kidney or bladder. In cases of cystitis sometimes the ureter may escape for a long time on account of the valve-like action at the orifice which prevents the entrance of germs. The commonest cause is the gonococcus. The symptoms are chiefly those of the associated cystitis, and there is often frequent micturition. The diagnosis must usually be made by examination of the bladder with a cystoscope, and the collection of separate portions of urine. The most valuable sign is an excess of desquamated epithelium in the urine from the affected ureter. The urine from the affected side usually shows marked reduction in urea. Tenderness over the ureter during vaginal examination is an important sign. Stricture of the ureter often gives rise to the same symptoms, or, as it is often accompanied with the ureteritis, the differential diagnosis is not so important. The prognosis is very unsatisfactory as regards cure. The treatment is palliative. The diet should be mild, and articles that make the urine irritable should be avoided. The bowels should be regularly evacuated; the patient should rest and take fresh air. Of the drugs, those rendering the urine alkaline are of advantage, and urotropin sometimes appears to do good. When much pus is present, alcohol should be avoided. General tonics are of advantage, and sleeplessness is to be combated with tryonin. Garceau describes, by some pictures, an apparatus devised by himself for injecting the ureter through the cystoscope. This apparatus consists essentially of a long, slender, silver tube with a bulb near its extremity. The tube is introduced into the ureter, the bulb serves to close the orifice, and the liquid can then be injected with considerable force. He has only used it a few times, and recently, so that he is not yet prepared to state whether or not the results will prove permanently beneficial. The application usually relieves the symptoms for a short time. In obstinate cases a vesicovaginal fistula is the only resource. He describes an interesting case which was under treatment for 3 years with some relief. He then discusses stricture or obstruction of the ureter which is to be diagnosed by the introduction of ureteral bougies. He describes a case occurring in a woman, 45 years of age, the symptoms of which had come on immediately after an acute infection 25 years previously. The stricture was found in the right ureter, and after it was dilated the patient was greatly relieved. He also mentions a case of calculus obstructing the ureter as a result of stones in the left kidney for which that organ was removed. The patient rapidly recovered after the operation. Complete obstruction is a serious condition. If due to the infection, there is nearly always pyelonephritis at the same time. The symptoms, as in all other diseases of the ureter, are chiefly those of associated cystitis. Whenever there is reason to believe that the kidney does not actively functionate, it may be removed. If the stricture can be opened by bougies, relief may be afforded. He mentions 2 cases, in one of which the kidney remained normal, in the other there was a tight stricture in the right ureter a short distance from the bladder. The right kidney was removed, and the patient recovered. Garceau also discussed calculus of the ureter and tubercular ureteritis. The latter is not so very uncommon, because in 3424 autopsies at the Boston City Hospital and the Massachusetts General Hospital it was present 24 times. In this disease the ureter may be greatly increased in size. It is thickened, the urine discharged from it contains pus, and bacilli can sometimes be found. The treatment is, of course, operative, and occasionally complete recovery may take place. Finally he speaks of a rare condition in which, as a result of ascending infection, the ureter became progressively larger from below upward. [J. S.]

9.—Woods discusses **gonorrheal vulvovaginitis in young children**, and reports 5 cases that he has observed occurring in children of 3 months and 3, 4, 8 and 10 years of age. In one case the staining reaction was typical, and a growth was obtained upon hydrocele-agar, which made the diagnosis slightly uncertain. In another case a diplococcus was found that did not resemble the gonococcus, but no growth was obtained upon hydrocele-agar. In 2 others the cases were positive, that is to say, no growth was obtained upon hydrocele-agar, and the staining reactions were characteristic, but the patient did not return for cultures. He discusses the cause of vulvovaginitis in young children and speaks of the mode of contraction which may be from the utensils or by sleeping with infected women. He speaks of the complications which make it one of the most serious of diseases; then speaks of treatment that he used which consists in cleanliness, the administration of small doses of quinine or syrup of iron iodide, careful attention to the bowels, and sometimes dosing with a solution of potassium permanganate, increasing the strength from one to 2000 upward. [J. S.]

10.—Mary A. Clark contributes a sympathetic **memoir to J. M. DaCosta**. She speak of his early education, which was largely obtained in Europe. He graduated in medicine at the age of 19 years, and then spent 18 months in Paris and Vienna, where he studied pathology and internal medicine. His practice at first grew slowly. His work on medical diagnosis appeared in 1864 and has continued one of the most valuable of its class for the subsequent 38 years, the ninth edition having been issued just as the author died. He was elected visiting physician to the Pennsylvania Hospital in 1865 and maintained his connection with the institution until his death. In 1866 he became a lecturer on clinical medicine at the Jefferson Medical College, and in 1872 was elected professor of the theory and practice of medicine, succeeding Professor Dixon. He resigned his chair in 1891. She mentions a remarkable instance of his skill in diagnosis in which he was able to recognize the existence of 3 abscesses in the liver, which subsequently proved to be the case. She also mentions a number of his important contributions to medicine, and the many honors conferred upon him by learned institutions. He was a man of great learning, a remarkable linguist, and thoroughly enjoyed good literature. [J. S.]

REVUE DE MEDICINE.

March 10, 1903. (23me., Anneé, No. 3.)

1. Reduplication of the Aortic Second Sound. PAUL CUFFER and RAYMOND BONNEAU.
2. Clinical Study of a Tuberculous Antitoxin. GUERDER.
3. The Tuberculous Issues of the Lung. CH. SABOURIN.
4. Cardiac Epilepsy and the Phenomena of Repetition. L. RUEFF.
5. On the Lesion Called Congenital Stenosis of the Aorta in the Region of the Isthmus. L. M. BONNET.

1.—A variety of reduplication of the pulmonary diastolic sound is due, according to Cuffer and Bonneau, to transient hypertension in the pulmonary circulation; a sort of shock or surprise which determines vascular spasm. **Reduplication of the diastolic sound in the aortic region** may be similarly due to transient hypertension in the systemic circulation. Under the influence of any poison or of a reflex act, peripheral vascular spasm or obstruction may be produced, which will result in aortic hypertension. A purely mechanical result of this hypertension is the too sudden closure of the aortic semilunar valves, with the consequent reduplication of the aortic diastolic sound. The authors give notes of 32 cases in which such a reduplication was heard. The syndrome they have described, they believe to be a sign of recent infection or of an acute exacerbation of a chronic disease or of an intoxication. It usually disappears as soon as definite lesions are produced. [J. M. S.]

2.—Among the substances which have an action that neutralizes the influence of the toxins of tuberculosis upon the phagocytes, according to Guerder, are the active principles elaborated by the cells of the liver of the codfish. According to this author, the toxins of tuberculosis arrest the phagocytic power of the leukocytes, while the administration of extract of the liver of the codfish neutralizes this action and causes the phagocytes to resume their activity. The extract of codfish liver has a well-marked local action and is, therefore, available in the treatment of local tuberculous lesions, into which it may be injected. The general beneficial action of these injections is quite remarkable; it appears to be feebly direct, but principally indirect and consecutive to its local action. The subcutaneous injection of this extract in the neighborhood of the lesions may cure recent tuberculosis without leaving traces of the disease. In articular tuberculosis the injections of this extract do away with the necessity for prolonged immobilization, which is so uncomfortable to children and so injurious to their general health. The injections cure suppurating tuberculosis by evacuation of the morbid products. The injections may be useful even when advanced tuberculous cachexia is present. These injections stimulate the reaction of the healthy cells that surround the tuberculous focus, thus approaching nature's method of spontaneous cure. [J. M. S.]

3.—Sabourin divides cases of curable pulmonary tuberculosis that fail to go on to complete healing into 2 classes: (1) Those that are not cured because some error in alimentary hygiene is committed by the patient; (2) those that are not cured because of some constitutional or nervous condition of the patient. Among the conditions preventing or retarding cure are: (1) The production of obesity in the patient by superalimentation; (2) too free administration of red meat and wines; (3) too free indulgence in alcoholic drinks; (4) such coincident diseases as asthma, pulmonary catarrh, syphilis, the neuroses; (5) the influence of menstruation, the establishment of puberty or of the menopause. [J. M. S.]

4.—Rueff reports the case of a woman, aged 46 years, a vest-maker by occupation, who, at the age of 18 years, had had an attack of chlorosis, and 3 years before Rueff first saw her she had a severe attack of bronchitis. The first symptoms of her cardiac affection appeared 2 months before she came to Rueff for treatment, and consisted of attacks of suffocation which prevented her from working. These suffocative attacks had been preceded for several months by abnormalities of the menstrual epoch. Three weeks before her admission to the hospital she had a violent attack of hysteria. The patient was in a state of asystole. The heart was more dilated than hypertrophied, and there was quite a degree of engorgement of the bases of both lungs with edema of the feet and enlargement of the liver. There was a systolic murmur over the region of the heart and quite marked attacks of tachycardia. The attacks of asystole recurred from time to time. The patient died, and at the autopsy the heart was found to be enlarged and dilated. The mitral orifice was both insufficient and obstructed. The liver presented the lesions of venous stasis and diffuse cirrhosis. The brain presented a yellow area of softening. The author uses this case as a text for voluminous remarks concerning **cardiac epilepsy.** He says that a compensated or latent lesion of the nervous centers, whether or not it has shown itself by former symptoms, may manifest itself if there is any disturbance of local cellular nutrition due to any general cause, such as circulatory disturbances, chilling, starvation, anemia, toxi-infection, auto-intoxication, exogenous intoxication, etc. This manifestation may be a repetition and may reproduce the details of a former clinical picture with minute faithfulness. It may occur as a new manifestation with all the organic or dynamic symptoms to which the said lesion has given or can give rise. [J. M. S.]

5.—Bonnet continues his article by giving abstracts of cases of congenital stenosis of the aorta in the region of the isthmus reported in the literature. [J. M. S.]

Special Article.

THE QUALITIES ESSENTIAL TO SUCCESS IN MEDICINE.*

By W. W. KEEN, M. D.,
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In the "Selected Essays and Addresses" of that most distinguished English surgeon, the late Sir James Paget, one of the most interesting is entitled "What Becomes of Medical Students." It opens thus: "It is said that, on entering the anatomical theater for one of his Introductory Lectures, Mr. Abernethy looked around at the crowd of pupils and exclaimed, as if with painful doubt, 'God help you all! What will become of you?'" Sir James then proceeds to analyze the results of an inquiry into the later history of 1,000 of his former students. The result may be stated in round numbers as follows: Sixty per cent. achieved success varying from "distinguished" and "considerable" to "fair"; 18 per cent. a "very limited success" or entire failure, and 22 per cent. either died or left the profession. His paper concludes as follows: "Nothing appears more certain than that the personal character, the very nature, the will, of each student had far greater force in determining his career than any helps or hindrances whatever. All my recollections would lead me to tell that every student may draw from his daily life a very likely forecast of his life in practice, for it will depend upon himself a hundredfold more than on circumstances. The time and the place, the work to be done and its responsibilities will change; but the man will be the same, except in so far as he may change himself."

I have had neither the time nor the opportunity to make a similar investigation, but what I shall say is based upon an experience now covering forty years of teaching, during which time I have observed the careers more or less accurately of from 6,000 to 7,000 students. Their successes and their failures have been probably about in the same proportion as Sir James Paget's. But I have never known a man to fail of achieving an honorable or even enviable success who had four characteristics:

First, a good moral character;
Second, good manners;
Third, perseverance, and,
Fourth, studiousness.

I need say but a word as to a good moral character, for it is the foundation of success in every department of life. He who lacks moral character lacks everything, and not only, as a rule, will not succeed, but ought not to succeed.

"Manners make the man," is an old adage, and in no calling in life, perhaps, are they so important as in medicine, for the doctor has to do not only with his fellow-men, but very largely with women and children, in which relations good manners are essential. It has been said of a well-known New York physician, now dead, that he owed much of his success to what was humorously called, among his friends, his "ten-thousand-dollar smile," and, while such a statement always carries the inaccuracy which inheres in most aphorisms, yet there was a large basis of truth for it. Neatness always pays. To wear a grease-spotted coat is reckless extravagance. It will cost you far more than a whole, clean, new suit. To display grimy finger-nails is as bad socially as it is surgically.

To illustrate the value of perseverance, my third requisite for success, let me give you an incident which occurred a number of years ago in my own office. Among my students was one who had had unusual advantages. His parents had sufficient means to give him the best education. He graduated at his university at the head of his class. When he took his degree in medicine, he was an honor man. He served an honorable apprenticeship as a hospital resident. He spent a year or more abroad and acquired an excellent knowledge of French and German as well as added to his knowledge in medicine. Before going abroad he married and, as soon as he returned, settled in practice. One day he came to me greatly discouraged and said: "I think I must give up the practice of medicine. My parents have been very kind to me, but I cannot always be dependent upon them for the support of myself and my family." I said to him: "My dear ——, exactly how long have you been in practice?" "Seven months." "How much have you actually collected in cash?" "Two dollars and a half." In other words, in 210 days he had made 250 cents, a little over one cent a day. It was enough, I confess, to chill even a stout heart, but I encouraged him and told him what I am telling you, that I had never known a man with these four qualifications to fail; that he had three of our four requisites, a good moral character, good manners, studiousness; and that, if he would but remember the fourth qualification, perseverance, he would be sure of success. To-day he is widely known as a most successful practitioner and has an enviable place not only in the esteem of the profession, but in that of the community.

I might give you beside this a little of my own experience, for I passed through almost the identical stage of discouragement that I have just related to you. Failure I thought again and again stared me in the face. It seemed for a number of very long years as if I should never be able even to earn a decent livelihood. Plenty of people needed surgical advice, but the ninety and nine went decorously on the well-beaten paths leading to other offices. Only the one poor forlorn and wandering sheep, attracted by the luxuriant grass in an unfrequented path, reached my own. But I had good friends who encouraged me, and I remembered the story of the knight whose crest was a man at the foot of a great mountain which he was attacking with a pick axe, and whose motto was "petit à petit," "little by little." More than one disappointment in preferment came to me, but I simply buckled down to my work with more tenacity of purpose than ever before, resolved to do each day the work of that day as well as I knew how to do it. Finally the clouds broke away, and the bright blue sky and the beaming sun were revealed. So it will be with you if you will heed the lesson that I am giving you. Remember Emerson's saying, "Make yourself necessary to the world, and mankind will give you bread."

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*The Commencement Address before the Medical Department of Columbia University, Washington, D. C., June 1, 1903.

Studiousness is the fourth essential condition of medical success. Medicine is a science, and one which has progressed with extraordinarily rapid strides, especially within the last few decades. The rate of progress in the next fifty years, during your active lifetime, will probably be even more rapid than it has been. Unless you devote yourself, therefore, to your patients, your books and your medical journals, you must expect, and you ought to expect, to be left behind, stranded on the shore of idleness, while others sail on to fortune and to fame.

When you begin, for a number of years your cases will be sufficiently infrequent for you to be able to study each case as if your own as well as your patient's life depended upon your knowing all about that case. One case thoroughly studied, so that you know not only all about that individual case, but all about that individual disease or accident, is worth a dozen treated in a slipshod routine manner. If with each differing case you master the disease as well as treat the case, it will not be long before you will have run the gamut of most of the ordinary diseases and have become master of them all. Make each patient understand, while you are investigating his case, that he is the only patient in the world for you at that time. If you practise in the country, do not waste your time in gossip at the corner store. Remember that medicine is a jealous mistress and will allow no rival. She must have your whole heart or she will have none of you.

Moreover, remember that there are broader and larger questions to be studied than this or that disorder, however important it may be. Let me name a few which have arisen in my day. I have seen the birth and development of antisepsis, of asepsis, of all our knowledge of immunity, of the serum treatment of disease, of the X-rays, of practically the entire departments of neurology and gynecology; the whole of pathology and of surgery have been rewritten from the time of Virchow's "Cellular Pathology," published just as I was entering upon the study of medicine, and since Lister's epoch-making work in the sixties and the seventies. These subjects touch all diseases rather than any one disease or any one particular case. In the future there will be new discoveries quite as important, and, it may be, even more so, and you must be on the alert to absorb all the new knowledge that comes from investigations, many of which doubtless you yourselves will be among the foremost to undertake.

In addition to this, you must not neglect that culture which so broadens a man's view, adds to his influence and importance in the community and is in itself a source of so much delight. Not many of you, perhaps, will be able to imitate the Scotch country doctor whose story is told by John Brown in his charming "Spare Hours." When paying him an early visit, he found the old Aberdonian at breakfast ready for his morning ride, but meantime "amusing himself" (mark you, not *working* at it, but "amusing" himself) "with penciling down a translation of an ode of Horace into Greek verse." But you can all make yourselves familiar, certainly, with the master-pieces of English prose and verse. And let me add that none of you will be as good a doctor as you ought to be unless you know at least French and German and draw not only on the medical stores of knowledge to be found in these languages, but also on the splendid literature which awaits you when you once possess the ability to read and, I hope, to speak these tongues.

When you have gathered sufficient experience and attained sufficient knowledge, write; but not till you have something worth saying. In order to have something worth saying you must have an accumulated lot of case-notes; hence from the very day of your graduation let every case be recorded and indexed. Even the commonest disorders, when you have gathered the notes of a large number of cases, will afford you material for excellent papers which those who are less industrious and less painstaking will read with pleasure and profit.

You are about to join a great and noble profession whose value to the community is beyond estimate. The lives and happiness of the community you serve will be in your hands. Dare you be recreant to your trust, indifferent as to whether you add to your knowledge as the science progresses, or remain a fossil of the year 1903, indifferent to the death of defenceless youth and hoary age, of the bread-winning father, of the tender, care-taking mother, of the loving and beloved child whose untimely death leaves a scar on the heart, which all the waters of Lethe cannot efface?

The whole world has been moved within the last few weeks by an atrocious massacre in Kischeneff, and the press and the platform have been right in their denunciation of such a crime. The slain and the injured, it is said, number nearly 1,000. But where has a voice been raised in indignant protest against the massacre of 50,000 persons in the year 1902, in the United States alone, by typhoid fever—a preventable disease, which ought to be stamped out, and practicaly could be stamped out, were a proper water-supply and proper sanitary precautions taken? Have you heard any national denunciation of the massacre last year of 150,000 persons in the United States by tuberculosis, another disease which, if not absolutely preventable, could be reduced to a minimum by proper sanitation? Our ears have been deaf, our eyes closed and our minds dulled to this horrible state of affairs, because forsooth we are used to it. How often in my clinic at the Jefferson Hospital, as my house surgeon reads to the class the history of patient after patient, I hear this startling statement: "A. B., aged 25 years, had the *usual diseases of childhood*"—as if disease ought ever to be "usual." Moreover, those of whom this is said have recovered from the "usual diseases of childhood," but those who have fallen in the holocaust from measles, mumps, chicken-pox, whooping cough, scarlet fever and diphtheria, have passed beyond any clinic or any history. This field alone is a splendid opportunity for fruitful work in this fair twentieth century just opening, and if you do your duty, and the rest of our profession do theirs, long before its end, such a history will state that "A. B., aged 25 years, had the *usual health of childhood*," for the now usual diseases will be banished. Happy childhood will be free from their assaults, and health instead of sickness will be the standard. It is a mark of a low grade of civilization that any disease should be "usual." It reminds us of the days before Jenner, when almost everybody had smallpox, and its victims were numbered by the hundreds of thousands. Soon may the happy day come when the only two causes of death will be accident and old age; when the surgeons will only be called upon to remedy the injuries inflicted by the first, and the physicians' only service will be to assist at our entrance into the world and to sign the death-certificates of centenarians.

LA RIFORMA MEDICA.

April 8, 1903.

1. Compensation in Acute Experimental Cardiac Lesions.
   L. FERRANINI.
2. Experimental and Clinical Investigation of Two Cases of Paroxysmal Hemoglobinuria.
   G. MATIROLO and E. TEDESCHI.
3. Clinical Investigation of the Effect Upon Atonic Gastro-intestinal Conditions, of Extract of the Medullary Substance of the Suprarenal Capsule.
   U. BACCARANI and A. PLESSI.

1.—Ferranini gives a detailed description of the condition of the compensating heart in dogs, following instrumental production of insufficiency of the aortic valves. In addition to hypertrophy of the muscular fibers, he found marked congestion of the bloodvessels of the myocardium; and in some parts small hemorrhagic points were seen, while in others there was pericellular infiltration and proliferation of connective tissue, especially about the bloodvessels. The author infers from his findings, that with myocardial compensation is associated a vascular or vasomotor compensation; the vascular activity supplementing cardiac hyperactivity in the effort to bring arterial pressure up to the normal and overcome the depression of aortic regurgitation. He finds that in such acute experimental lesions a progressive aggravation of the condition is exceptional: but rather that compensation is promptly established and maintained; and, in many instances, cicatrization of the injured valve takes place, with a growth of tissue sufficient to close the breach; the heart then returning to its normal condition. [R. L. F.]

2.—To be abstracted when concluded.

3.—Not till Vassale treated gastric atony by administration of an extract of the medulla of the suprarenal capsule, was the tonic influence of that substance, upon unstriped muscular tissue, utilized in the treatment of the muscular coat of the gastro-intestinal wall. Baccarani and Plessi report successful results in treatment of 14 patients with Vassale's preparation, to which he gave the name of "paraganglina." The authors state that 40 to 60 drops of the extract, divided in 4 to 8 doses, were well borne by all the patients save 2; in one of whom sweating, sense of heat, throbbing in the temples, restlessness and insomnia followed the use of the remedy; and in the second, a case of gastric carcinoma, severe pain in the epigastric region developed. These untoward effects were thought, however, to be due to the insufficient division of doses. In general, the severity of all symptoms of the disease decreased at once and disappeared entirely within a few days, and, in some instances, the cure persisted after withdrawal of the drug. [R. L. F.]

Original Articles.

A BRIEF SKETCH OF MALARIA, DISEASES AND CONDITIONS ON THE WEST COAST OF AFRICA.

By ALFRED A. LOEB, M. D., C. M., (McGill University).
of Philadelphia.

A visit to the west coast of Africa during part of 1900-1901 showed to me many diseases which are seldom, if ever, seen here. It is a shame that something has not been done by the American physicians in the study of the diseases peculiar to this coast. The field for research work is enormous, both in malaria and other diseases indigenous to that country.

Major Ronald Ross, of the Liverpool School of Tropical Medicine, has done magnificent work in the study of the anopheles and its relation to malaria. This much-dreaded disease is far more severe than the malaria met with in America, and, as far as I observed, neither the native nor the European is immune to the onslaught of the anopheles. There is practically no portion of the coast free from malaria. It is well called "coast fever" by the traders.

Freetown, Sierra Leone, the islands up the Sherbro River and Liberian coast, are especially hotbeds of malarial fever; in fact, no part of the coast is free from it. The onset of the malaria was, as I observed, abrupt. The patient may be occupied in his daily routine, totally unconscious of his having malaria. I shall outline briefly four fairly typical cases.

CASE 1.—An Englishman, first visit to Freetown, November, 1900. I saw him one morning, two weeks after his arrival. He complained then of general uneasiness, headache and nausea, and, as he expressed it, "a feeling as if he would be taken sick." Suspecting malaria, I ordered him to take five grains of quinine at once, to be repeated in six hours and ten grains daily thereafter. He had not taken the precautionary quinine previous to this time. I saw him again in the evening at the onset of a chill, which was of the most severe type, lasting three-quarters of an hour: his temperature rose rapidly to 106° F.; during this stage he was heavily covered and drank freely of hot lime-juice. The hot stage lasted nearly two hours. He complained of thirst and drank freely of lime-juice and water. The sweating stage was slight. After a rub-down with a Turkish towel he said he "did not feel badly." Temperature fell to 99° F. During he whole of his attack the spleen was distinctly palpable. Unfortunately, I was unable to follow this case further, owing to a compulsory departure for other parts of the coast. I heard in the early part of 1901 that this patient had died from a ruptured spleen following an attack of malaria during the month of January.

CASE 2.—Greek trader, had been in York Island (110 miles from Sierra Leone), a low lying piece of land, for two months. Had three attacks of chills and fever. Had taken large doses of quinine, from thirty to sixty grains daily, for some time past. According to his statements and those of his friends, he was suffering from the tertian type of malaria. He had been living in the native mud-huts and often attended to by them, did not use a sleeping net. During his malarial attacks he passed large quantities of bloody urine. From the traders I learned that during the attacks his temperature often rose to 108° F., with a rapid fall to 100°-101° F. I saw him one evening at the onset of an attack and found him very weak with nausea, vomiting freely and with great pain over the epigastrium and kidneys. The examination of his abdomen revealed the spleen extending down nearly to the umbilicus, his liver enlarged for two fingerbreadths below the costal border; the pulse was full and hard, and large quantities of bloody urine were passed. The cold stage lasted half an hour. Temperature was 108° F. by rectum; the hot stage was free from any marked change in temperature; he suffered greatly from thirst and partook freely of lime-juice. He desired to be sponged, but, as fresh water was scarce, this could not be done. Sweating was most profuse, and at the end of the attack his temperature fell to 100°. He rested quietly and the following day was up attending to his work, seemingly none the worse. I was called to see him two days later and found him in the cold stage, which was greatly more marked than his previous attack; the temperature by rectum was 110° F. Chills were of the greatest severity. There was a marked cyanosis of the face and hands, and his pulse was decidedly weak. The cold stage lasted for an hour, his temperature still remaining at 110° F., when he suddenly died in a coma. Although he had taken quinine the day prior to and at the time of the attack, it had no effect whatever upon him. This case was the most marked of any I had seen and was undoubtedly pernicious malarial fever (comatose form).

CASE 3.—English trader. Resided at York Island two years; had had many malarial attacks, but none was violent; his temperature never going above 102°; spleen slightly enlarged, but no hepatic enlargement. When I saw him he was suffering from a distinct right-sided lobar pneumonia, accompanied with malaria. With this he had an orchitis (he denied ever having had any venereal disease). Unfortunately, I could not follow this case closely. Nevertheless, all his symptoms pointed distinctly to a pneumonia with malaria. I believe that this condition is uncommon. This was the only patient I saw with malaria associated with pneumonia.

CASE 4.—English trader, resided at Bonthe (three miles from York Island) for two and a half years. He had had frequent attacks of malaria; temperature varied between 99° and 101° F.; had taken quinine in small doses, but irregularly; had a chill shortly before I saw him. He was markedly anemic and weak. Spleen greatly enlarged and firm. He suffered greatly from breathlessness upon exertion. His skin was of a yellowish tint. I diagnosed malarial cachexia and advised him to return to England. Being afraid of quinine, owing to his having a slight deafness, I ordered and gave him liquor potassæ arsenitis, *m* ii, t. i. d. p. c. until his return home. I heard from him some little time ago that he had entirely recovered from malaria, the splenic enlargement having also subsided. He had not taken anything but arsenic.

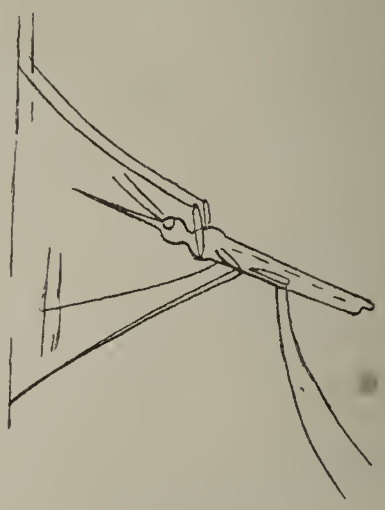
The hemorrhagic form of malaria is common, and the hematuria often is profuse and fatal. I found that quinine given internally often aggravates it. Small doses of the solution of arsenic, or a solution of quinine hypodermically, are useful. Many of the French and German traders use this method of administering quinine. If given deeply into the muscles, there is little danger of abscess formation. The bisulphate makes a nice solution, but, not having much of it, I used the sulphate, dissolving five grains in from five to seven drops of acidum hydrochloricum dilutum, adding to this from four to eight drams of boiled and filtered water, giving ten minims of this, three times a day.

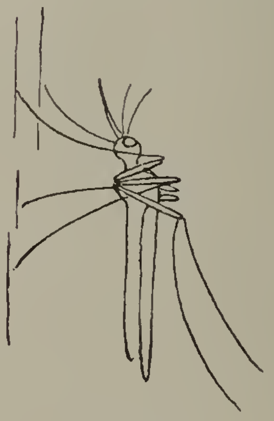
Ronald Ross, in his "Instructions for the Prevention of Malarial Fever," advises sleeping under a net with a large mesh, the use of a punkah by day and night. In fact, when resting, use the net and punkah, care being taken to have the net in good condition and well tucked around your bed. But with all precautions as to clothing, etc., one is apt to be infected by the anopheles.

He advises further, if the anopheles is seen in the bungalow, that search is to be made in the puddles containing green water weeds, the breeding ground of the anopheles, with kerosene oil to kill them. Of the division of culicidæ, the culex and anopheles are the most important, because the anopheles carries malaria, while the culex appears to be harmless.

Ross describes these as follows: The anopheles has a slim, elegant body, shaped like that of a humming-bird, with a small head and a long, thick proboscis. When seated on a wall, the axis of the body is almost at right angles with the wall; they generally have spotted wings. The culex has a coarser body, with a thick thorax and a thin proboscis. When seated on the wall, the tail hangs downward or even points to the wall, and the wings are generally plain. (The following drawings show the characteristic attitudes adopted by these two kinds of insects.)

The larvæ of the two kinds are equally different from each other. Those of the culex float when at rest on the surface of the water, suspended by their tails, and with their heads hanging downward; when disturbed, they wriggle at once to the bottom. But those of the anopheles float flat on the surface of the water, like sticks, and when disturbed wriggle on the surface with a backward skating movement. Males can be distinguished from females by their possessing feathery antennæ on their heads."


ANOPHELES.


CULEX.

The anopheles should not be killed by hand, as they often contain the parasite of elephantiasis.

II.

The so-called "sleeping-sickness" is by no means as common as it is supposed to be. It is seen more frequently near the equator. I had the pleasure of seeing but two cases, one in a young man, the other in an elderly man. As both cases were alike, the description of one should suffice. The patient was lying prone in a semiconscious state, with eyelids closed; when the lids were opened by force, the pupils reacted slowly. The mouth was open and saliva flowed freely from it. No attempt was made to masticate food put into the mouth. When placed in the sitting posture, this was maintained for some time. Reflexes were latent. Both men were greatly emaciated. The temperature was normal.

"*Craw-craw*" (native name), a papulopustular skin eruption, is common among the tribes of the west coast of Africa, especially those that swim in the ocean a great deal. As far as I could observe, the disease is infectious. The male element is most often infected. A white, who had used a blanket upon which a native had slept, was infected and developed "craw-craw."

Filaria Loa, which is a cylindrical worm, about 3 cm. in length, the habitat of which is beneath the conjunctiva, causes the most distressing of all ocular disturbances to the native, great inflammation existing and often pus being formed. The natives remove the filaria loa from the eyes of their fellows with a small sharp-pointed stick.

Pulex penetrans, sand flet (Crigger), penetrates deeply and most frequently into the sole of the foot, causing inflammation with a pustular swelling. This parasite is easily removed with a sharp instrument.

Ainhum is frequently met with. It is by no means rare to see natives with one or more toes missing from either foot. The fourth and fifth toes are generally the ones involved at the digitoplantar fold. It is apparently painless. The toe gradually drops off.

Guineaworm disease is fairly widespread in some parts. Most frequently the parasite is found in the calves of the legs and in the feet at the bottom of the abscess formation. It should not be removed by forceps from its bed. The natives use certain leaves to hasten suppuration, and they remove the worm by means of a round piece of wood. The worm is about fifty to sixty centimeter long.

Elephantiasis is frequently seen, that of the leg being the most common, the scrotum (lymph scrotum) being the next involved. The scrotum often reaches an enormous size. I saw one patient at Sassandra whose scrotum reached nearly to the ankles. The legs, when involved, are greatly enlarged.

Beriberi is by no means as uncommon as it is supposed to be. The coast native is most frequently attacked. The most typical case I saw was at Axina. The patient, male, was in the neighborhood of 30 years of age. The crossed paralysis, atrophy of the muscles, areas of anesthesia, loss of the tendon reflexes, fever, anemia and anasarca were the most pronounced symptoms. It is debatable whether beriberi is due to the fish diet, of which some of the coast natives partake, or to the rice. Many traders, who have spent some time on the coast, attribute it to rice eating. The mortality is not alarmingly high.

Leprosy is not as frequently met with on the coast as in Madeira, Teneriffe and others of the Canary Islands. I saw a number at the Canary Islands.

Smallpox is the most dreaded disease to be met with among the natives; it spreads rapidly among them, greatly decimating their villages, young and old of both sexes being attacked. It is mostly confluent in form, hemorrhagic next, and then discrete. Recovery leaves a frightfully pitted face. Only in the larger villages, where there are whites, is quarantine maintained. Accra and Apam-Apam had a number of cases during my visit there. The Europeans are vaccinated freely now in many places, which is proving effectual.

Syphilis is common among many tribes, the three forms showing itself. Many are infected, others inherit it. The percentage of cases is about equally divided between the sexes. The traders are frequently infected.

Gonorrhea, adenitis, etc., are also very common among both the natives and the white traders. The adenitis is usually severe and painful. The natives use certain leaves to hasten suppuration. Orchitis is common, as is also gonorrheal ophthalmia.

Hydroceles are most common among certain tribes, frequently reaching an enormous size. One I tapped at Uydah contained nearly half a bucket full of fluid. The natives support these hydroceles with a suspensory made of grass, having one part over the neck or shoulders. They have no treatment for hydrocele.

Hernia. The umbilical form is seen very often among both sexes, young and old, and often is of large size. I did not see any case of strangulation among them. Next to the umbilical in frequency is the scrotal form; the femoral is next.

Meningitis is common among some tribes, the children being mostly attacked, and among them the mortality is high. The adults, both native and white, are frequently attacked by it.

Osteomyelitis is not uncommon in some of the villages, the children suffering the most from it, causing them the greatest distress and pain. The discharge from the bone is free. If its starting point is in the tibia, it spreads to the femur with great rapidity. Unfortunately, the native has no means to handle it, and death, therefore, results.

Dengue, "break-bone fever," more frequently attacks the white traders, with sudden headache, chills, great pain in the joints and muscles. The temperature runs from 105° to 107° F., there is loss of appetite, the tongue is coated, and constipation is present. The joints get red and painful. In two cases I saw, there was an urticarial rash in one, a scarlatiniform rash in the other. The first patient had epistaxis, the second coffee-ground vomiting. The pains were not localized for any length of time in either patient. The whole attack in both lasted seven days. During that time both took quinine, five grains three times a day, and one-quarter grain of morphine every four hours until the pain was relieved, which was, as both men said, "agonizing."

Phthisis is frequently seen among the tribes of the northwest and southwest coast. Those in the middle west are not altogether free from it, but are nearly so.

Dysentery (tropical), as in all tropical countries, is greatly marked and fatal, as a rule. Emaciation is most marked. Stools vary in number from eight to fourteen daily, are fluid-like and contain mucus and blood. The temperature does not change much; it may go up occasionally to 101°, but is more generally at 99.2° F. There is a great deal of abdominal tenderness and tenesmus. Often there is abscess formation in the liver. The dysentery is more frequently seen in the villages along the rivers, especially in villages at the mouth of the rivers.

Cardiac diseases of all forms are frequently seen in many of the tribes of the coast.

Rheumatism is fairly common among the tribes living on the low, marshy grounds, the inflammatory form predominating.

I would advise any one visiting the west coast of Africa for the purpose of study to provide himself with a mosquito-net, an abundance of light clothing and a large helmet. As fresh food is often scarce, a good supply of the best canned foods should be always on hand. To live as far away as possible from the native villages is advisable. As there is no sanitation, the villages, therefore, are not the most pleasant places to be near. Never sleep in a native hut, as they are often overrun with vermin. Do not partake of native food, except under compulsion, as it is very far from being palatable. In many places good fresh water is unobtainable; the traders use rain-water, which they store up in tanks and which, unless boiled and filtered, should not be used.

Hunger is greatly increased, but it is advisable to refrain from eating too much and too frequently. It is best to divide the meals as follows: At 6 A. M. take coffee or tea (if good water is obtainable); at 11 A. M. take the noon-day meal, and at 6 P. M. the evening meal, eating what food you may deem the best. Do not eat too freely of fruits.

It is advisable to rest from 11 A. M. until 3 P. M. Keep out of the sun's rays.

During the rainy season provide yourself with the proper covering.

With these few little (?) drawbacks, by having good scientific instruments, there is plenty of interesting work to be done.

THE TREATMENT OF OTITIS MEDIA SUPPURATIVA ACUTA.

By S. MacCUEN SMITH, M. D.,
of Philadelphia.
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The early recognition and prompt treatment of acute inflammatory diseases of the organ of hearing is one of the most important duties devolving on every practitioner of medicine. It is a sad reflection on our boasted civilization to realize that it will take some years yet to impress upon the medical profession the great importance of this simple fact, and overcome the professional skepticism that became prevalent many years ago, and to some extent still exists.

The ignorance of the laity in the most fundamental rules governing the care of their own ears, and especially those of their children, is not surprising when we recall the empiricism that has surrounded the organ of hearing and its treatment throughout the history of medicine. It comes within the province, I may say within the power, of this and similar societies to end effectually the prevailing gross ignorance of the most simple methods for taking care of the ear.

Many of our members direct the teaching of otology in the various medical institutions of this country, and can therefore exert an effective influence at the foundation, the very beginning of medicine, by properly instructing the medical student. I, for one, regard it as a disgrace and an injustice both to the embryo practitioner and to the public, to confer the honored degree of Doctor of Medicine upon any candidate who is not able to diagnose and properly to treat acute diseases of the tympanic cavity. If such knowledge were more general, and greater pains were taken to instruct the public in their duty, the specialist would be called upon to treat only a small part of the multitude of suffering humanity that now crowds the clinics of every city in the world.

It will not be denied that the prompt and proper care of an acute catarrhal otitis media will, in a great majority of cases, prevent it from progressing to the stage of suppuration; furthermore, should the case have already reached the stage of suppuration, this same prompt recognition and care will in most instances arrest the progress of the disease and insure a prompt recovery without loss of function or other disability. Then again, should the disease be purulent from its inception, immediate evacuation of the pus will effectually prevent many serious complications and consequent loss of life.

Clearly to define the exact termination of an acute otitis media without suppuration, and the beginning of an acute suppurative inflammation of the tympanic cavity, is purely a supposition based on theoretical, and not on practical knowledge; neither is the ending of an acute suppuration distinguishable from the beginning of a chronic discharge.

Some cases are doubtless purulent from the very inception of the disease, and may therefore be properly termed acute suppurative. On the other hand, it will not be denied that a great majority of all suppurative diseases of the tympanum are primarily catarrhal, but later become suppurative from sheer neglect, either on the part of the patient or of the attending physician. So long as the acute inflammation is confined to the stage of hyperemia and consequent hypersecretion of the mucosa, it can be classed as the nonsuppurative variety. If, however, the accumulating secretion remains for a time confined within the tympanic cavity, further pathological changes rapidly develop, overdistension and perforation of the membrana tympani occurs, and the case is then known as an acute suppurative one.

It is impossible, therefore, to distinguish between acute *catarrhal*, and acute *purulent* otitis media, until the stage of perforation becomes manifest; hence the treatment to be applied during the hyperemic or acute stage is identical in each.

In the interest of effective treatment, however, it is important to distinguish, as fas as possible, between an acute otitis media caused by an attack of coryza, or other mild forms of the disease, and that of the more virulent type occurring as a complication or sequela of one of the exanthemata, or from epidemic influenza or pneumonia. The former variety usually yields to the application of the most simple remedial agents if these are employed during the stage of congestion; while the latter are generally purulent in character and demand prompt and heroic measures for their relief.

In the opinion of the writer, the aural diseases complicating epidemic influenza and pneumonia, on account of their virulence and persistent tendency to cause necrotic changes, are probably more prone to produce intracranial lesions than an aural involvement complicating one of the exanthemata. The ravages of the bacillus of influenza and of the pneumococcus, after the acute symptoms have somewhat subsided, are so insidious that mastoid or intracranial involvement is in many cases actually well advanced before the complication is discovered, and this occurs notwithstanding the physical symptoms apparently denote marked improvements in the general condition.

In these cases a relapse takes place, and without presenting any aural symptoms whatever death occurs during a violent convulsion; or, as was manifest in two cases seen by the writer this past winter, death was preceded by a condition in which Cheyne-Stokes respiration was most marked.

Recent bacteriological investigations demonstrate beyond question that the quantity, and especially the quality, of the discharge are all, important factors in considering the treatment and prognosis of individual cases. Generally speaking, a discharge without fetor has been considered harmless, and, therefore, in most cases has received but little attention except for cosmetic purposes. It is a mistake to assume that the virulence of an aural discharge can be judged by its odor, or that the gravity of an otorrhea can be measured by its chronicity. An odorless discharge from the ear sometimes contains pathogenic micrococci, which may cause some of the most serious intracranial inflammatory lesions. The same observation is true in many cases of fetid otorrhea. Nevertheless, nonpathogenic cases are often seen, even in which the fetor is extreme, clearly illustrating the value of the microscope and cultures in the differential diagnosis of cases of suppurative diseases of the tympanum. Such a demonstration of the presence of the bacillus of influenza or other infectious micro-organisms is a practice to be commended, and should be employed when at all practicable. Within a very short time, however, the discharge from the tympanic cavity is liable to develop a mixed infection, such as the streptococcus, pneumococcus, staphylococcus, etc., thus often supplanting the original germs present. To be of service, therefore, the examination must be made as soon as the pus has been evacuated, whether from a spontaneous rupture or after an incision of the membrana tympani.

The character of the general illness, of which the aural complication is but a local manifestation, will frequently aid us in determining the necessity for early surgical interference. If, therefore, the organ of hearing becomes involved during an attack of one of the exanthemata, epidemic influenza or pneumonia, the ear should frequently be examined and treated energetically. This is all the more important in the case of children, and especially of infants, so many of whom have died from meningitis or other complications, while the underlying cause of their illness had been entirely overlooked.

Primarily then, the most effectual method of treating an acute suppurative otitis media is by the adoption of preventive measures to arrest the disease at the stage of hyperemia, thereby preventing it from progressing to the point of suppuration. If, however, this is not accomplished, and the stage of suppuration has arrived, it is most unfortunate, if from tardiness, or through ignorance or neglect, the membrana tympani is *allowed* to rupture spontaneously. It is equally to be regretted if the patient has been subjected to the ineffectual operation known as paracentesis of the membrana tympani; a procedure, to the mind of the writer, that has no useful place in aural surgery.

The old surgical axiom, "Wherever there is pus leave it out," is to-day quite as pregnant with truth as it was when first promulgated by the elder Gross. When the middle ear, as well as other cavities, is filled with pus, it must be thoroughly evacuated; this, however, can never be accomplished by a simple puncture of the membrana tympani. The membrane, consequently, must be *freely incised*, the chief requisite being to carry the incision from the most bulging point downward to the lower border of the canal, said incision to be continued either in an anterior or posterior direction, until about the sixteenth part of a circle has been formed. This will not only provide for good drainage, but will insure the opening remaining patulous long enough to admit of proper after-treatment.

There are two principal reasons, then, why so many cases of suppurative otitis media do not yield to treatment in the initial stage. In the first place, if the membrana tympani ruptures spontaneously, the opening thus formed is usually situated in the superior part of the membrane, which only allows the pus to escape by the process of overflow; furthermore, pressure sufficient to produce rupture frequently causes maceration and peeling off of the mucosa. Auto-infection, therefore, occurs on account of the cavity being constantly filled with pus up to the point of the perforation. Again, the edges of the ruptured membrane are irregular, consequently they do not coaptate readily, nor unite kindly; whereas a clean incision will always repair with the greatest facility. On the other hand, if only a puncture of the membrane is made, the opening is too small to provide for adequate drainage.

The logical measure, therefore, to be employed in the evacuation of pus from the tympanic cavity, is, as above stated, a free incision of the membrana tympani, but never to commit the folly of a simple puncture. The practice of so-called paracentesis is nonsurgical in so far as it relates to otology, and, in order that the future shall be free from the inefficient treatment this procedure has engendered in the past, the word should be dropped from aural literature.

In considering the treatment of an acute suppurative otitis media, therefore, it must be assumed that every effort had been made to arrest the progress of the disease before the formation of pus. If, however, pus formation has already taken place, there is, of course, nothing to do but evacuate it in the manner above stated.

The classical indications for incising the membrana tympani are in some cases as unreliable and misleading as the classical rules are for operating on the mastoid. Generally speaking, it is well to wait until some bulging of the membrana tympani occurs, but a grave error will have been committed if we wait for this symptom to become prominent in ear diseases complicating the exanthemata, epidemic influenza or pneumonia. As these cases are usually purulent from the very inception of the disease, it is important that an early incision of the membrane should be made, even though bulging has not occurred. This is especially true if the pain is severe and not influenced by bloodletting and the employment of other measures for relief. Should the suffering continue for some time after thorough evacuation of the pus, and an examination shows the presence of the streptococcus or the bacillus of influenza in any considerable number, the patient's future health, as well as conservative surgery, will be best served by an immediate opening of the mastoid.

After evacuation of the fluid from the tympanic cavity has been accomplished, a good recovery will be made in many cases by cleansing the canal and middle ear with an antiseptic solution, followed by introducing a strip of iodoform gauze well into the deep canal to provide for good drainage, this to be renewed every day or two. It is well to keep in mind, however, that the two essential elements for the rapid development and multiplication of bacteria are heat and moisture. The treatment in many cases, therefore, must be directed to the avoidance or correction of these elements, as the site of a suppurative otitis media is a veritable hot-bed for the propagation of disease germs. Our chief object, then, in such cases is the application of therapeutic measures to rid the ear as far as possible of these bacteria, and endeavor to inhibit their further development by the destruction of the very pabulum of their existence through the reduction of inflammatory heat and by keeping the propagatory surface dry. After the secretions have been removed by inflation, irrigation or a cotton carrier, the surface can be gently dried with cotton and hot air, and then dusted with some impalpable powder, such as boric acid or aristol, care being taken only to *dust* the surface, as an excess of powder would become impacted and interfere with drainage.

The general health must not be neglected. Absolute rest in bed, with free diuresis and properly conducted diaphoresis are of the first importance. The bowels should be freely opened and the diet restricted to milk and broth. Indeed, one or two days of absolute fasting and enforced rest in bed will frequently accomplish more in prophylaxis than any other single or combined therapeutic measures.

WOUNDS INFLICTED BY MODERN AGRICULTURAL IMPLEMENTS.*

By D. W. BASHAM, M. D.,
of Wichita, Kansas.

Since the universal employment of machinery to perform the labor formerly done by human hands on the farm and ranch, surgeons have been called upon to care for a class of wounds not so often seen before.

It may seem at first thought that wounds incident to agricultural pursuits differ in no wise from injuries coincident with other walks of life, but traumas inflicted by reapers, threshers, corn-harvesters and the corn-knife, have each certain special characteristics which render special consideration necessary.

These injuries are generally received during work in the fields and often far beyond the reach of the surgeon specialist, consequently it behooves the practitioners everywhere to be familiar with their proper management. To treat these wounds correctly and successfully, it is necessary for the surgeon to be skilled in the operation of tendon suture and nerve suture, for there seldom occurs an injury produced by the corn-sled, in which the tendons of the leg are not severed.

Of course, it is possible to heal a wound involving division of the tendons without tendon suture, but the healing thus obtained is unaccompanied with restoration of function. It is not sufficient for the modern surgeon to bring about simple healing of the wound,—he must also seek to restore function to the wounded member.

Restoration of functional activity cannot be secured without apposition and aseptic fixation of divided tendons, nerves and, in certain instances, bloodvessels. It is possible even to restore to usefulness a joint which has been opened, if the anatomical relations be reconstructed under perfect asepsis.

Of all wounds to which farmers are predisposed by occupation none is so serious as those inflicted by the threshing-machine and the cotton gin. In the one instance the hand is always reduced to shreds by the action of the teeth in the cylinder, and in the other case the member is cut into strings by the saws. In both cases a wound is generally produced of sufficient severity to require amputation. The wounds resulting from contact with a thresher cylinder in operation, or the saws of the cotton gin, are always extremely painful because the nerves are exposed.

The various corn-harvesters are capable of inflicting a particularly distressing class of injuries, and many a man has given a foot as the price of this labor-saving device.

There is a very considerable resemblance between some of the corn-harvesters and the ancient war-chariot. The knife is set just far enough above ground to sever the muscles of the calf when the operator loses his footing and the leg comes down in front of the moving machine.

If the knife is set low, the tendo Achillis is divided or the ankle joint is opened. These are smooth, incised wounds, and all the soft structures, nerves and arteries included, are divided down to the bone. Fatal hemorrhage sometimes occurs before assistance can be obtained. It happens not unfrequently that gangrene supervenes as a complication in the history of these wounds.

This complication may be attributed to two causes: (1) The division of the vessels and the nerves; and (2) the introduction of infecting germs by unclean efforts to aid the patient by his fellow-workers or the bystanders. I have seen gangrene occur and extend sufficiently to destroy the limb, when earth had been forced into the gaping wound in order to arrest the hemorrhage.

The structures most frequently involved in corn-sled wounds are the soft structures of the calf of the leg, the tendo Achilis, the ankle joint and the flexor group of tendons in front of the ankle joint. Sometimes the ankle joint is opened from behind and sometimes from in front.

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*Read before the Tri-Medical Society at Hannibal, Mo.

When the injury is limited to the muscles of the region of the calf of the leg, the surgery is comparatively simple and consists in disinfecting the wound, arresting the hemorrhage and re-uniting the tissues with suitable sutures and, lastly, the comfortable adjustment of the member in an aseptic dressing.

This is all extremely simple, indeed, excepting the suturing, which should not be done as it is most often done *i. e.* by the ordinary deep suture. The correct method of closing up a wound involving a system of muscles consists in finding the upper and lower ends of each muscle and uniting them with some absorbable suture, thus treating one muscle after another from the bottom of the wound to the skin. The nerves and bloodvessels, if they are large, should also be re-united by suturing.

When the wound involves the division of the tendons and the opening of the knee or ankle joint, the case is no longer simple, but, on the contrary, great fineness of judgment and extreme nicety in the application of the principles of antisepsis and asepsis are indispensable, if healing with restoration of function is to be obtained.

The tendo Achillis may no longer be, as in the days of the Trojan hero, the only vulnerable structure in the body, but it is beyond question still one of the most refractory to therapeutic measures. The reasons for this are the great strength of the tendon, which is sufficient to tear out the sutures, and the lack of sufficient bloodvessels in the tendon proper to nourish it.

There are two good methods of suturing this tendon which may be employed, according to the wish of the operator. The tendon may be sutured with silver wire or silkworm gut, and the ends brought out through the skin; or some of the most durable of the absorbable suture materials may be employed and the suture left buried.

When the tendons in front of the ankle joint are divided, they may be safely re-united with catgut, for the foot can be dressed in superflexion to diminish the tension while healing is going on. If the ankle joint is opened, it should be most thoroughly cleansed by irrigation with warm saline solution or a feeble solution of corrosive sublimate. Great attention should be given to the temperature of the solution, for, if too hot, changes in the synovial membrane may be brought about which might compromise the desired result.

When the disinfection is completed, the anatomy of the joint should be reconstructed by bringing the structures together with a running suture of catgut. Then the tendons are re-united with the same material, and the skin may be brought together with any desired suture material.

For a few days after closure of a joint and tendon suture, the yellow synovial fluid may be seen oozing through the stitch holes, and one might be led to doubt the success of the operation, but this usually ceases after a time, and, if the asepsis has been perfect, the case goes on to recovery. These cases should be dressed in moist bichloride gauze covered over with oiled silk and cotton, and all should be held in place by a roller bandage. The dressings should be changed often enough to keep them moist and to permit of sufficient opportunity to observe any change that may take place in the wound.

In injuries inflicted by the sickle of the reaper or mower, the bone may be divided, and this is especially likely to be the case when the patient happens to be a child.

When the sickle is in rapid motion, the bone may be cut through in several places in close proximity. I once attended a patient in whom the ankle joint was opened by the sickle of a reaper and the bones of the tarsus were cut into several little rings; yet upon the disinfection of the wound, reposition of the fragments, tendon suture and closure of the joint, the boy recovered with a useful foot and considerable motion.

One should never despair of a member so long as the bloodsupply is adequate to the needs of the parts and the promotion of the healing process. The knee joint is very frequently cut into with the common corn-knife, and formerly many of such injuries were followed by ankylosis of the articulation.

After correct antisepsis and asepsis, these wounds may be closed up, even though a joint be involved, the same as we close the abdomen under similar conditions, and the same results may be anticipated in the one case as in the other.

In this brief paper the aim has not been to enter profoundly into the study of this lamentable class of cases. The object is simply to place the subject in its most important aspect before the gentlemen who are most often applied to for relief by this unfortunate class of injured.

If any one whomsoever may be caused to enter into a more extended and profound investigation of the subject through having listened to these few words, the writer shall feel most amply compensated for the trouble of writing and the embarrassment of coming before this society with this paper.

A PLEA FOR THE ABANDONMENT OF THE ABDOMINAL BELT AFTER CELIOTOMY.*

By MAURICE KAHN, M. D.,
of Leadville, Colorado.

Mr. Chairman and Members of the Mississippi Valley Medical Association:

I wish to submit my sincere thanks and appreciation for the great honor, to which I am keenly sensitive, that you have bestowed on me in asking me to read a paper before your distinguished society; and further, to say that I experience pleasure in appearing before you expresses it but mildly.

A few quotations are inserted as evidence of the prevailing opinion regarding the use of the abdominal belt, as attestation that I am not unmindful of the possible furore that the expression of my opinion may excite. And it is with a full knowledge of this possibility that I venture to depart from the orthodox belief.

Hunter Robb "Aseptic Surgical Technique:" "Before the patient is permitted to get out of bed she should be furnished with an abdominal bandage which not only will tend to prevent any opening of the incision which might be followed by a hernia, but will also add a great deal to the patient's comfort by supporting the abdominal walls. This bandage should be used for from six months to a year."

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* Read before the Mississippi Valley Medical Association on its twenty-eighth annual meeting, held at Kansas City, October 15, 16 and 17, 1902.

American Text-Book of Surgery: "A protective abdominal binder should be worn for at least six months thereafter." (Abdominal Section.)

"— — — The patient is directed to wear an abdominal supporter for several months after he has left his bed."

Senn: ("Practical Surgery)": "Four weeks in bed and the wearing of a well-fitting abdominal support for from three to six months are the most reliable precautions against the occurrence of a postoperative ventral hernia."

"An American Text-Book of Gynecology:" "For six months or a year after the operation an abdominal binder should be worn, at the end of which time it may gradually be dispensed with."

Garrigues: ("Diseases of Women:") "An elastic abdominal belt is used during the first year after laparotomy to take off the strain on the cicatrix."

Howard Kelly: "Operative Gynecology:" "The value of abdominal bandages to prevent herniæ has been greatly overestimated. I advise their use only in fat women or when the abdominal wall is exceedingly lax and the muscles atrophic; — — when they are necessary they should be worn for from six months to a year." I take issue with Dr. Kelly on the necessity at any time of using an abdominal bandage to prevent hernia. The more lax the walls are, the more do they need developing and the greater the indication for not using a support; and I would recall attention to what I consider of much more importance in the prevention of hernia than the binder, and that is correctly placed fascia sutures. I may add that I should not experience any solicitude if the abdominal wall were sutured by Dr. Kelly's own method.

Fowler: "A Treatise on Appendicitis:" "No binder or other abdominal support need be worn after complete healing of the abdominal wound has been secured. Care should be taken that no undue strain is brought to bear upon the parts for several months. If the patient is compelled to undertake a laborious occupation before this time, he should wear an abdominal support." I should suggest gradual development of abdominal muscles to meet the exigencies of the laborious occupation, as applied to the individual case.

With one exception I have been unable to find any expression of my own conviction. That exception is the opinion held by Professor Olshausen, of Berlin, as stated by Professor Senn in "American Medicine" July 19, 1902. Dr. Senn says:

"Professor Olshausen is of the opinion that ventral hernia after laparotomy only occurs when the fascia, from faulty suturing or suppuration, fails to unite. He has no confidence in abdominal supporters of this postoperative complication." Coming as it does from so high an authority, it merits and demands a consideration which the same theory could not command if promulgated by a less brilliant star in the surgical firmament.

The universal practice of prescribing the abdominal belt after celiotomy as a supposed preventive of hernia seems to me to be the result, partly of irrational reasoning interspersed perhaps with a circular philosophy, and partly to the human proclivity thoughtlessly to follow, without knowing why, the practices and precepts of others. If I but succeed in arousing some discussion of this subject, or if I only succeed in directing some thought along these lines, even though I do not convince your honorable body that the fallacious theory, which invites the confidence reposed in the efficacy of the postoperative binder, is a modern Scylla, this paper shall have achieved the purpose of its writer. For, if in consequence sufficient interest is aroused in the subject, I firmly believe that it will be but a short time when the postoperative abdominal belt will be obsolescent.

The anatomy of the abdominal parietes is doubtless sufficiently well comprehended not to require its rehearsal except perhaps to call attention to the direction of the muscle fibers. It will be remembered that the fibers of the muscles and fasciæ intersect each other at angles varying from about twenty-five to ninety degrees. By reason of a common nerve supply the large muscles of the abdominal wall act synchronously. This has a bearing on a point to be made presently.

In performing an abdominal section our purpose should be to have an incison so directed that after closure of the wound the contraction of the muscles themselves will tend to safeguard against hernia and not conduce to its formation. The excellent cancellated arrangement of the fibers of both muscles and fasciæ makes this easily accomplished. It follows, then, that the most rational method of gaining entry to the abdomen and the one of first importance is by the so-called "muscle splitting" or "gridiron" operation, i. e. splitting the muscle parallel with the direction of its fibers rather than the "cross cut" or "straight-through" operation.

It must be evident that, inasmuch as the muscles act simultaneously, and as each muscle in contracting and shortening its fibers diminishes the size of the opening in a direction parallel with its own long axis, the result is a diminution in the size of the opening that is not limited to one direction but is general; and, further, the more strenuous the contraction, the greater the diminution in the size of the opening, and the more securely it is closed, the less the liability to hernia. The reverse would obtain in the cutting technique in which the fibers are severed transversely instead of longitudinally if it were not for efficient suturing. And I believe the straight-through technique to be the most effective factor in subverting an ideal result in most cases, not so much because the muscles are cut transversely, but because of inaccurate and careless suturing afterward. I may say here that I am not indulgent to the use of the belt after the straight-through incision and condemn its use as vehemently as I do after the muscle splitting operation, for even in the straight-through operation, if the deep sutures are securely and correctly inserted, they will effectually retain in approximation the two edges of the fascia. If it is true that the more forceful the muscles contract, the greater the safety against hernia, then are we to be considered less clever than the veriest tyro in athletics? If the athlete desires muscular development, does he bind up his arms and legs for a few months and then expect to be able to withstand the strain of a contest? However, it is unnecessary to give illustrations of so universal a truism as: To exercise muscle is to develop muscle.

Then why not adopt nature's suggestion and strengthen the muscles when they require it, by development—by giving them not only their ordinary task to perform, but impose on them an excess of labor? This is certainly a safer and more reasonable procedure than the one generally adopted of relieving them of the work they are accustomed to perform by applying an abdominal belt which, if tight enough to exert any influence, must relieve the muscles of their usual labor; the result being that we have supervening the atrophy of nonuse, whereas it would be desirable to have the hypertrophy of overuse. Then when the time arrives for the belt to be discarded we have muscles unaccustomed to executing all the work alone (having been assisted by the belt); in short attenuated muscles suddenly summoned to accomplish what is relatively an excess of labor or actually a normal labor with a subnormal ability. Why permit the muscles to atrophy at all? Why not insist on their doing their work without intermission as has been their habit? Let us suppose a case in which some operation has been performed on the posterior tibial nerve high. Is there a surgeon present who would, even while suffering from an attack of incubus, put that leg in plaster for the purpose of preventing an aneurysm of the posterior tibial artery? And yet the cases are not wholly dissimilar.

There are doubtless some who will maintain that the abdominal belt is harmless anyway, and should be worn as a possible safeguard. Let me reply to these that even if this were true, which it is not, as has been pointed out in the foregoing, the bother of applying it and the inconvenience of wearing it are not merely fanciful objections to its use.

If it were possible to apply a belt internal to the abdominal wall, it might perhaps be of service in giving the cut edges of the fascia an opportunity firmly to unite before any strain were imposed upon it, but even so the muscles would be atrophying the while. Nevertheless, this might not be an unwise procedure; whereas such argument cannot be advanced in favor of the ordinary external abdominal belt which will not prevent the exertion of pressure on structures internal to itself.

It has been my practice for over three years, including one patient operated upon at the second month of pregnancy and who carried to term ("Removal of ovarian cyst, broad ligament cyst and appendix at the second month of pregnancy. Delivery at term," *American Medicine*, July, 1901), after removing the first dressing which is applied snugly for comfort, to allow patients to go without any support. This dressing is usually removed three or four days after the patient is up and around, sixteen or eighteen days after operation—and I have had no occasion to regret the practice that may appear to some to be an indiscreet radicalism, but which I am convinced is an eminently circumspect conservatism. In closing, I should say: Suture accurately and securely, abandon the belt, develop the muscles when necessary and thus avoid hernia.

SOME OBSERVATIONS ON TUBERCULOUS PATIENTS SENT TO COLORADO.

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The impression prevails abroad, and correctly so, that the great plateau directly east of the Rocky Mountains is a most salubrious climate for pulmonary tuberculosis. Thousands of consumptives annually come to this Mecca in search of health. The physician, whose practice is mainly among this class of patients, often witnesses disappointing results which he is powerless to control. Aside from the fact that these results obtain so frequently in advanced cases of pulmonary tuberculosis, there are other reasons which I shall attempt to point out.

In the first place, what kind of patient should be sent to Colorado? Often a difficult matter to decide correctly. Incipient and first stage patients do well, as a rule, provided they are placed under favorable environment and receive proper medical advice immediately on coming here. As to what constitutes an incipient or first stage case, and when incipiency ends and the first stage begins, when the first stage ends and the second begins and so on, a diversity of opinion exists. Nor can inflexible rules be laid down, without present methods of examination, for the purpose of drawing sharply the dividing lines. Usually a safe plan is to advise a patient who presents the symptoms and signs of the early stages of the disease, to come to Colorado, provided these symptoms are not rapidly progressive and that they are not those of acute tuberculosis. I am convinced that the days of this class of patients are shortened by coming to this climate. The physician should keep such patients at home and try to control the more severe symptoms, such as fever, diarrhea, etc., by the usual methods, and not attempt to send them on a long journey with the hope that the climate of Colorado will check the disease and ameliorate the symptoms.

Should the patient improve, he ought not to be kept in the unfavorable climate until there is a recurrence of the symptoms, but should be sent at once. However, incipient cases occasionally fail to improve in Colorado, because they are not placed under favorable conditions and environment on coming here. By this I mean the opportunity to obtain either sanatorium treatment or good food and lodgings. Too often is the physician disheartened, when advising as to food, etc., by the patient stating that he has about enough money to pay his way for three months by the strictest economy, after which he expects to be able to earn enough to support himself. In order, therefore, to make his limited capital last as long as possible he must procure cheap quarters in an unhealthy neighborhood and correspondingly cheap and poor food, and then he hopes the climate will do the rest. Is it any wonder that such patients fail to improve? Far better were it if they were kept at home, for then they would be spared the discomforts of being sick and miserable among strangers. Again, some almost on the day of their arrival seek employment, and the worry and fatigue connected therewith bring about an aggravation of the symptoms that forces them to desist, with the inevitable result.

There is another difficulty that is growing more formidable, and this is the procuring of board and room in a boarding house or with a private family, for those willing and able to pay. The consumptive is looked upon as a leper to be shunned, and but few care to receive him into their homes or at their tables. This is due to the propaganda that has been carried on by health boards and newspapers regarding the contagiousness of tuberculosis which has been given rise to a tuberculophobia, detrimental to the welfare of that invalid. Recently California has attempted to discourage the coming of the pulmonary invalid to that state by refusing to build a state sanatorium for the poor of this class. When, therefore, I am approached upon the subject by those intending to receive these invalids, I tell them just where the contagion exists, and I instruct them in the precautions it is necessary to take. I do not wish to be understood as deprecating the efforts of health boards in issuing circulars on the subject of contagiousness of tuberculosis and in trying to suppress the spitting nuisance, but I should desire to see some moderation exercised and the danger not exaggerated, so that intelligent people will fully understand the source of contagion. Circulars avail little with the illiterate or indifferent, and these should be placed in sanatoria where rigid hygienic regulations are enforced and where they are not likely to prove a menace to their fellows. Unless a patient is able to obtain proper care amid favorable surroundings, I contend it is better for him to remain at home. This applies with great force to that unfortunately large class that comes to Colorado, practically penniless, sent here by the well-meant but ill-advised kindness of friends and fellow employés.

Again some fail to improve in this climate owing to erroneous advice given them by their family physicians. They are told not to consult a physician on their arrival in Colorado; all they have to do is to "drink plenty of milk, eat fresh eggs and take exercise in the open air." This stereotyped advice brings about serious consequences in many cases, for nothing can possibly be worse for the patient with fever than to do much walking or take exercise on his arrival in a high altitude like ours. The progress of the disease is unchecked, in fact it is occasionally accelerated, and either he is seized with a hemorrhage or his fever and cough grow worse and his appetite poorer. A physician is then called who may be able to repair the mischief. I have met patients who have been in Colorado for several months and grown worse, who, I have felt certain, would have improved had they been properly advised on their arrival. The fever is one of the most stubborn symptoms that the physician is called upon to treat, absolute rest in bed is our most efficacious weapon with which to fight it. Patients have been kept in bed three or four months in the endeavor successfully to combat the fever.

In fact, with or without fever, exercise, whether in the shape of walking, riding or calesthenics, is, with rare exceptions, to be forbidden for reasons that ought to be apparent. Incipient cases require little, if any, medicinal treatment. No universal rule, in fact no rules, can be laid down which will apply to every patient. If there is one thing that the intelligent physician must learn in the treatment of tuberculous patients it is to avoid going into a rut. The physician becomes in reality a medical mentor, he must direct the daily routine of the patient's life and determine when and what he should eat; how his food should be prepared; what medicines, if any, he should take; and many other things.

Homesickness is another reason why some of the patients who are apparently of the class that ought to improve, fail to do so. Often it is the father of a family, the bread-winner, who has left his wife and family at home and comes out here believing that in a few months he can return home. He tries to be content, but soon becomes homesick, and every symptom of his trouble is aggravated, and, in many instances, he finally returns home worse. Some persevere and try to overcome these attacks. I have, however, found that, when the symptoms of homesickness are at all acute, it is better to have the family come here, if they can possibly do so, or, as a last resort, allow the patient to return home for a short time at a favorable stage of his case.

Whether it is wise to send the more advanced patients, that is, those that are in the second stage of the disease, is a question of expediency. Many patients of this class get well in Colorado, and the physician can decide whether to send them or not, being guided by the principle that, unless patients of this class can afford to obtain proper care and accomodations, they had better not leave home. Almost invariably good results cannot be obtained in the second stage cases, unless they are provided with sufficient means to receive proper care for at least one year, and more often longer. Even under the most favorable conditions they often fail to get well or to improve. Numerous boarding- and rooming-houses of the city of Denver have many of this class mingling with others better and worse off than themselves, who fail to improve because they do not receive the right kind of food, or because they are not in the open air sufficiently, or because contact with those in the last stages of the disease has a most depressing effect.

Now, what can be said for the third stage cases, those with cavities. Should they be sent to Colorado? Except in occasional instances, no. Some of these patients get well, but the majority succumb. When the disease has a tendency to localize itself in a part of the lung, such cases offer some hope of recovery, more often, however, a lung containing a cavity is involved extensively with tubercular deposits. A few of this class have improved wonderfully, and are today living here and working. The personal equation in each patient plays such an important part that the physician had better keep a patient of this class under observation for several months before attempting to give a definite prognosis.

Sanatoria for the treatment of tuberculosis have greatly increased in numbers during the past few years. This subject has been exhaustively discussed by prominent writers, and it seems superfluous, therefore, to add anything. This much can, however, be stated: That, if the sanatoria for tuberculosis had never effected a cure of the disease, the vast benefit resulting from the hygienic education emanating from them and the improvement to the health of the community in removing from their midst a large number of poor, infected people, would more than compensate for the outlay in maintaining them. But they do effect cures, in fact, large numbers of them. All cases should not, however, be sent to sanatoria indiscriminately. Some patients are depressed by coming in contact with those worse off than themselves, and, if they fail to overcome this after a short stay at the sanatorium, they should be advised to leave, although in my experience the depression soon wears off in the majority of cases.

Others, to whom the rules and regulations of sanatorium life are irksome, had better, for the preservation of the *morale* of the institution, be kept outside. Some incipient cases do better outside of sanatoria. For the more advanced and late-stage cases, provided their temperaments are suitable, the sanatorium is the place *par excellence*. Whether it is better to house the various stages in separate buildings is questionable. Arbitrarily to assign a patient in the late stage of the disease to a building set apart for him would seem needlessly cruel. Such a building could almost have written over its entrance portals: "He who enters here leaves hope behind," and yet a constant recurring problem is to provide suitably for this very class, to whom the doors of many hospitals and sanatoria are closed.

The day is not far distant when every state in the Union will maintain, at public expense and in a healthy section, a sanatorium in which the poor consumptive can receive proper care. Philanthropists can and will open their purses, build and endow institutions for the treatment of tuberculosis. Private enterprise will add to the number. Pulmonary tuberculosis is already on the decline, as a result of what has been done.

THE INFLUENCF OF CERTAIN ALCOHOLIC LIQUORS, AND TEA AND COFFEE, UPON DIGESTION IN THE HUMAN STOMACH.*

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H. A. Hare[11], in an article contributed to the *Medical News*, in 1887, says: "Every one knows that alcohol retards digestion in the test-tube, but aids it in the stomach. It is a fair supposition that beer, which retards digestion the least in the test-tube, retards it the least in the stomach. Most beers in all probability do not retard digestion in the stomach, and some probably aid it. Alcohol in all forms retards salivary digestion."

Sir Lauder Brunton[4], in his treatise on "Disorders of Digestion, Assimilation, etc.," published in 1901, states that gastric juice mixed with alcohol has no digestive power, and, even when the quantity is not sufficient to precipitate pepsin, it seriously impairs its digestive properties. Although large quantities of alcohol are detrimental to digestion, small quantities may be innocuous or even beneficial.

The exhaustive laboratory experiments of Leube and Buchner[15], Duggan[7], Roberts[16] and Chittenden[5] have yielded practically the same results. For the reason that Roberts' experiments are quoted in part by such recent works as "Hemmeter's[12] Diseases of the Stomach," 1897; Yeo's[21] Dietetics, of the same year, and Thompson's[20] Dietetics, of 1902, I select his observations as representative of this line of investigation.

Roberts shows that both beer and whiskey retard peptic digestion in the test-tube when used in the percentages as ordinarily drunk, and that small amounts have no appreciable effect. He says[17]: "My experiments indicate that ardent spirits, as usually employed dietetically by temperate persons, act as pure stimulants to gastric digestion." As a matter of fact, his results as tabulated indicate no such action, but he assumes that, since alcohol stimulates the flow of saliva, it also stimulates gastric secretion and excites peristalsis, thereby aiding digestion. He further shows that beer and whiskey are powerful retarders of salivary digestion, the retarding effect of beer being in direct proportion to the amount of acid it contains. He also says that a tumbler of light beer would evidently promote rather than retard digestion.

Albertoni and Luccana[1], from their experiments upon dogs, conclude that small quantities of 20% alcohol accelerate digestion, while intoxicating quantities retard it, and that absolute alcohol inhibits it altogether.

Chittenden[6], as a result of his later experiments upon dogs, states that, "in dogs at least, neither alcohol nor alcoholic liquors retard digestion, but of hastened digestion our results give little or no suggestion."

Kretschy[14], from his experiments upon a girl with a gastric fistula, observed that small amounts of alcohol delayed digestion.

Buchner[2], by administering wine and beer with meals to persons and later emptying their stomachs, always found more food present than on similar occasions when water was given. He concluded that these liquors delayed digestion.

Gluzinski[9], by his extensive experiments upon human stomachs, shows that both alcohol and brandy retard digestion and also diminish peristalsis.

These observations are but a few of the many which might be quoted, yet they are perhaps sufficient to convince one that no consensus of opinion prevails regarding the influence of alcoholic liquors on digestion.

This evident conflict of statements seems to have arisen mainly from different results obtained by various methods of experimentation, but in part also from a disposition of some observers to express opinions based, probably, upon clinical experience rather than upon laboratory results.

The object of a few experiments which I have recently made was to ascertain what influence a drink of whiskey, a glass of beer and a cup of tea or coffee might have upon digestion in the human stomach when taken with meals.

While the tests used fail to show the influence of these liquids upon certain individual functions of the stomach, they furnish quite reliable information regarding their gross effects on digestion.

The three individuals upon whom these tests were made were not addicted to the use of alcoholic liquors, tea or coffee. Their stomachs were found normal by previous examinations.

To these subjects, on alternately successive mornings, I gave a certain meal in place of the ordinary breakfast, they having fasted from the preceding evening meal.

---

*Read before the Norfolk District Medical Society, Boston, Feb. 24, 1903.

I chose the Ewald test-breakfast (bread, 35 gm., and water, 300 cc.), because the analysis of the stomach contents from this meal is familiar to many. The meal was modified on the various occasions only by the quality of the liquid used, the bulk was always the same.

On the first morning I gave the Ewald meal unmodified on the second morning I substituted 60 cc. of the water by 60 cc. of whiskey, on the third morning I substituted the entire amount of water by 300 cc. of beer, on the fourth morning I gave 250 cc. of coffee and 50 cc. of water, and on the fifth morning 200 cc. of tea and 100 cc. of water.

The liquids in all cases were taken during the meal, the whiskey was taken diluted, the tea and coffee were taken without cream or sugar.

At the end of one hour after the meals were eaten, (at a period when their digestion should be more than half completed), the stomach contents were removed and subjected to the ordinary chemical analysis.

It is by the results thus obtained that one is enabled to judge of the extent of salivary and peptic digestion and other conditions.

The tests used in the chemical analyses are those commonly employed by physicians in the examination of stomach contents. Starch digestion was determined by the reaction to Lugol's solution. The propeptones were estimated by the amount of precipitate produced by the addition of a saturated salt solution and acetic acid, and, after filtration, the peptones were estimated by the intensity of the biuret reaction. The period of pepsin digestion is the time required by the gastric juice to digest a piece of egg albumen. Uniform quantities of the contents and reagents were always used. As some of the quantitative estimations were made by comparison of shades of color and amounts of precipitate, many of the tests were necessarily frequently repeated, thereby insuring greater accuracy.

The results of these tests are shown by the accompanying tables.

TABLE NO. 1.

Analysis of stomach contents obtained from the test-meals, bread 35 gm., and water 300 cc.

CASE	Amount contents	Free H Cl. per mille	Total acidity per cent.	Erythro-dextrin	Achroö-dextrin	Maltose	Pro-peptones	Peptones	Period of artificial digestion
									h.-m.*
A	135 cc	1.8	63	present	0	present	Nor.	Nor.‡	4-50
B	150 cc	1.6	57	present	0	present	Nor.	Nor.	4-45
C	160 cc	1.6	52	present	0	present	Nor.	Nor.	4-15
Average	148 cc	1.7	57	. . . .	. . . .	. . . .	. . . .	. . . .	4-36†

Table No. 1 furnishes a standard set of normal results obtained from the analysis of contents from the unmodified Ewald test-breakfasts. By comparing with these results those obtained by analysis of contents from the other meals, one notes certain variations attributable to the use of the different liquids. Since the result of any single test may be influenced by various causes, only such variations as are common to each case are considered.

TABLE NO. 2.

Analysis of stomach contents obtained from the test-meals, bread 35 gm., whiskey 60 cc., water 240 cc.

CASE	Amount contents	Free H Cl. per mille	Total acidity per cent.	Erythro-dextrin	Achroö-dextrin	Maltose	Pro-peptones	Peptones	Period of artificial digestion
									h.-m.
A	190 cc	1.8	66	strong	0	present	Nor.	Dim.	5-50
B	180 cc	1.5	58	strong	0	present	Nor.	Dim.	5-25
C	185 cc	2.	71	strong	0	present	Nor.	Dim.	5-25
Average	185 cc	1.77	65	. . . .	. . . .	. . . .	. . . .	. . . .	5-33†

By table Fig. 2 it is seen that the digestion of starch was slightly delayed, as indicated by the strong reaction of erythrodextrin. Peptic digestion was also delayed, as shown by the diminution of peptones. The periods of pepsin digestion in the test-tube were delayed in each case from 40 to 70 minutes, showing impairment of the digestive power of the secretion.

The mean increase in amount of contents and acidities suggests a slight increase of secretion.

TABLE NO. 3.

Analysis of stomach contents obtained from the test-meals, bread 35 gm., and beer 300 cc.

CASE	Amount contents	Free H Cl. per mille	Total acidity per cent.	Erythro-dextrin	Achroö-dextrin	Maltose	Pro-peptones	Peptones	Period of artificial digestion
									h.-m.
A	120 cc	1.7	74	0	present	present	Incr.	much dim.	6-30
B	100 cc	2.	86	0	present	present	Incr.	much dim.	6-15
C	130 cc	1.7	73	0	present	present	Incr.	much dim.	6- 0
Average	117 cc	1.8	77	. . . .	. . . .	. . . .	. . .	. . . .	6-15

Table No. 3 shows that the digestion of starch was somewhat accelerated, as denoted by the presence of achroödextrin. Peptic digestion was retarded more than in the case of whiskey, as denoted by the increased amount of propeptones and the diminution of peptones. The periods of pepsin digestion were prolonged from 90 to 105 minutes, or a mean delay of nearly two hours. The mean and individual diminution in the amount of contents I attribute to increased absorption, while the mean increase of acidities may be in part accounted for by the acidity of the beer.

Tables Nos. 4 and 5 give practically the same results. Starch digestion was *not* delayed in either case, while in the meals with tea it was hastened. An estimation of the peptones could not be made on account of the color of the contents imparted by

TABLE NO 4.

Analysis of the stomach contents obtained from the test-meals, bread 35 gm., coffee 250 cc., water 50 cc.

CASE	Amount contents	Free H Cl. per mille	Total acidity per cent.	Erythro-dextrin	Achroö-dextri	Maltose	Pro-peptones	Peptones	Period of artificial digestion h.-m.
A	210 cc	1.9	67	0	present	present	Nor.	Not obtained	5-5
B	130 cc	2.	72	0	present	present	Nor.	Not obtained	4-55
C	200 cc	1.6	60	present	0	present	Nor.	Not obtained	4-25
Average	180 cc	1.83	66	. . . .	. . . .	. . . .	. . . .	. . . .	4-48

TABLE NO. 5.

Analysis of the stomach contents obtained from the test-meals, bread 35 gm., tea 200 cc., water 100 cc.

CASE	Amount contents	Free H Cl. per mille	Total acidity per cent.	Erythro-dextrin.	Achroö dextrin.	Maltose	Pro-peptones	Peptones	Period of artificial digestion h.-m.
A	170 cc	2.	70	0	present	present	Nor.	Not obtained	4-55
C	140 cc	1.7	62	0	present	present	Nor.	Not obtained	4-30
Average	155 cc	1.85	66	. . .	. . . .	. . . .	. . . .	. . . .	4-42

*h.=hours.
m.=minutes.
‡Nor.=Normal.

the tea and coffee. The results of pepsin digestion in the test-tubes were practically the same as those of the Ewald meal contents. They show no impairment of the digestive power of the secretion. The mean amounts of contents and acidities suggest, as in the case of whiskey, that secretion was slightly stimulated by these beverages.

Summary.—In summing up the effects produced by beer and whiskey, one notes that salivary digestion was silghtly delayed by whiskey, and somewhat accelerated by beer; the influence, however, in either case is not sufficient to be of much significance.

Peptic digestion, both in the stomach and in the test-tube, was noticeably delayed by whiskey and, in a more marked degree, by beer, in the latter case quite out of proportion to the amount of alcohol contained in the beer.

Secretion was probably somewhat increased by whiskey and may have been slightly stimulated by beer.

These results in general confirm those of investigators who have carried out their experiments upon the human stomach, and also some of the results obtained by laboratory tests.

No one denies the harmful effects upon digestion of large quantities of liquor, but there are those who maintain that small amounts may be beneficial. The reasons given for the beneficial effects of small amount are that they stimulate secretion and excite peristalsis. The experiments here presented show the effects of moderate amounts of liquors when taken with meals, and from these results it does not seem difficult to infer what the influence might be from smaller quantities.

Buchner[3], Gluzinski[10] and others have shown that moderate amounts of liquor diminish peristalsis, while Hemmeter[15], by tests made with the kymograph and intragastric bag, has shown that small quantities have no influence upon this function.

As to stimulation of secretion, admitting that moderate quantities have this effect, it must be borne in mind that this result is *more than offset* by their retarding influence when taken with or just before meals.

Gluzinski, by his experiments upon patients, has observed that in cases of gastritis with diminished secretion neither alcohol nor brandy increases it, while in cases of hypersecretion with hyperacidity these liquors produce the undesirable effect of stimulation.

Thus it would seem that liquor, taken as a beverage with meals, exercises on the whole only a harmful influence, while in cases of gastric disease its use is not followed by any beneficial results.

Concerning the influence of tea and coffee upon gastric digestion Fraser[8] says: "The cup of after-dinner coffee may have some effect on secretion, but from its action on peptic digestion it has little to recommend it, and the same may be said, in a higher degree, of tea. Coffee, as a rule, retards digestion."

Roberts[18], by his laboratory experiments, has shown that both tea and coffee exercise a powerful retarding effect on peptic digestion, and that tea particularly, even in very small quantities, hampers salivary digestion. His results are quoted by the above-mentioned authorities on diatetics[20, 22], and probably it is from his observations that the majority of physicians, either directly or indirectly, have obtained their ideas regarding the influences of these beverages upon digestion. But it must be remembered that Roberts' results were obtained by laboratory experiments with saliva and artificial gastric juice.

My tests with these beverages show that, when taken with meals, in the amounts ordinarily used, *they do not* retard either salivary or peptic digestion, but that, in fact, salivary digestion is accelerated slightly by tea.

My results also show that these beverages may act as mild stimulants to gastric secretion; the digestive power of the secretions, however, is not augmented, and, on the other hand, it is not impaired, as in the case of whiskey. Therefore, as a stimulant to gastric secretion, tea or coffee would seem preferable to whiskey. In the tests with these beverages I used a strong, black tea and a 10% strength of coffee (coffee, 10 gm., water 100 cc.). Both the strengths and amounts used were sufficient to show any harmful effects which might be produced by these fluids as ordinarily drunk. Thus far I have been unable to find reports of any experiments with these beverages made upon the human stomach, therefore I can offer neither confirmatory nor contradictory observations from such sources.

Admitting the generally harmful effects of large quantities of tea and coffee, and that even moderate amounts, when taken with sugar and cream, disagree with some individuals, I believe that an undue prejudice has been excited against the use of these beverages by the results obtained from laboratory experiments.

1. Albertoni and Luccana. Sul alcool, sul aldeide e sugli etenvinci, Lo sperimentale, 1871.
2. Buchner, Deut. Archiv. f. klin. Med., 1881.
3. Ibid.
4. Brunton, on Disorders of Assimilation, Digestion, etc., 1901.
5. Chittenden and Mendel, Amer. Jour. Med. Sciences, 1896.
6. Chittenden, Mendel and Jackson, Amer. Jour. of Physiol., 1898.
7. Duggan, Stud. Biol. Lab., Johns Hopkins, III, p. 483, 490.
8. Fraser, Jour. of Anat. and Physiol., London, 1896-97, XXXI.
9. Gluzinski, Deut. Arch. f. klin. Med., 1886.
10. Ibid.
11. Hare, Med. News, 1887, L, 649.
12. Hemmeter, Diseases of the Stomach, 1897, p. 281-2.
13. Ibid, p. 279.
14. Kutschy, Deut. Arch. f. klin. Med., XVIII, p. 527.
15. Leube and Buchner, Deut. Arch. f. klin. Med., XXIX, 537.
16. Roberts, Direction and Diet, 1891.
17. Ibid, p. 133.
18. Ibid, p. 121.
19. Ibid, p. 139.
20. Thompson, Dietetics, 1902.
21. Yeo, Food in Health and Disease, 1897, p. 113-116-134.
22. Ibid, p. 100 and 106.

Health Reports.

Health Reports: The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon-General, U. S. Public Health and Marine-Hospital Service, during the week ending May 23, 1903:

SMALLPOX—United States.

			C.	D.
ALABAMA:	Mobile	May 3-16	13	
CALIFORNIA:	Los Angeles	May 3-10	1	
	San Francisco	May 3-10	4	
FLORIDA:	Chipley	May 8-16	9	
	Jacksonville	May 8-16	7	
	Pensacola	May 8-16	5	
GEORGIA:	Atlanta	May 6-20	4	1
ILLINOIS:	Belleville	May 11-18	9	
	Chicago	May 8-16	8	1
	Galesburg	May 8-16	3	
INDIANA:	Ellwood	May 10-17	7	
	Evansville	May 1-16	6	
	Indianapolis	May 8-16	6	1
	Kokomo	May 8-16	1	
IOWA:	Des Moines	May 8-16	1	
LOUISIANA:	New Orleans	May 8-16	7	1
MARYLAND:	Baltimore	May 8-16	7	
MASSACHUSETTS:	Lawrence	May 2-9	1	1
			Doubtful	1
MICHIGAN:	Detroit	May 8-16	33	
	Grand Rapids	May 8-16	2	
	Port Huron	May 8-16	1	
MINNESOTA:	Winona	May 8-16	2	
MISSOURI:	St. Louis	May 3-17	17	
NEBRASKA:	Omaha	May 8-16	1	
NEW HAMPSHIRE	Manchester	May 8-16	1	
	Nashua	May 8-16	1	
NEW YORK:	Elmira	May 8-16	1	
	Rochester	May 7-14	2	
OHIO:	Ashtabula	May 8-16	1	
		Imported from Toledo		
	Dayton	May 2-16	6	
	Toledo	Apr. 18-May 16	31	1
PENNSYLVANIA:	Pittsburg	May 2-16	48	7
	Phliadelphia	May 8-16	35	1
SOUTH CAROLINA	Charleston	May 2-16	1	
	Georgetown	May 20	1	
TENNESSEE:	Memphis	May 8-16	3	
UTAH:	Salt Lake City	May 8-16	5	1
		Imported		
WASHINGTON:	Tacoma	May 4-11	2	
WISCONSIN:	Milwaukee	May 8-16	3	

SMALLPOX—Insular.

PHILIPPINE ISLANDS:	Manila	Mar. 21-Apr. 4	11	2

SMALLPOX—FOREIGN.

AUSTRIA:	Prague	Apr. 18-May 2	11	
BELGIUM:	Antwerp	Apr. 18-May 2	6	
	Brussels	Apr. 25-May 2		4
BRAZIL:	Rio de Janeiro	Apr. 19-26		2
BRITISH GUIANA:	Demerara	Apr. 25	Present and spreading rapidly	
CANADA:	Quebec	Mar. 2-9	2	
CHINA:	Hongkong	Mar. 26-Apr. 3	4	1
COLOMBIA:	Bocas del Toro	Apr. 28-May 5		1
FRANCE:	Paris	May 1-8		1
GREAT BRITAIN:	Birmingham	Apr. 25-May 2	5	
	Bristol	Apr. 25-May 2	3	
	Dublin	Apr. 30-May 7	23	3
	Leeds	Apr. 25-May 2	14	
	Liverpool	Apr. 25-May 2	69	4
	Manchester	Apr. 18-May 2	17	
	Newcastle-on-Tyne	Apr. 25-May 2	1	
	Nottingham	Apr. 18-May 2	2	
	Sheffield	Apr. 18-May 2	6	2
	Sunderland	Apr. 25-May 2	1	
INDIA:	Bombay	Apr. 14-21		73
ITALY:	Milan	Mar. 1-31	1	
	Palermo	Apr. 25-May 2		1
JAPAN:	Kobe	Mar. 27-Apr. 11	3	
MEXICO:	City of Mexico	Apr. 26-May 3	7	10
RUSSIA:	Moscow	Apr. 18-25	5	1
	Odessa	Apr. 19-May 2	4	1
	St. Petersburg	Apr. 4-25	58	12
	Warsaw	Apr. 11-18		3

YELLOW FEVER.

BRAZIL:	Rio de Janeiro	Apr. 12-26		34
COLOMBIA:	Panama	May 7-14	3	1
MEXICO:	City of Mexico	Apr. 26-May 3		1
	Tampico	May 8-16	1	1
	Vera Cruz	May 2-16	11	5

CHOLERA—Insular.

PHILLIPPINE ISLANDS:	Manila	Mar. 21-28	1	1
	Provinces	Mar. 21-28	164	93
		Not previously reported	14	14
	Provinces	Mar. 28-Apr. 4	201	141
		Not previously reported	521	261
	Provinces	Apr. 4-11	64	35
		Not previously reported	547	291

CHOLERA.

STRAITS SETTLEMENTS:	Singapore	Mar. 21-Apr. 4		13

PLAGUE—Insular.

HAWAII:	Honolulu	May 10		1
PHILIPPINE ISLANDS:	Manila	Mar. 21-28		6
PHILIPPINE ISLANDS:		Mar. 28-Apr. 4	6	6

CHOLERA—Foreign.

AUSTRALIA:	Brisbane	Feb. 1-28	5	2
BRAZIL:	Rio de Janeiro	Apr. 12-26		1
CHINA:	Hongkong	Mar. 27-Apr. 3	28	24
INDIA:	Bombay	Apr. 14-21		1,320
	Karachi	Apr. 4-19	372	340
ME¼ICO:	Mazatlan	May 14	1	

GLASGOW MEDICAL JOURNAL.

April, 1903. (Vol. LIX., No. 4.)

1. Can Anything be Done by the Medical Practitioner to Diminish the Frequency and Lessen the Mortality of Cancer of the Uterus? J. K. KELLY.
2. Three Cases of Different Forms of Congenital Syphilitic Diseases of the Eye Occurring in the Same Family. JAMES HINSHELWOOD.
3. Cases of Marked Dilatation of the Superficial Abdominal and Thoracic Veins Without Evident Cause. W. R. JACK.

1.—Kelly advises that patients complaining of any pelvic discomfort whatever, at or approaching middle life, should be examined. The early stage of cancer occurs either in the form of a small, hard patch or of a small ulcer, usually at the edge of the os externum. He states that it is too late when we have hemorrhage, pain and fetid discharge, and that the disease is well established when we have these symptoms. [T. M. T.]

2.—Hinshelwood advocates the use of mercurial treatment combined with full doses of syrup of iron iodide for the treatment of eye diseases due to congenital syphilis. He administers the mercury in the form of gray powder or inunctions. In syphilitic choroiditis no treatment will restore the patches of choroid which have been destroyed. Specific treatment will put an end to the activity of the disease as well as stop the progress. [T. M. T.]

3.—Jack reports a case of the condition, which was quite remarkable on account of the very excessive degree of dilatation of the superficial veins, and the almost complete absence of the physical signs usually accompanying the ordinary causes of obstruction of the vena cava within the thorax. There was no direct evidence of either aneurysm or thoracic tumor; there was little evidence of pressure beyond the condition of the veins; the Röntgen rays failed to demonstrate any internal lesion of the thorax. Thrombosis of the vena cava was a possible explanation. [T.M.T.]

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See Advertising Page 8

Vol. XI. No. 24 JUNE 13, 1903 $5.00 PER ANNUM

An Editorial Announcement.—With the appearance of this number the editorial management of the **Philadelphia Medical Journal** passes out of the hands of the present editorial staff. The reasons for this change are entirely administrative, but in announcing it the editor feels that it is only proper that he should state that in the period of two and a half years, during which the members of the present editorial board have conducted the **Philadelphia Medical Journal,** they have been actuated solely with the desire of conducting this Journal entirely in the interests of the medical profession and for the advancement of scientific medicine. Our aim has been to maintain a high standard of literary and scientific excellence, but it is not for us to say in this final word with what success we have attained this object.

The Journal will now pass to another city and to another business control, but of the aims and objects of the new management we are not empowered to speak. But, as those who will in the future be identified with this Journal are already widely and favorably known to the medical profession, it is not necessary for us to do more than express a wish for their continued prosperity. The members of the editorial staff in resigning their functions would simply call attention to the fact that they have been responsible for the editorial control alone of this Journal, and they relinquish their trust with the consciousness that they have discharged their duty with every effort to meet their literary and professional obligations. We think it is not inappropriate or unconventional that we should make this statement as a brief valedictory announcement.

The **Philadelphia Medical Journal** will now be consolidated with the *New York Medical Journal* under the present able editoral management of that paper. Although the publication office will be in New York City, we understand that a business and editorial office will be maintained in Philadelphia and the consolidated **Journal** will continue a vigorous editorial and business connection with this city.

Abdominal Wounds in the Insane.—A very extraordinary paper on "Two Cases of Abdominal Surgery in the Insane from Attempted Suicide," is contributed by Robert Jones, F. R. C. S. to the April number of the *Journal of Mental Science.* Mr. (not Dr.) Jones is medical superintendent of the Claybury Asylum. The paper is extraordinary, not so much from the nature of the cases reported (although these cases were most interesting), as from the fact that a superintendent of an insane asylum puts himself on record as an expert in abdominal surgery. We think that most readers on this side of the Atlantic will regard this example of an all-round asylum superintendent as unique.

The first case occurred in a woman, aged 35, who was suffering with melancholia. One evening, with suicidal intent, she swallowed a hat pin, eight inches long and with a large beaded head. The superintendent thought he could detect the point of the pin through the abdominal wall, and, nothing loath, he immediately proceeded himself to do an abdominal section of the most heroic kind. This is described *secundum artem.* An incision was made from the xiphoid cartilage to the umbilicus, and the point of the pin was found to have passed through the wall of the stomach. It was pulled well out of the wound so that the stomach-wall was brought well into view. Mr. Jones hesitated at first whether or not to cut the shaft of the pin off, well up near the head, and thus leave the head within the stomach to be discharged *per vias naturales*, but he quickly decided to cut open the stomach and liberate the pin-head. This he did in a most masterly fashion. All the details of the operation and the toilette are given with the accuracy of a practised surgeon. On the second day, the insane patient being troublesome and nauseated, the wound opened, and the intestines protruded, but the superintendent was promptly equal to the emergency, and replaced the vagrant bowel. The patient recovered perfectly from the operation, but her mental state did not improve with this necessary but unusual treatment.

The second case, in an insane Arab, was not so fortunate, but not due to the fault of Mr. Jones. The patient attempted to eviscerate himself, and made a free incision in his abdomen, puncturing the bowel in several places. The superintendent, as in the former case, played the part of abdominal surgeon, but the case was most unfavorable, and the patient died.

We doubt if anthing like this could occur in any of our American Asylums. The hospital superintendents have sometimes been roundly criticised for their alleged indifference to the advances of practice, but surely Mr. Jones, superintendent of the Claybury Asylum, shows that he is up to the times—certainly as far as abdominal surgery is concerned. He is also a good alienist, we judge, for he reports the mental features of his cases with some precision. In view of the fact that the surgeons are monopolizing more and more the field of medical practice, we are glad to see such an emphatic and practical protest come from Claybury Asylum. Mr. Jones has demonstrated that he proposes to be a superintendent in every sense of the word, and if his insane patients persist in ripping open their abdomens, he will sew them up again as a contribution to psychiatry.

Perforation in Typhoid Fever.—The profession is now unanimously agreed upon the fact that the so-called clinical picture of perforation in typhoid fever is in reality the picture of a general peritonitis, and that the recognition of such classical symptoms has come far too late to afford us a chance of saving the life of a patient. Time and time again the onset of perforation has been recognized by a sudden change for the worse in a patient's condition, by an hourly increasing leukocyte count and by abdominal pain whch may be severe or slight, and general or localized. If we take into account a large number of perforations, these symptoms would appear to be valuable, but unfortunately not conclusive. The patient may show no appreciable change in pulse, temperature or respiration, but, with the symptoms we have detailed, together with that indefinable clinical instinct upon which the physician of experience comes to place considerable reliance, it is often possible to arrive at an early recognition of this complication. The physical signs of the abdomen may prove negative, but usually tenderness can be found and some muscular rigidity on the affected side. The obliteration of the liver dulness anteriorly is not always present, and vomiting, while a symptom of value, is frequently found wanting. The importance in the point of view of surgical intervention of the early recognition of perforation is apparent. A number of methods have been suggested of which, perhaps, the simplest is the best; that is, the simple closure of the ulcer, by invagination, thorough cleansing of the general abdominal cavity with normal saline solution, provided there has been a general extravasation of intestinal contents; or a thorough rubbing with gauze pads and without irrigation if the escape has been localized. Following this, drainage should be instituted and the infected portion guarded from the general peritoneal cavity by means of gauze packing. The operation, if performed expeditiously, should not consume much time nor prove *per se* a source of great danger. The unfortunate aspect of many of these cases from the point of view of prognosis is the extremely lowered vitality of the patient and the inability of the damaged tissues to excite an inflammatory reaction necessary to healing. Truly has it been said that the chapter on perforation in typhoid fever must be rewritten. This fact itself is an evidence of our increase of diagnostic acumen. It has been stated that three per cent. of all fatal cases of typhoid fever are due to perforation. It is highly probable that this percentage is too low, and that with improved clinical methods we shall be able to prove that a number of fatal cases ascribed to the toxemia and other causes have been, in reality, due to perforation.

The Typhoid Epidemic in Philadelphia.—During the past year Philadelphia physicians have been face to face with a great epidemic of typhoid fever. Unlike the summer of 1898, when our city hospitals were filled with the sick soldiers, the victims of this disease contracted in our Spanish war, the present malady has been of alarming severity and of a very high death-rate. Dr. F. S. Crum, writing in the *Medical Record* of June 6, has found a considerable decline in the death-rate during the last six-year period from the statistics of Providence, Rhode Island, as collected duing the past eighteen years. From the figures which showed this decline he concludes that medical treatment has had more to do with this decreased mortality than sanitary science. In other words, he has fallen into the error of so many statisticians of judging from the death-rate alone and not taking into account the severity of the epidemic. We have pointed out on several occasions in these columns the necessity of observing the well-known fact that epidemics of any and all diseases are cyclical in their nature. There is a period of low mortality which gradually increases until the maximum is reached and then, as gradually, declines. So universally does this seem to be true that the results, if we except diphtheria, seem to be quite independent of treatment. Notwithstanding the known severity of the typhoid infection in the present epidemic, we do not feel satisfied with many phases of our knowledge of the treatment of this disease and our means of recognizing that dreaded complication, perforation; and further, having recognized perforation, are we at all gratified with the results of even early surgical intervention.

Lord Kelvin's Biology.—It is hardly fair to judge the opinions of a scientist by what is printed in the newspapers about them; but, if he is not misquoted, Lord Kelvin (Sir William Thomson that was) has been delivering himself of some judgments that will at least attract attention by their startling lack of reserve. As quoted in the New York *Tribune*, Lord Kelvin has been discussing that never-to-be-ended problem of creative design. There is no problem that lends itself so readily to dogmatic statement, but surely a scientist of Lord Kelvin's stature should avoid the pitfalls of hasty generalizations and inappropriate illustrations. For instance, the noble lord says that "modern biologists are coming once more to a firm acceptance of a vital principle," and goes into a general denunciation of the view that the phenomena of life can be explained entirely by what we might call the physiology of matter. If modern biologists are accepting a "vital principle," in the old sense or non-sense of that term, we had not yet heard of it.

Lord Kelvin is particularly unfortunate in his use of illustrations. "Is there anything so absurd," he says, "as to believe that a number of atoms by falling together of their own accord could make a crystal, a sprig of moss, a microbe, or a living animal?" He then perceived, when too late, that a crystal is formed in precisely that way—i. e., by the falling together of a number of atoms—and he attempted with ill success to explain the fact away. But facts are facts; and a crystal, which represents nature's first attempt at organic matter, was an unfortunate obstacle in the way of Lord Kelvin's metaphysics. But this old doctrine of design, with its long train of special creations, is as old as the race, and has been responsible for many erroneous conceptions of nature. It is odd to see Lord Kelvin perpetuating them.

Injuries of the Head in Labor.—Injuries of the fetal skull in labor are usually the result of instrumental interference or pelvic contraction. In the use of the forceps not infrequently a vicious grasp of the head results, either because of the inaccessible position of the head or because of the carelessness or ignorance of the operator. Before the application of the blades it is most important that an accurate diagnosis of the fetal position be made. The head may rest in one of four possible positions, namely, in the right oblique diameter, in the left oblique diameter, high up transversely, or low down in the conjugate. In this country the general teaching is the cephalic application of the blades, that is, to the sides of the fetal head in order to grasp the latter in its smallest diameter. This method necessitates the rotation forward of one of the blades, that corresponding in name to the oblique diameter in which the fetal head is resting. In transverse positions of the head this rotation is impossible and a vicious grip results, the head being seized in its larger diameters; in anteroposterior positions the rotation is unnecessary. Serious compression of the skull results in improper gripping of the head, and not infrequently fractures are so produced. In forceps-operations in minor degrees of pelvic contraction, even when the application of the blades is perfect, a fracture of the skull may result from the extreme compression which becomes necessary in order to draw the head through the contracted channel. In these cases the fracture partakes more of the nature of a *contre-coup* and appears not at the point of application of the blades, but over the forehead or in the occipital region. There is another variety of fracture, the so-called "spoon-shaped depression" of the skull, that results from pressure of the ischial rami upon the descending head. This is an unusual form of fracture. Much rarer than this even is the direct puncture of the skull produced by the spiny pelvis, in which, although the pelvic diameters may be normal, there is an unrecognized contraction at some point of the pelvic brim or below produced by a spinous projection, sharp and even knife-like.

This is an exceedingly serious condition, usually resulting fatally to both mother and child. Spontaneous fractures of the fetal skull in labor may result from congenital fragilitas ossium which is generally a sequel of intra-uterine rachitis. The study of the injuries of the fetal skull in labor is intensely interesting and instructive, and the subject is commanding considerable attention in the recent literature of obstetrics.

Correspondence.

RACE SUICIDE AND INFANT-MORTALITY.

By PEARCE KINTZING, M. D., of Baltimore.

To the Editor of the **Philadelphia Medical Journal**:

It does not seem to have occurred to any of the hysterical agitators of the so-called race suicide problem, an agitation started by a casual remark of the President, to apply to it the maxim of Poor Richard that a penny saved is two pence earned. All sorts and kinds of consequences have followed in the train of the President's remark, and numerous individuals, with the insatiable craving for notoriety so characteristic of a certain class of Americans, have fairly vied with each other in making themselves ridiculous by their endeavors to substantiate a proposition which is absurd on its very face. A Philadelphian of the latter class sent out letters of inquiry to numerous prominent physicians, asking them to assign a reason for the alarming paucity of births, and among the answers returned was one from a well-known scientist who stated in effect that the reason was the lack of a clear and deep-rooted conception of Christianity on the part of humanity, and that this was the sum and substance of the whole matter.

This view of the question is certainly as unique as it is narrow. It is totally oblivious of the fact that the sum total of human energy is a fixed amount for each individual, and that, if consumed in one way, can not be utilized in another. It takes no account of the enormous increase in the expenditure of energy which commercial enterprise necessitates, and which, in its reflexes, operating to some extent upon all classes, must of necessity cause a diminution of energy in some direction, and that one of the results of the times has been an increase in sterility and a decrease in procreative power, as well as a diminution of carnal desires on the part of both men and women. A broader life for the one sex, and a life replete with work, worry and excitement, ending in bodily fatigue and mental exhaustion, for the other, can not fail in the long run to lessen both capacity and desire. Indeed, one of our foremost medical writers and teachers is wont to tell his students that the way to escape the snares of Venus is by hard work. And where is the hard worker who is not ready to acknowledge the logic of this proposition?

The above view would effectually account for race suicide among the teeming hordes of India and China, and would stamp our own Polish Hebrews and Hungarians as our most exemplary Christians. Personally, we are unable to see either vice or virtue exemplified in large families *per se*. But, further than this, it impresses us that a man who views his wife as his private incubator, is in urgent need of moral reform, whatever may be the state of his Christianity. It is, in effect, to excuse one's lack of self-restraint on the specious and egotistical plea of the necessity for continuing the species.

It seems not to occur to at least some of these investigators and respondents that children are moral responsibilities, and that it is decidedly immoral to bring into the world more children than their progenitors can properly care for. And, second, we may say, though this postulate may startle the thoughtless, that it is not only immoral, but a crime for persons with certain constitutional vices and deformities to beget children, when there is more than a reasonable probability of the transmission of these defects, even though such persons be legally married.

What we need is not more children, but better children. Let us state the question as a problem in economics. The average number of births per annum, in the city of Baltimore, is 8,700. The average annual number of deaths of infants under five years of age is 3,700, which proportion is a little better than the average for cities in general. Let us say that, of every 100 children born, 43 die before they reach the age of five years.

Now let us multiply the cost of each child by the infinite number which represents the nameless children, who did nothing but cost, and add thereto the sufferings, the griefs, the maladies, the irreparable injuries to maternal health—for, though child-bearing be physiological, we venture to say that not one birth in five leaves a woman whole and sound—and then ask ourselves which is the more logical and rational procedure, from an economic standpoint, to save a larger percentage of what we have, or to increase the product and maintain the old rate of waste, even though both procedures lead to the same ultimate result.

That by far the greatest rate of infant-mortality is among the poor and ignorant, will not be disputed, and that this mortality of infants far exceeds 50% of the births, is patent to the casual observer of statistics. Hence the well-to-do, with his three or four children, does more to continue the race than does his poverty-saddled neighbor, with six or seven. Further, these three or four, being better nourished, better clothed, better educated, are in eminently better position to enhance the co-efficience of race value, and consequently are more desirable products, than the 50% remnant of the six or eight. Nevertheless, it is chiefly against the rich that the charge of race suicide has been made, whereas the only races that have perished off the face of the earth so far as we are able to recall, were aboriginal savages. That physicians are doing all in their power to lessen this frightful waste, we are ready to admit; and that their ability to alleviate the conditions is slowly but surely augmenting, we do not deny, but the fault lies outside of the field of their energies, and so long as a clear waste of forty-three per cent. exists in any business, we assert that there is urgent need of reform, and, when applied to the race production business, the need is so palpable, so striking, that it ought to bring shame and consternation to our hearts, if it be not, forsooth, sufficient evidence to convict the whole race of manslaughter.

If now but a tithe of the wasted energy represented by this useless production, and a moiety of the total cost in dollars and cents, were spent in teaching the race how to rear the quota of children now provided by nature, in teaching the mothers among the poor child-hygiene and child-feeding, then our efforts as physicians would avail us somewhat both morally and physically. What can blunt the sensibility of the moral sense of an ignorant mother more than to see child after child, which she has brought into the world, ruthlessly and purposelessly perish?

I once heard a public speaker proclaim that in Philadelphia a youth could fit himself for the practice of science or art within reach of his ability, with no other expense than his own maintenance. Now, I ask, if child-bearing and child-rearing are the most important ends and aims of existence, where are our girls or our women taught the simplest, the most fundamental principles of that art? Where may such knowledge be systematically acquired, either free or for value rendered. Surely not in our schools, unless some of the drivel contained in such books as "Six Weeks in Physiology" might, by courtesy, be so denominated.

Even where puerile attempts to impart such instruction have been made, what class of people have been the recipient? The very class which stands least in need of it, the well-to-do class, while the fifty-per-cents are left to struggle on in outer darkness. All this science-getting is left to remorseless nature and unerring mother-instinct, and physicians know only too well how unerring is this instinct.

Let us begin by teaching mothers how to feed their offspring. The French are at this time essaying systematic instruction in this field, but can we afford to stand idly by and await the result? We know that physicians are doing all within their power, but that power is not rich enough in opportunity nor broad enough in scope, to meet the requirements of the case.

Let us do more, and 't were well 't were done quickly.

Reviews.

Practical Points in Nursing. For Nurses in Private Practice. With an Appendix containing Rules for Feeding the Sick; Recipes for Invalid Food and Beverages; Weights and Measures; Dose List; and a full Glossary of Medical Terms and Nursing Treatment. By Emily A. M. Stoney, late Superintendent of the Training School for Nurses, Carney Hospital, South Boston, Mass. Third Edition, Thoroughly Revised. Philadelphia, New York, London; W. B. Saunders and Company. 1903.

This excellent book, now thoroughly up-to-date, deserves commendation. It will prove of decided value even to the best-informed trained nurse. In its present form it is a good book for reference, to be consulted in emergency as well as during leisure moments. Though containing some statements that will hardly pass unchallenged by the experienced physician, it can still be recommended as a most careful, thorough and modern book on nursing. [M. O.]

Mucomembranous Enterocolitis. Symptoms, Complications, Etiology and Treatment. By Maurice de Langenhagen, M. D., Consulting Physician at Plombières, Vosges, France. London, J. and A. Churchill, 1903.

This exceedingly thorough monograph, by a man who well understands his subject, is most concisely written. In fact, the full details of the symptomatology, complications, clinical forms, prognosis, diagnosis, etiology and treatment of mucomembranous enterocolitis cover just a little over 100 small pages. The treatment especially is most fully discussed, showing the author's vast experience with this morbid condition. A complete bibliography is appended.
[M. O.]

News and Notes.

AMERICAN

PHILADELPHIA AND PENNSYLVANIA.

New Hospital Buildings in Philadelphia.—Plans have been published for the new Municipal Hospital, on the property recently purchased by the city in the Thirty-third ward. The building will be 3 stories high, 252 by 40 feet, with 2 wings, 28 by 129 feet and 36 by 52 feet. It will cost about $150,000.—The Presbyterian Hospital has purchased 2 properties at Thirty-ninth and Filbert streets for $17,000, upon which new hospital buildings are to be erected.—Plans have also been drawn for a new seven-story building, to be erected at Eighteenth and Cherry streets, by the Medico-Chirurgical Hospital. The new building, which will cost about $250,000, will be 116 by 40 feet. Improvements are also to be made to the present hospital building.

Lock Haven Hospital, Pa.—The new building of this hospital, which has just been completed, was dedicated June 2. An address was delivered by Dr. R. J. Flickinger.

Board of Public Education, Philadelphia.—Dr. Charles S. Turnbull has been appointed a member of the Board of Public Education, taking the place of the late Dr. T. B. Morton. Dr. T. H. Buchanan has also been made a member of this board.

The Health of Philadelphia.—During the week ending June 6, there was an enormous increase in the number of cases of typhoid fever reported, 315 cases, with 26 deaths, as compared with 264 cases, with 27 deaths, during the week previous. There was also an increase in the number of scarlet fever and diphtheria cases reported, 95 cases of scarlet fever, with 2 deaths, as compared with 50 cases, with 5 deaths, during the preceding week, and 66 cases of diphtheria, with 7 deaths, as compared with 60 cases, with 7 deaths, during the week before. There were but 31 cases of smallpox reported, with 4 deaths, as compared with 41 cases, with 7 deaths, during the week previous. Of the typhoid fever cases reported the greatest number, 58, occurred in the Twenty-eighth ward, while 27 cases were in the Thirty-eighth ward. An epidemic of typhoid fever is also reported at Green Hill, a suburb of York.

Harrisburg Academy of Medicine.—Dr. Alfred Stengel, professor of clinical medicine in the University of Pennsylvania, delivered an address before the Harrisburg Academy of Medicine, May 29, upon the History of the Diseases of the Stomach.

Society Meeting Next Week.—The following society will meet next week at the College of Physicians, Philadelphia, at 8.15 P. M.: Philadelphia County Medical Society (business meeting) on Wednesday evening, June 17.

City Hospital, McKeesport.—To offset the cuts made by Governors Stone and Pennypacker in the City Hospital's appropriations, aggregating $15,000, McKeesport workmen have offered to assess themselves twenty-five cents each for four months in order to make up this amount, which is needed by the hospital.

NEW YORK AND NEW JERSEY.

Pasteur Institute, New York City.—During the month of May 23 cases of rabies were reported by the Pasteur Institute. This makes 172 cases occurring between January 1 and June 1, in New York City.

Scarlet Fever on the Columbia.—A number of scarlet fever cases were again discovered on the receiving ship *Columbia*, June 6.

Medical Society of New Jersey.—The next annual meeting will be held at Asbury Park, June 23 to 25.

WESTERN STATES.

Pneumonia in Chicago.—The epidemic of pneumonia continues. In discussing the prevalence of the disease, Dr. Banks, U. S. P. H. and M.-H. S. says: "This record is little less than astonishing, and would seem to call for its inclusion among the diseases calling for special protective measures from the profession. Its communicability seems to be so well established that it should be held as warranting all the sanitary restrictions thrown around cases of tuberculosis. As an instance of its ravages in one group of persons, it may be mentioned that thirteen men, employés of the City Treasurer's office, have died from pneumonia during its prevalence in this locality."

Smallpox at Salt Lake City.—Over 50 cases of smallpox have been discovered in the southeastern part of Salt Lake City, Utah. The health officers believe nearly every family living in that section of the city has been exposed, and steps are being taken to quarantine the entire ward.

New Hospital for Poor Consumptives.—Plans are on foot for the establishment of a hospital for consumptives on the boundary between Arizona and New Mexico. The hospital will care for those who are unable to pay their own expenses, and no charge will be made for services of any kind. Dr. T. C. Bancroft, formerly of Kansas City, is at work on the plans for a hospital.

SOUTHERN STATES.

Annual Conference of Public Health Officers.—The first annual conference of the state and national public health officers, for which a call was recently issued by Surgeon-General Wyman, in accordance with the provisions of an act of Congress approved July 1, 1902, met at the New Willard Hotel, Washington, D. C., June 5. This being the first of these annual conferences, the representation of twenty-one states and the District of Columbia was very gratifying to the surgeon-general, who has taken a great personal interest in the success of the movement. The conference was presided over by Surgeon-General Wyman, and after the meeting was called to order Assistant Secretary of the Treasury Armstrong, on behalf of the government, welcomed the delegates and assured them that everything would be done to make their stay as pleasant and profitable as possible. He said that in the great work of improving the health conditions of the country co-operation between the states and between the states and nation was the secret of success, and he promised in the name of the national government to do everything to further this end. Surgeon-General Wyman, U. S. P. H. and M.-H. S., in his opening address, outlined the purposes of the conference and what it is hoped it will accomplish. He said the great end in view was closer association and union of effort between state and national health authorities. He then briefly described the system and workings of the United States Public Health and Marine-Hospital Service and suggested a plan of organization by which the work of the national and state health administrations might be co-ordinated and made more effective. This paper appears on page 963, in this journal. Dr. Foster, of California, gave a description of quarantine operations in that state, particularly in relation to the plague danger in San Francisco. He said that with the vigorous cleaning out of Chinatown the fear of another attack of this disease was rapidly disappearing. He attributed the success achieved to the hearty co-operation existing between the city, state and national health officers in endeavoring to stamp out the infection. Dr. Foster was followed in interesting talks by Drs. Townsend, Porter, Egan, Conniff, Bailey, Souchon, Young, Fulton, Baker and Woodward. At the suggestion of Dr. J. Y. Porter, of Florida, a telegram was addressed to the Florida legislature, expressing the hope of the conference that the act now pending before that body providing for the collection of vital statistics would receive favorable action. The conference then took a recess until afternoon, when the discussion of local health and quarantine conditions was continued, each representative explaining the sanitary laws and the method of carrying them out in his particular state. Among those who spoke were Drs. Westbrook, Hunter, McAlester, Probt, Smith, Swarts, Simons, Tabor and Cooper. The Conference adopted the following resolutions: Whereas, the Conference of the State Boards of Health of the United States with the Public Health and Marine-Hospital Service, having confidence in the earnest efforts and ability of the Governor and State Board of Health of the State of California acting in harmony with the Bureau of Public Health and Marine-Hospital Service thoroughly to eradicate bubonic plague heretofore existing in the City of San Francisco, do resolve that in the judgment of this Conference, so long as the present effective work is continued, there is no need for quarantine restrictions of travel or traffic to or from that state. Resolved that the methods of co-operation between national and state health authorities suggested by the presiding officer, meets the approval of the Conference. A committee was also appointed to draft a resolution expressing regret at the death of Dr. Mathew Gardner, late President of the State Board of Health. The various states were represented by the following delegates: California, Dr. N. K. Foster; Connecticut, Dr. J. H. Townsend; Delaware, Dr. E. W. Cooper and Dr. Alex. Lowber; Florida, Dr. J. Y. Porter; Illinois, Dr. J. A. Egan; Iowa, Dr. R. E. Conniff; Kentucky, Dr. William Bailey; Louisiana, Dr. Edmond Souchon; Maine, Dr. A. G. Young; Maryland, Dr. J. S. Fulton; Michigan, Dr. H. B. Baker; Minnesota, Dr. F. F. Westbrook; Mississippi, Dr. J. F. Hunter; Missouri, Dr. A. W. McAlester; Ohio, Dr. C. O. Probst; Oregon, Dr. Andrew C. Smith; Pennsylvania, Dr. Benjamin Lee; Rhode Island, Dr. G. T. Swarts; South Carolina, Dr. T. Grange Simons; Texas, Dr. George R. Tabor; Utah, Dr. T. B. Beatty; West Virginia, Dr. Samuel F. Myers; District of Columbia, Dr. William C. Woodward.

Maryland Public Health Association.—The annual meeting was held at Annapolis, June 4 and 5, under the presidency of Mr. H. A. Brauns, of Baltimore. Among the papers read were those on the Restriction of Typhoid Fever, by Dr. W. H. Welch, of Baltimore; Typhoid Fever and Malaria, by Dr. J. S. Fulton, of Baltimore, and Mosquitoes and Malaria by Dr. W. R. Stokes, of Baltimore. The following officers were elected for the ensuing year: President, Dr. T. B. Owings, Ellicott City, Md.; vice-president, Dr. F. H. Thompson, Annapolis; secretary, Dr. John S. Fulton, Baltimore, and treasurer, Dr. William R. Stokes, Baltimore.

MISCELLANY.

Bubonic Plague.—A letter from the United States Minister, dated May 12, states that there had been 10 cases of bubonic plague up to that time, most of the cases having appeared in Callao. At that time there were no cases in Lima. Callao was officially declared free from plague June 7. It is believed that the disease was imported from Australia or India in cargoes of rice and wheat.—A case of bubonic plague has been officially reported at Port Said, April 27, the patient being a European. Several cases of the disease have also been reported in various districts of Egypt, including Minieh, since March 28.—The presence of the plague was officially reported, May 27, at Iquique, Chile. Three new cases occurred June 6, one of which ended fatally. A special commission has been appointed by the Governor to investigate this outbreak. Seven cases of supposed bubonic plague have been reported in the Las Vacas district, but this has not yet been confirmed.—One death of bubonic plague was reported at Honolulu, H. I., May 10.—The Governor of Mauritius has reported 2 cases of bubonic plague during the week ending April 23, one of which terminated fatally.—Another case of plague developed at Mazatlan, Mexico, May 19.

Bee Stings for Rheumatism.—Dr. Perc, of Marburg, delivered an address last week on the healing properties of bee stings in articular and muscular rheumatism. He pointed out that it has been known from time immemorial as a cure among the poorer classes of people, who have no faith in medical science. He has tested it thoroughly and proved its efficiency in 500 cases. If a patient is suffering from rheumatism, the stung part does not swell at first, not until the bee poison is frequently introduced. Then the rheumatic pain gradually vanishes. Dr. Perc allows his patients to be stung at first by a few bees and then gradually increases the number. In one sitting he allows seventy bees to sting the patient. He describes the case of a woman who suffered excruciating tortures from rheumatism. In the course of treatment she was stung 6.952 times, and this resulted in a complete cure.

Yellow Fever in Mexico.—Under date of June 4, yellow fever was reported as having appeared at Progreso.

Obituary.—Dr. A. W. Brown, at Cottage City, Mass., June 1, aged 89 years.—Dr. Fiske Holbrook Day, at Lansing, Mich., June 2, aged 77 years.—Dr. J. R. Straw, at Ashland, Wis., June 3.—Dr. J. H. Byrne, at Winchester, Va., June 4, aged 74 years.—Dr. P. Cassidy, at Shawneetown, Ill., May 15, aged 43 years.—Dr. William C. Eichelberger, at Jackson, Tenn., May 18, aged 62 years.—Dr. Clinton Henry Lubbock, at Alameda, Cal., May 20, aged 42 years.—Dr. James Melvin Sims, at Marion, Ill., May 16, aged 33 years.—Dr. Walter Byron Sherman, at Eagle Cliff, Ohio, May 19, aged 72 years.—Dr. George C. Synon, at Chicago, Ill., May 21, aged 45 years.

FOREIGN.

GREAT BRITAIN, ETC.

A Remarkable Case of Multiple Pregnancy.—In the *Medical Press and Circular*, (May 27, 1903), Drs. J. W. Kerr and H. Cookman, of the West African Medical Staff, report the birth of 6 children at one confinement. They were called to attend a native woman at Accra, Gold Coast, West Africa, and photographed the 6 infants soon after birth. Five of the children were boys, and they had 4 placentæ between them. The girl and one of the boys had a placenta each, while the remaining 4 children were attached by a tube to 2 placentæ. Each placenta was delivered immediately after the birth of the children to which it was attached. Labor lasted 4 hours, the births following one another rapidly. One child died when 2 days old, 4 when 3 days old and the sixth when 4 days old. The mother, though much exhausted, recovered. At her first confinement she had given birth to 4 children. At her second confinement, to 3 children, at her third confinement to 3 children more, and at this, her last, confinement of 6 children, making a total of 16 children to 4 confinements.

University of London.—Dr. Philip H. Pye-Smith was elected vice-chancellor of the University of London, May 20, to fill the vacancy caused by the resignation of Dr. Robertson. Dr. Pye-Smith is the second medical vice-chancellor since the foundation of the University, the only other having been Sir James Paget, who held office from 1893 to 1895. Dr. Pye-Smith was educated at Mill Hill School and on the Continent, and received his medical education at Guy's Hospital, afterward becoming M. D., London, and F. R. S. In later years he has been visiting physician to Guy's Hospital and lecturer on physiology and medicine in Guy's Hospital Medical School.

CONTINENTAL EUROPE.

Bubonic Plague in Berlin.—Dr. Milan Sachs, of Vienna, who has been engaged in the isolation of plague bacilli in the Institute of Infectious Diseases, died June 6, of bubonic plague, in the isolation department of the Berlin Hospital. In consequence of his death, Dr. Koch's bacteriological laboratory has been quarantined, and the Government has forbidden further experiments with plague bacilli, the risk of spreading infection being considered more dangerous to the public health than is justified by the knowledge gained in studying the deadly microbes. Dr. Sachs was sent to Berlin by the Austrian Government and was expected to take charge of the sanitation in Bukowina after his return from Berlin.

Chemical Congress, Berlin.—At the meeting held June 7, Professor Proskauer, of Berlin, read a paper on the sterilization of drinking-water with ozone. He reported his exhaustive experiments in the purification of water impregnated with cholera, typhoid and dysentery germs. He said that the ozonizing plant was cheaper than the sand filtration system.

University Notes.—**Bonn:** Dr. Rudolf Rosemann, of Greifswald, has been appointed professor of physiology.—A monument by H. Everding in memory of the well-known chemist, Dr. Kekule, was unveiled, June 9.—**Budapest:** The University celebrated the 133d. anniversary of its foundation, May 13. The dean of the medical faculty distributed a number of prizes on this occasion.—**Dorpat:** Dr. N. Saweliew has been appointed professor of internal medicine.—**Franzensbad:** A monument in honor of Dr. von Frerichs was unveiled May 16. An address was delivered by Dr. Deissl.—**Genoa:** Dr. Ugolino Mosso has been appointed professor of materia medica and pharmacology.—**Munich:** Dr. Otto Walkhoff has been appointed professor of dental surgery.—**Prague:** Dr. A. Przibram, director of the first medical clinic in the German University, recently celebrated the completion of 30 years as a professor.—**Strassburg:** Dr. M. B. Schmidt has become editor of the *Zentralblat für Allgemeine Pathologie und Pathologische Anatomie*, replacing the late Dr. von Kahlden, of Freiburg.—**Vienna:** The monument in memory of the late Dr. Karl Langer von Edenberg, professor of anatomy, was unveiled May 24, in the court of the university buildings. The bust of the late professor is the work of A. Canciani. An address was delivered by Dr. Toldt.—It has now been announced authoritatively that Dr. Flügge declined the post of professor of hygiene.

Obituary.—Dr. S. Hadra, the well-known surgeon died in Berlin, May 20, aged 47 years, after a prolonged illness.

The Latest Literature.

BRITISH MEDICAL JOURNAL.

May 23, 1903. (No. 2212.)

1. Remarks on the Influence of Wind on Phthisis. W. GORDON.
2. A Case of Pyopericarditis, Pyopneumopericardium, Pneumococcus Pyemia. W. KNOWSLEY SIBLEY. With Notes on the Operations; W. ARBUTHNOT LANE, and on Anesthetics. GEORGE ROWELL.
3. A Case of Infective Endocarditis Successfully Treated by Rectal Injections of Antistreptococcus Serum. DYCE DUCKWORTH.
4. Traumatism as a Factor in the Etiology of Pulmonary Tuberculosis. JAS. WEIR.
5. The So-Called Anthracosis and Phthisis in Coal Miners. R. S. TROTTER.
6. The "Physiological" Differences Between the Two Sides of the Chest in the Physical Signs Obtained over the Upper Part of the Lung. J. EDWARD SQUIRE.
7. Consumption in the Navy. W. E. HOME.
8. Observation on Empyemata in Children. P. S. BLAKER.
9. Six Cases of Empyema. O. F. ROWLEY.

1.—Gordon concludes that west and south-west **winds** in Devonshire raise the death-rate from **phthisis** amongst the population exposed to them and injure those who have already developed the disease. This bad influence is probably due to the fact that these winds are the prevailing strong, wet winds of the district. It is reasonable to believe that strong, wet winds anywhere may produce similar effects. These bad effects may be explained by the chilling and depressing nature of these winds and by their tendency to excite bronchial catarrh in those exposed to them. [J. M. S.]

2.—Sibley, Lane and Rowell report the case of a boy, aged 16 years, who developed a sore throat which was followed, in a day or two, by the majority of the symptoms, but without the physical signs of **pneumonia** of the left base. On the eighth day after the onset of the disease an apparent crisis occurred, but in a few hours the temperature rose again and showed a morning fall and an evening rise for 3 days; then came a period of 8 days in which the temperature was subnormal, but in which there was a pulsus paradoxus. There were no heart murmurs. Then a left **empyema** was opened without relief to the general symptoms. Ten days later the **pericardium was opened**, but with only slight improvement, followed by a more irregular temperature and death in 13 days, 23 days after the original operation. The immediate cause of death was hemorrhage from the heart due to the rupture of one or more small abscesses in the walls of that organ. The bacteriological examination showed the presence of the pneumococcus in great numbers in the blood, death being the result of a general pneumococcus pyemia. The heart sounds heard in this case after the pericardium was opened were accompanied with a peculiar, loud, metallic resonance, such as would remind one of the resonance accompanying sounds in a small cave. [J. M. S.]

3.—Duckworth reports the case of a boy, aged 15 years, who had been ill for 2 days, complaining of rigors, universal pains and a rash on his limbs and trunk. The rash was like that of erythema nodosum or erythema multiforme. Later an eruption of herpes appeared on his left cheek, and for some days after that there were daily rigors and occasional fresh eruptions some of which were petechial; there was vomiting at intervals. Twenty-one days after the beginning of the illness treatment was begun with fresh yeast, 2 or 3 tablespoonfuls being given in water 2 or 3 times a day. Ten cc. of antistreptococcus serum were injected in the left flank, without result. Later an effusion developed in the left knee, a presystolic murmur, followed by a systolic murmur, was heard over the heart. Then mixed antistreptococcus serum was used as rectal enemata, 10 cc. being given daily. In a few days there was decided improvement. The patient recovered, and his heart sounds were found to be normal 3 months after the ending of the attack of **infective endocarditis.** [J. M. S.]

4.—Weir reports a case which he believes is a distinct case of **pulmonary tuberculosis following slight injury of the thoracic walls.** [J. M. S.]

5.—Trotter says that, though all coal miners show a blackening of the lungs due to the inhalation of coal dust, smoke and soot, this is by no means due to a diseased condition of the lungs, nor does it seem to be a factor in the causation of lung disease. **Phthisis,** either fibrous or tuberculous, as an occupational disease **among coal miners** is very uncommon; in fact, he says, that phthisis is more uncommon in coal miners than among any other class of workmen in the country. He questions whether the presence of coal dust and soot in the lungs of miners has any influence in the production of phthisis, and he is of the opinion that **anthracosis** as a disease does not exist, but that it is really an epiphenomenon. He is inclined to believe that the comparative rarity of phthisis among coal miners is probably largely due to the protecting influence of coal dust and soot. [J. M. S.]

6.—Squire finds the following peculiarities of the **physical signs at the right apex** as compared with the left. The percussion note is slightly less resonant and higher pitched; the breath sounds are louder, and the expiratory portion of the sounds is more marked; the vocal resonance and the vocal fremitus are more marked. These modifications are probably due to the direction and form of the main bronchus. [J. M. S.]

8.—Blaker reports 81 cases of **empyema in children.** He believes that an empyema is an empyema from the beginning. He divides the cases into (1) acute or primary in which the signs of fluid in the chest develop simultaneously with those of pneumonia, and (2) late or secondary in which the signs of fluid develop after the attack of pneumonia. Examination of the pus was made in 69 out of the 81 cases. In all but 4 of the 69 the diplococcus was found, either pure or in combination with some other organism. The prognosis depends on the age of the patient; the younger the less the chances of recovery. The bacteriology must be taken into account in making a prognosis; mixed infections or pure staphylococcus or streptococcus infections are more fatal than pure pneumococcus infections. Out of the 81 cases there were 31 deaths. Pericarditis was demonstrated at autopsy in 7 patients; purulent peritonitis in 3; suppurative mediastinitis in 2. Bronchopneumonia was especially fatal, particularly in patients under 2 years of age. All the patients were treated by opening the pleural cavity and draining it. Double empyema should be operated on in 2 steps, one side being opened at a time. A longer interval than 3 days should be allowed to pass between the 2 operations. In acute cases it is a mistake to open the chest because some thin, purulent fluid is withwrawn by the exploring needle, better wait until the acute stage of the affection has passed away. The after-treatment requires careful watching, the tube should be gradually shortened and after the first 2 days should be removed each day, washed, shortened and replaced. Washing out the pleural cavity is useful for the removal of thick pus or flakes of lymph. The author uses a solution of tincture of iodine, one dram to one pint of water. [J. M. S.]

9.—Rowley reports 6 cases of **empyema.** [J. M. S.]

LANCET.

May 23, 1903.

1. An Address Entitled, Some Reflections, Mainly Ethical, on the Present Position of Operations in the Practice of Surgery. WILLIAM H. BENNETT.
2. A Lecture on the Tongue in Disease. W. HOWSHIP DICKINSON.

3. An Address on the Disposal of the Wounded in Naval Warfare. PHILIP N. RANDALL.
4. The Surgical Treatment of Pulmonary Hydatids. JOHN O'CONOR.
5. A Case of General Infection by a Nematode, Accompanied With Hypertrophic Gingivitis. J. DENCER WHITTLES.
6. A Case of Full-time Extra-uterine Pregnancy; Fetus Lodged in a Capsule of the Ovary in a Peritoneal Sac Resembling that of the Tunica Vaginalis. JAMES OLIVER.
7. Note on the Etiology of the Sleeping Sickness. ANNIBAL BETTENCOURT, AYERS KOPKE, JOSE GOMES DE REZENDE, JUN., and ANNIBAL CORREIA MENDES.
8. On a Case of Arterial Occlusion and Gangrene. ANDREW DUNLOP.
9. A Further Note on the Therapeutics of a 10% Solution of Sodium Cinnamate in Glycerine Injected Subcutaneously. LOVELL DRAGE.
10. Researches on Hibbertia Volubilis. JOHN REID.

2.—Dickinson contributes an article **on the tongue in disease.** After many observations he reaches the conclusion that dryness of the tongue means suppression of the saliva, and this implies some constitutional disturbance. Another important constitutional influence as telling on the tongue is pyrexia. Increased heat produces proliferation of the epithelium. Another influence bearing on the tongue is a local or mechanical one, want of friction, scour and wash, which goes with failure in the process of eating and deficiency of saliva. To these influences, lack of saliva, pyrexia and disuse, may be added inflammatory congestions. He then proceeds to sketch an outline of the several changes in the tongue which may be called symptomatic. He describes the dotted or stippled tongue which is characterized by an excess of epithelium on the papillæ either from overgrowth or insufficient removal. It occurs with any local disease which has not as yet gravely involved the entire system; when the tongue is dry it is of more serious import. He next speaks of the coated or loaded tongue, then the furred or shaggy tongue and then refers to the incrusted, brown and dry tongue, and the red, smooth and dry tongue. [F. J. K.]

5.—Whittles reports **a case of general infection by a nematode, accompanied with hypertrophic gingivitis,** which occurred in a woman, 19 years of age. The patient suffered from swelling of the gums consequent to treatment of the teeth at the Dental College, Birmingham. The hypertrophied condition of the gums had existed for 10 months when the patient came under observation. The author learned that she was very fond of dumb animals, especially dogs, and on further inquiry he was informed that she was in the habit of fondling and kissing a dog at home which had died the previous Christmas, about 2 months prior to his seeing her. An examination of a piece of hypertrophied tissue revealed complete or portions of nematodes in almost every microscopical section. On March 22, 1902, a blood examination revealed a slight increase in the number of leukocytes, with no increase in the eosinophile cells. About Christmas, 1901, an abscess developed over the strnum; in May a second one formed on the neck and then one upon the scalp. Many pustular swellings had occurred from time to time, but they did not appear to give the patient much inconvenience. On December 11, 1902, a pustule formed on the inside of the right cheek, the pus from which contained at least 10 nematodes. The nematode is described as a transparent object which can be readily overlooked in sections unless stained with methylene blue. The author contends that the skin lesions in this case were probably due to infection by these nematodes. [F. J. K.]

6.—Oliver reports the fifth case of **full-time extra-uterine pregnancy** which he has operated upon and all successfully. In the present case the amenorrhea had covered a period of 11 months. In 2 of the 5 cases the fetus arrived at maturity without one symptom differing from those of the normal uterine pregnancy. In 2 only was there exclusion of decidual membrane *per vaginam.* In 3 the fetus and placenta were lodged in the substance of the broad ligament. [W. A. N. D.]

7.—Bettencourt, Kopke, Gomes de Rezende and Mendes, members of the Portuguese Commission, contribute an article **on the etiology of sleeping sickness.** Their first report, dated June 9, 1901, seemed to guide them in considering the disease of infectious nature, and 2 months afterward they proved the existence of a diplostreptococcus in the cerebrospinal fluid *intra vitam* (6 positive results in 9 cases); in the subarachnoid exudate (13 times in several necropsies which were performed). They are inclined to include this micro-organism in the streptococcus group and propose to give it the name of "hypnococcus." Castellani has described a bacillus as the probable cause of this condition and recognizes differences between this organism and the one described by the Portuguese Commission. They maintain that all the characteristics which Castellani says distinguish the two germs do not exist, and consequently the difference between them does not exist either. On the contrary, there is a marked agreement in various points of the description. Finally, they conclude that there is not the slightest doubt that Castellani's bacterium is the one which they described, and that his investigations are a complete confirmation of theirs. They also state that the priority in the question is relatively a secondary one. The work of the English Commission, done quite independently and in quite different and distant regions, does not in the least lose its merit or the important significance for the clearing up of the etiology of sleeping sickness. [F. J. K.]

8.—Dunlap reports **a case of arterial occlusion and gangrene,** which occurred in a retired army officer, 53 years of age. In the summer of 1899 he complained of a paniful redness and swelling affecting the ball of the left great toe, at first resembling Raynaud's disease, later running up the dorsum of the foot. In the spring of 1900 a black spot formed on the under part of the distal phalanx of the great toe and another on the tip of the little toe. In September of the same year there was a good deal of constitutional disturbance, due, apparently, to septic absorption. In October, as the line of demarcation seemed to be stationary, the ganrenous toe was removed by cutting through the first phalanx. The patient made an uneventful recovery and remained in excellent health until the spring of 1902. In April of this year he complained of pain in the right thigh and right leg, which was paroxysmal in character, and later spots of gangrene on the right foot developed. Some of the gangrenous areas were removed by operation; and healing did not occur with the usual rapidity. About the middle of February the right femoral vein became occluded, and, a fortnight later, a similar condition developed on the left side. The patient's heart appeared normal, and the urine was free from albumin and sugar. There was no evidence of atheroma or sclerosis in any of the accessible arteries. About the middle of April the disease seemed to have entered upon another period of quiescence. [F. J. K.]

9.—Drage contributes a **further note on the therapeutics of a 10% solution of sodium cinnamate in glycerine injected subcutaneously.** He has seen this drug give excellent results quite recently in a case of pulmonary tuberculosis in a man, 28 years of age. The article contains a chart which illustrates the temperature curve in the case referred to. For a period the temperature conformed to the remittent ype, then to the intermittent type, later it was high and gradually reached the normal. The patient also gained flesh, improved in spirits, and there was a general continuous improvement in health until finally the cough disappeared. The author refers to a second case in which the issue was a most satisfactory one. He writes that the results of experience of the use of the drug so far have led him in the direction of the belief that in early cases of pulmonary tuberculosis a successful issue may be predicted with confidence, and that in all more advanced cases amelioration may be guaranteed with equal confidence. No treatment obviously can restore cells which are destroyed absolutely, and, if there are not sufficient cells remaining which are capable of performing their work, the organ of which these cells are a part can either not perform its functions at all or only in part. So long as healthy cells remain in an organ sufficient to carry on its work, just so long has treatment with sodium cinnamate or any other treatment a chance of preserving the life of the owner of the organ. The case of early tuberculous laryngitis mentioned in his first communication is arrested, and the patient is enjoying good health. [F. J. K.]

10.—Reid contributes an article on **hibbertia volubilis**. The parts of the plant used in his investigation were the fruit and the pistils which had been preserved by drying. By extraction with acetic acid and subsequent precipitation an alkaloid was obtained which is called dillenine; extraction of the residue with boiling alcohol takes up the oil; while, by boiling the residue with liquor potassæ, a solution of potassium dillenate is obtained, from which insoluble calcium or lead dillenate may be prepared and the acid eventually isolated. The internal administration of a dry precipitate in doses of less than one grain caused a lowering of the bloodpressure; the pupils became dilated and remained so for a few hours with disappearance of the power of accommodation. The oil has an irritating effect on the tongue and gullet. [F. J. K.]

MEDICAL RECORD.

June 6, 1903.

1. Perforating Gastric and Duodenal Ulcers: Unilateral Exclusion of Duodenum for Perforating Ulcers of Its Posterior Wall. ALBERT A. BERG.
2. Results of Preventive Medicine in Providence, R. I., 1885-1902. FREDERICK S. CRUM.
3. Fatal Gastric Hemorrhage, with Autopsy. MARSHALL LANGTON PRICE.
4. The Local Treatment of Acute and Chronic Gonorrhea. R. O. KEVIN.
5. Primary Report of a Successful Operation for the Radical Cure of Complete Prolapse of the Rectum of Sixteen Years' Duration in a Case of Primary Dementia. JOHN RUDOLPH KNAPP.

1.—Berg discusses **perforating gastric and duodenal ulcers**. He states that it is a mistake to think that all patients with perforation of any part of the gastro-intestinal tract suffer from collapse at the time of its occurrence. In cases in which the extravasation is slight or very slow, the symptoms of collapse may be entirely wanting. The degree of collapse is entirely proportional to the amount of, and the suddenness with which, the peritoneal cavity is soiled by the infectious gastric or duodenal contents. The symptoms of perforation are outlined in detail, and the results of this complication are described. As to the time at which operation should be performed, the earliest moment should be chosen after the diagnosis has been made. Ruptured ulcers situated on the anterior wall of the stomach and duodenum are very accessible, and their closure, as a rule, can be readily effected. Excision of the necrotic edges or excision of the entire ulcer, and then closure of the defect by suture, has not yielded as satisfactory results as simple inversion by suture of the ulcer into the lumen of the viscus. This may necessitate a considerable infolding of the wall of the stomach or duodenum; in the case of the former such infolding is of no material import; in the duodenum it may so materially narrow the lumen of the viscus as to necessitate its exclusion by gastro-enterostomy. It has been Berg's experience that a reduction in the diameter of the lumen of any part of the small intestine to one-half the normal does not result in any marked interference with the passage of contents through it. Retroperforation after inversion of the ulcer is not likely, provided the inverting sutures are passed through healthy tissues. It is to be remembered that the posterior duodenal surface is uncovered in the adult by peritoneum and, should a rupture occur in this position, the sutures will either not hold in the necrotic cellular tissues or through secondary infection will give way. In any event, duodenal fistula results. To avoid this the writer suggests the following procedure: When the diagnosis is made before operation, it is advisable to evacuate and drain the extravasated material and purulent exudate in the retroduodenal, retrocolic and perinephritic spaces through a lumbar incision, thereby avoiding any soiling of the peritoneal cavity. The orifice of the ruptured ulcer is tamponed with gauze. The abdomen is then opened, a gastrojejunostomy established and the pylorus constricted with a purse-string silk suture. The perforated duodenum is thus unilaterally excluded from the intestinal circuit, and leakage of the chyme through the fistula prevented. The procedure is better than a jejunostomy, for gastric digestion is not done away with by it. The duodenal rupture must necessarily close spontaneously by granulation, as there is nothing to leak out and keep it open. The clinical notes of 4 cases are included in this report. [T. L. C.]

2.—Crum states that in the 18 years (1885-1902) there have been 3,090 cases of **typhoid fever reported in Providence**. He presents a mortality table which shows that the ratio of deaths to cases has declined from 35.4 in the first 6-year period to 23.8 in the last 6-year period. From this he concludes that medical treatment has had more to do with the decreased mortality than sanitary science. The number of deaths from typhoid fever reported was larger per 10,000 of population in 1891-96 than in 1885-90, but the ratio of deaths to cases was so much less in the period 1891-96 that the typhoid fever death-rate was only 3.8 per 10,000 of population in 1891-96 as against 4.5 in the period 1885-90. During the same period of years there were 6,213 cases of diphtheria reported. The table shows that the ratio of deaths to cases has steadily declined, the average for the first period being 32.9% and for the last period 12%. On the other hand, diphtheria cases have increased, both in actual numbers and relatively to the population. Yet the death-rate has declined from 7.1 per 10,000 in 1885-90 to 3, or less than ½, in 1897-1902. During the same period under consideration there were 8,343 cases of scarlet fever in Providence, 700 of which terminated fatally. The ratio of deaths to cases reported shows an even more noticeable decline in the statistics of scarlet fever than in typhoid fever and diphtheria. From 15.7 deaths in every 100 cases to 2.9 is, indeed, a noteworthy result. Fatalities among scarlet fever patients were less than one-fifth as frequent in 1897-1902 as in 1885-1890. In the period 1891-1896 there were nearly as many cases reported as in the two other periods combined, but, in consequence of the reduced ratio of deaths to cases, the actual number of deaths was less in that period than in 1885-1890. The scarlet fever death-rate per 10,000 of population has fallen from 4.4 in the first period to 0.6 in the last. [T. L. C.]

3.—Price reports a case of fatal **gastric hemorrhage**, with notes of the autopsy. The stomach was markedly distended and showed a dark appearance through its walls, and on section fluid and partly clotted blood exuded to the amount of about 2 gallons. The weight of the whole being estimated at about 10 pounds. Near the cardiac end on the posterior surface there was a large sloughing mass, about 8 cm. long, 5 cm. wide. The entire mucosa in the neighborhood had sloughed away from this space. Numerous foul-smelling granulations arose. The ulcer had entirely perforated through the stomach and was firmly adherent to the left lobe of the liver. The adhesion was very firm and could only be separated by considerable force. The stomach about this area was congested, but showed no other areas of ulceration. On the outer surface, where adherent to the liver, there was present an ulcerated area about 4 by 3 cm., tissue, soft and necrotic. The base of the ulcer contained a mass of cauliflower granulations, which were soft and easily broken down. The ulcer began about 1 cm. from the esophageal opening, but did not involve the esophagus. [T. L. C.]

5.—Knapp presents the report of a **successful operation for the radical cure of complete prolapse of the rectum of 16 years' duration in a case of primary dementia.** Ten weeks after the operation the patient walked about the wards with ease, and there was not the slightest evidence of any return of the prolapse. The sphincter has perfectly regained its tone, and the bowels move normally. [T. L. C.]

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

June 6, 1903.

1. Development and Care of Children. JOHN C. COOK.
2. The Diagnosis of Cutaneous Syphilis. ISADORE DYER.
3. An Interesting Case of Lupus Vulgaris. R. R. CAMPBELL.
4. The Study of Pediatrics. Is It Worth the Attention it Gets, and Does it Get the Attention it Deserves? C. F. WAHRER.
5. A Case of Probable Gummata of the Liver in a Child of Six. MAURICE OSTHEIMER.
6. Is the Realization of Reasonable Ideals in Dental Education Near at Hand? CHARLES C. CHITTENDEN.
7. The Abuses and Uses of Venesection in the Practice of Medicine. ROBERT REYBURN.
8. A Diagnostic Examination of One Hundred and Fifty Cases of Leprosy. JONATHAN T. McDONALD.
9. The Chemistry of Cerebrospinal Fluids. TORALD SOLLMANN.
10. Clinical Observations in Stomach Surgery. A. J. OCHSNER.
11. Results in Radiotherapy. H. R. VARNEY.
12. Clamp Forceps in Removal of Nasopharyngeal Tumors. E. FLETCHER INGALS.

1.—**See Philadelphia Medical Journal**, May 16, 1903, page 820.

2.—Dyer contributes an article **on the diagnosis of cutaneous syphilis.** He points out that no disease is as true to its types as syphilis. He discusses at some length the chancre, its location, arrangement and its differential diagnosis. He then discusses the various eruptions encountered in syphilis, and he concludes that if each type of syphilis, then, may carry its own points of recognition and definition, capable of diagnosis on these points, why not use a method of diagnosis which precludes the speculative line of thought which only clouds or forbids an intelligent conception of syphilis? [F. J. K.]

3.—Campbell reports **an interesting case of lupus vulgaris** which occurred in a married woman, 53 years of age, who at the age of 48 developed a small nodule on the left cheek. For three years soft papules continued to appear about this lesion, and ulceration of the original nodule began. Two-thirds of the cheek became involved in the destructive process. A nodule formed on the right cheek and several in the neck and throat. The sublingual and submaxillary glands became enlarged on both sides. [F. J. K.]

4.—**See Philadelphia Medical Journal**, May 16, 1903, page 820.

5.—**See Philadelphia Medical Journal**, May 16, 1903, page 821.

6.—Chittenden discusses **the question of dental education** and points out that, in order that ideals may be sooner and more surely established and maintained, the boards of examiners, with all fairness and reasonable consideration for the interest of honest educational efforts, must, nevertheless, be mindful of their official oath to carry out not only the letter, but also the spirit and intent of the law for the protection of the public. They must, in national association, stand squarely together on reasonable requirements and, more than all else, have the courage of their convictions in passing on the character of the colleges and their output, constantly having in mind that the goddess Justice does not close one eye and blink the other when on duty. [F. J. K.]

7.—Reyburn discusses **the abuses and uses of venesection in the practice of medicine.** He emphasizes that the class of cases benefited by venesection is generally composed of those in which there is an abnormal bloodpressure in the body which endangers the rupture of a bloodvessel in the brain or causes a stasis of blood in some vital organ. He also contends that there is a group of cases of acute pneumonia in which bloodletting is not only advisable, but absolutely necessary to save life. The toxemia of puerperal eclampsia can also in many cases be controlled by bloodletting. The article contains the histories of several cases showing the value of bloodletting. He believes that, although the field of usefulness of bleeding is very limited, we have been too hasty in abandoning this practice. [F. J. K.]

8.—McDonald contributes an article entitled **a diagnostic examination of 150 cases of leprosy,** and deduces a brief summary as follows: (1) The microscope is the supreme agent of the final diagnosis of leprosy. No patient should be committed to a segregated colony without a bacteriological demonstration of the disease. (2) Of clinical symptoms, maculæ, chiefly leukodermic spots are found in 89% of all cases. (3) The lepra nodules found in 74% are the one chief distinguishing lesion of skin leprosy. (4) Thinning or complete loss of eyebrows and lashes is present in 63%. (5) Atrophic changes in hands and forearms with retraction and contraction of fingers and enlarged ulnar nerve in 32%., a leading feature of nerve leprosy. (6) The plantar ulcer found in 26%., usually on the ball of the foot. (7) Absorption of the phalanges in 16%., with occasional spontaneous amputation. (8) Elephantiasis of hands and feet in 16%. (9) Facial paralysis in 11%. (10) The entire body should be carefully tested for anesthetic areas. (11) Several of the above symptoms can be found, in some slight degree at least, in every leprous subject. [F. J. K.]

9.—Sollmann contributes an article **on the chemistry of cerebrospinal fluids.** He has analyzed cerebrospinal fluid in five cases. In four he found the fluid perfectly clear and colorless; in one there was a small sediment. In one instance there was a slight pinkish tinge due to suspended blood. The specific gravity ranged between 1.0137 and 1.0079. Its reaction was slightly alkaline in all cases, and the freezing-point varied between 0.541° C. and 0.591° C. The total solids varied between 9.60 0/00 to 13.25. The amount of ash varied between 7.23 and 6.00 0/00. In one instance the amount of nonproteid organic matter was 1.64 0/00; no noncoagulable proteid was detected. A reducing substance was present in two instances. [F. J. K.]

10.—**See Philadelphia Medical Journal**, May 16, 1903, page 816.

AMERICAN MEDICINE.

June 6, 1903.

1. The Symptomatology and Diagnosis of Diseases of the Pancreas. REGINALD H. FITZ.
2. The Medicolegal Test of Bloodstains. E. N. LAYTON.
3. Isolysins in the Serum of Disease. S. PESKIND.
4. Modification of Milk for Infant Feeding. EDWIN E. GRAHAM.
5. The Inefficency to Restore Pelvic Support by Immediate Suture of Lacerations Sustained During Labor. WILLIAM E. GROUND.
6. An Interesting Case of Endocarditis with Fatal Termination. FREDERICK G. CANNEY.

1.—Fitz discusses the **symptomatology and diagnosis of diseases of the pancreas.** The symptoms attributable to disturbed pancreatic function are almost invariably connected with **chronic lesions** productive of extensive destruction of pancreatic tissue, or with interference to the passage of its secretion into the intestine. The pancreatic lesions usually associated with diabetes are those in which the common element of **interstitial inflammation** exists with a corresponding destruction of the parenchyma of the gland. **Visible fecal fat and azotorrhea,** on the contrary, are oftener associated with chronic conditions interfering with the flow of pancreatic juice into the intestine, from obstruction of the ducts than with those causing destruction of the secreting cells of the gland. **Steatorrhea** is second in importance only to **glycosuria and diabetes** as evidence of disturbance of pancreatic function. Fitz discusses at length the views concerning its significance and presents 3 tables which show: (1) The relation of fatty stools in pancreatic disease to diabetes or glycosuria and to jaundice; (2) the relation between diabetes or glycosuria, steatorrhea, azotorrhea and jaundice in diseases of the pancreas; and (3) comparative results of analyses of fecal fat. The examination of the urine for pentose, and the aromatic compounds indol, skatol and phenol, and the quantities of indican and of ethereal sulphates give evidence of the extent of the proteid putrefaction and indirectly of the condition of the pancreas. The symptoms most useful in diagnosis are those which call attention directly to the region of the pancreas, these are epigastric pain, tenderness, tension and tumor with or without obstructive jaundice and evidence of mechanical interference with the motility of the stomach and duodenum. The differential diagnosis lies first between acute and chronic affections and second between the several varieties of chronic pancreatic disease. The former include pancreatic hemorrhage and the hemorrhagic gangrenous and suppurative varieties of acute pancreatitis, all of which are characterized by similar symptoms, and some of which presumably represent stages of the same affection. The latter include chronic pancreatitis with or without calculi, cysts and tumors, [T. L. C.]

2.—Layton has studied the various medicolegal tests of bloodstains. The chief objections to the microscopic tests are the large amount of blood required, the great variability of the red bloodcells, even in fresh blood, and the absence of both the red bloodcells and the hemoglobin crystals in old stains. In performing the serum tests he has used the method of Uhlenhuth and, judging from his experiments, he believes that the following conclusions are justified: (1) The reaction is caused by the development within the bloodserum of the injected animal of an antibody or a property or substance which causes a certain reaction with the serum homologous to the one injected. (2) The reaction does not occur when normal rabbit serum is used. (3) The reaction occurs much more rapidly, especially when dilute solutions are used, if the test is exposed to a temperature of 37° C., although it will occur at ordinary room temperature. (4) An immediate result in the cold is obtainable by diluting only the blood tested, the test-serum being used pure. (5) The reaction is obtainable when using a dilution of the test-serum of 1-20,000, or of the blood tested of 1-4,000. Hence, only a minute stain and a single drop of the test-serum are required for making the test. (6) The delicacy of the test is not altered by the admixture of other bloods or of other foreign material, except the albumin precipitants. (7) The presence or absence of mineral salts, such as copper sulphate, or of other precipitants of albumin, can be determined by the control tests. (8) The delicacy of the test is not materially altered by the age of the stain. (9) A differentiation from monkey blood is possible, and contamination with monkey blood can be excluded, (a) by a great dilution of the blood tested and a dilution of the test-serum of 1-500, with incubation; (b) by a great dilution of the blood tested, the test-serum being used pure, and the test made at room temperature. (10) The test is specific, invariable and, therefore, applicable to forensic use. [T. L. C.]

3.—Peskind has recently noted the presence in the serum of a leukemic patient of an **isolysin** (a substance which caused hemolysis of human bloodcorpuscles). This hemolysin may have been a product of the disease or it may have been derived from the leukocytes which were present in great numbers. The red bloodcells of the leukemic patient appeared to be immune to the hemolysin contained in the serum. From this observation Peskind has been led to investigate the serum in other diseases to determine whether isolysins are present, and, if so, whether they are specific for these diseases or not. In his series of cases the serums from 2 cases of typhoid and one of uremia caused absolutely no laking of normal corpuscles after 2 or 3 days, but the serums in all these cases produced rapid laking of each other's corpuscles. This laking is stated to be due, in all probability, to the lowered resistance of the bloodcropuscles in these diseases to hyperisotonic solutions. [T. L. C.]

5.—Ground treats of the **inefficiency of restoring pelvic support by immediate suture of laceration sustained during labor.** He holds that almost every woman suffers injury during confinement from which she does not recover unless she is subjected to a secondary operation for the repair of lacerations of the pelvic floor. Immediate suture of apparent lacerations does not restore pelvic support in the vast majority of instances. One or two months after labor the woman should be subjected to a thorough examination with reference to the integrity of the pelvic floor. Should indications of unrepaired lacerations exist as evidenced by vaginal relaxation and prolapse, uterine displacement, etc., an operation for immediate repair should be made before the woman's health has been impaired. [T. L. C.]

6.—Canney reports an interesting case of endocarditis with fatal termination in a young physician of 32 years, who, about 17 years ago, while fencing, was accidentally thrust through, the foil entering about the third intercostal space, 2 inches to the left of the sternum, and taking its exit at the back about one inch from the spine. The patient finally made what appeared to be complete recovery. Immediately following the thrust there ocurred a very loud roaring systolic cardiac bruit which absolutely disguised all the normal sounds. This persisted for the remaining 17 years of his life, and during the final illness the sound was not different in character. Large vegetations were found on the cusps of the pulmonary valves and smaller vegetations on the mitral, aortic and tricuspid valves. The query suggests itself: What had the foil thrust to do with the production of the loud systolic bruit that persisted for 17 years, and the malignant endocarditis that caused death? [T. L. C.]

MUENCHENER MEDICINISCHE WOCHENSCHRIFT.

March 31, 1903. (No. 13.)

1. The Operative Treatment of Acute Stenosis of the Larynx. TRUMPP.
2. The Diuretic Action of Theocins. H. KRAMER.
3. Contribution to the Question of the Regeneration of the Blood. P. SCHMIDT.
4. Blood Investigations in Cases of Hydatid Cysts. Local and General Eosinophilia. J. SABRAZES.
5. The Direct Percussion of the Epigastrum: A Diagnostic Aid in Ulcer of the Stomach. F. MENDEL.
6. The Significance of the Röntgen Examination for Practical Surgery. F. FRAENKEL.
7. The Significance of Nasal Respiration in Its Protective and Curative Action upon Disease. G. TRAUTMANN.
8. Isolated Clonic Spasm of the Soft Palate. L. ROEMHELD.
9. A Case of Gonococcic Pneumonia. BRESSEL.
10. The Danger of Infection with Ankylostoma Duodenalis in Trench-Digging. TENHOLT.
11. Hans Buchner's Part in the Development of Bacteriology. M. GRUBER.

1.—Trumpp discusses **intubation in stenosis of the larynx.** He believes that it should be employed only by physicians who are expert in its performance. The patient should be carefully watched until the results are satisfactory; the tube should be selected according to the nature of the case. He has had constructed tubes which are somewhat elastic and are shaped more like the Bauer than the O'Dwyer instrument. The first was a spiral metal tube which was not, however, a complete success; then tubes were constructed of durit which were quite successful, although they could not be polished. However, one of these tubes could be left in the trachea of dogs 24 hours without producing bad results. [J. S.]

2.—Kramer reports some **experiments with theocin or theophyllin.** It usually acts very promptly at first, but its effect is soon lost. It is even more efficient than diuretin. The maximum effect occurs onto the first or second day, and after this it sinks rapidly. [J .S.]

3.—Schmidt, after discussing **polychromatophilia and the basophilic granulation of red cells,** reaches the following conclusions: That they occur during convalescence from anemia; that, if in rabbits upon · which experimental anemia has been produced, the circulation of one ear is separated from the general circulation, they do not occur during convalescence. In some cases during recovery from anemia it is possible to observe the nucleus in the process of degeneration. In others the granules appear only in nucleated cells. Basophilia and polychromatophilia occur physiologically in newborn animals and embryos. Polychromatophilia appears to be due to the solution of the granules, for the injection of hydrochloric acid and tartaric acid into the blood of animals with basophilia increases the polychromatophilic cells and decreases the basophilic cells. The general conclusion, therefore, is that basophilia and polychromatophilia of the red bloodcells is to be looked upon as an indication of an early stage of these cells. [J. S.]

4.—Sabrazès has examined the blood of 7 adults who had **hydatid cysts.** He finds that there is always an increase in the eosinophile cells, sometimes slight and sometimes considerable; that in tissues in the neighborhood of the cysts there is always a great accumulation of the eosinophile cells. It therefore appears that the echinococci have a positive chemotaxis toward the eosinophile cells. Polycytosis, polychromatosis, nucleated reds, or red cells with basophilic granules were not observed. Usually there was a leukocytosis, although sometimes it was not present. [J. S.]

5.—Mendel calls attention to the fact that, **if light blows be struck upon the epigastrium** with a percussion hammer, the most **sensitive patient experiences no pain** unless there is some inflammation of the stomach or the surrounding tissues, If there is such an inflammatory process, it will be found that there is a sharply limited area that is exquisitely painful. Of course, this does not correspond exactly to the ulcer. Pain is often experienced when the ulcer is not sensitive to direct vigorous pressure. When the area of the zone is tender to percussion changes from day to day, it may be assumed that the ulcer is healing. The same method may be used for recognition of **duodenal ulcer.** He calls attention to this disease, which he believes is much more common than is generally supposed, and which occurs chiefly in men between the ages of 20 and 70 years. Ordinarily there is not even tenderness to pressure, but upon percussion an area is found just to the right of the linea alba, and about midway between the border of the ribs and the umbilicus. It is usually about the size of a two-mark piece. These tender zones may also be obtained in gastritis, perigastritis, carcinoma, cholelithiasis, various forms of cholecystitis and gastric herniæ. The method is not dangerous. [J. S.]

6.—Fraenkel describes the **apparatus that he has employed for X-ray investigation,** and believes that the method is particularly valuable in surgery, but not absolutely indispensable in many cases, and is especially difficult to employ on account of the expense of the apparatus and the necessity that the user shall have a good deal of technical experience. Besides in fractures, it is useful for the recognition of foreign bodies. He regards it as particularly important to examine fractured bones after they have been replaced, as well as for the purpose of making a diagnosis. Care must be taken not to draw too sweeping conclusions from an X-ray examination, nor, on the other hand, to consider that a negative or slight finding necessarily excludes serious processes. [J. S.]

7.—Trautmann, after collecting the opinions of a very large number of authorities regarding the value of **nasal breathing,** and the importance of the tonsils for protective purposes, states that he believes that operations in the nasal cavity should be restricted to the removal of the minimum amount of tissue. [J. S.]

8.—A woman, 60 years of age, with severe neuropathic heredity, found, upon awaking, that she could not speak. She was able to write, understood what was said to her, but could only utter unintelligible sounds. There was a doubtful paresis of the face, but no paralysis. There was no disturbance of sensation; examination of the throat showed that the uvula was relaxed and deviated slightly to the right. The right arch of the palate was several millimeters higher than the left, and it and the posterior wall of the pharynx exhibited rhythmic twitchings. These occurred 120 to 138 times per minute. The pulse at the same time was 76. Speech returned, but was slow, monotonous and nasal, and there was a partial dysarthria. There was no disturbance of hearing, but there was an objective noise from time to time, sounding as if a drop fell into a basin of water, synchronous with the contractions of the throat. This was heard in the right ear, and was also perceived by the patient. Bromides and specific treatment had no effect. Electrical examination showed contraction to the faradic current. Roemheld regards the case as one of **apoplexy** which produced a slight paresis and **clonic unilateral spasm of the soft palate,** probably in the medulla. [J. S.]

9.—A man of 32 years, after an attack of acute **gonorrhea,** suddenly developed headache, fever and pain in the region of the heart, cough, and finally, on the sixth day, **consolidation of the left lower lobe,** with bronchial respiration and a discolored expectoration that contained microorganisms resembling gonococci. The patient gradually recovered. On 3 occasions blood cultures were made; the first showed a typical growth of gonococci; the others were sterile. [J. S.]

10.—Tenholt replies vigorously to H. Bruns, who criticised his statement that there was considerable danger in ankylostomiasis in tunnel work. He insists that it has nothing in common with infectious diseases that enter by way of the gastro-intenstinal tract, such as cholera, typhoid fever, etc.; that the human being is not an intermediate, but the real host; that the ordinary water as found in mines does not contain enough sodium to destroy the eggs. He calls attention to the distinction between cases suffering from the worm disease, and others in whose intestines the worms act as harmless parasites, and believes that at present it is impractical, for lack of time, to make a thorough examination of all workmen in any large operation. At least 3 different specimens should be taken on different days and carefully examined, and, as the number of workmen, whom it is his duty to inspect, amounts to 2,500, it would be impossible to fulfil these conditions. [J. S.]

11.—Buchner was first particularly attracted by Naegele, the results of whose work upon the lower fungi were first made public in 1886 and 1887. At this time he selected Buchner as his assistant. As a result of this work he began to realize that the infectious principles must be bacteria, and then discussed the method by which cure could occur. He then commenced a series of studies upon infectious diseases, in the course of which, it is true, he made many mistakes, as, for example, believing that malaria was due to the inspiration of dust laden with germs. But, nevertheless, he learned that inflammation would check gangrene; that it was possible to diminish the virulence of the micro-organisms, converting the anthrax into a nonpathogenic form. These experiments led him to the false conclusion that the anthrax was merely a variety of the bacillus subtilis. As a result of some previous experiments he believed that it would be possible to cure infectious diseases, particularly tuberculosis, by the production of inflammation with arsenic. These mistakes practically destroyed his influence as a teacher. It was only as a result of continued application and beautiful scientific work that he gradually regained his position. Among these studies were those upon the morphology of bacteria, the discovery of the bactericidal action of the blood, the theory of the alexins, and of chemotaxis, the discovery of the action of the proteins, which antedated that of Koch with tuberculin, the theory of the phagocytes of Metschnikoff, and the discovery of ferments in brewers' yeast, such as zymase. [J. S.]

April 7, 1903. (No. 14.)

1. The Incompetency of Paranoiacs. K. HEILBRONNER.
2. Contribution to the Knowledge of the Pecularities of the Various Albumens of Milk. A. SCHLOSSMANN and E. MORO.
3. The Widal Serum Reaction in Abscess of the Liver. MEGELE.
4. Reunion After Symphyseotomy. O. IHL.
5. Report upon Splenectomy Required by Gunshot Wounds. L. BRENNFLECK.
6. The Casuistry and Therapy of External Anthrax in Human Beings. FEDERSCHMIDT.
7. A Case of Rhinogenous Pyemia With Termination in Cure. GRUNERT.
8. The Diagnosis of Occlusion of the Intestine. SCHNEIDERLIN.
9. Spontaneous Fragmentation of a Bladder Stone. L. GOERL.
10. Half Symphyseotomy. DIEHL.
11. Brief Remarks upon Seasickness. O. DORNBLUETH.

1.—Heilbronner discusses the question as to when it is justifiable to deny the **competency of paranoiacs.** He discusses the opinions of various authors, and expresses the opinion that as far as the law is concerned it makes little difference regarding the value of a will if it is proved that on one particular subject the patient was insane. He discusses the relation of the law to the wills of insane or supposedly insane persons, and believes that, in the interest of these persons and also in the interests of society, they should be declared incompetent to make a legal will as soon as the danger of an irrational comprehension of conditions arises as a result of the disease. There is no doubt that there are paranoiacs who regard the world with a diseased aspect, and who are, nevertheless, practically not impaired as members of society. [J. S.]

2.—Schlossmann and Moro have studied the **albuminous bodies in milks.** They performed a series of precipitations with various chemical substances, and found that in addition to casein another albuminous body was present. They found that this albuminous body had the following composition: C. 47.91%; H. 7%; N. 14.74%; S. 1.65%. This they named lactalbumin. In order to determine whether these albuminous bodies were the same in human and in cows' milk, they injected rabbits with them and found that the rabbits injected with lactalbumin gave a positive precipitation with cow casein or cow lactalbumin, but no precipitation with human lactalbumin. Rabbits injected with human lactalbumin gave no precipitation with cow lactalbumin. Therfore, the albumens in cows' milk are biologically different from those in woman's milk. This is one of the reasons why natural feeding is so superior to artificial feeding for infants. [J. S.]

3.—Megele reports the following interesting case: A man had typical symptoms of acute articular rheumatism. These disappeared in the course of 16 days; nevertheless, the temperature remained high, with morning remissions. As this did not yield to the salicylates, the Widal reaction was tried, but was negative. It was again negative several days later, but finally, on the twenty-sixth day, it was positive and remained thus for several days until on the forty-sixth day it was again negative. The patient gradually grew worse and died, and a large abscess was found in the liver. There were no symptoms of disease in the intestines, but the mesenteric glands and the spleen were enlarged. Cultures from the mesenteric glands gave only the staphylococcus pyogenes aureus, and the same result was obtained with cultures from the liver. It seems difficult to say whether this was a case of **typhoid fever** which had run its course, or whether it was a **case of some other infection giving the Widal reaction.** As, however, there was no clinical evidences of typhoid fever, no pathological changes indicating its existence, and the bacteriological studies were negative, it is to be presumed that the agglutination was caused by the presence of bile in the blood. [J. S.]

4.—The results of **symphyseotomy** may be either reunion of the bones or failure of reunion. The first can occur either as a result of the formation of connective tissue, or the union of cartilage or bone. If a bony reunion occurs, the pelvis may be permanently enlarged. If union does not occur, then, although the patient has more or less difficulty in walking and the inconvenience of a weak joint, nevertheless, subsequent births are very easy. He reports the case of a woman whose sixth child was born under his observation, and who had symphyseotomy done for the first child. Union had not occurred, and all subsequent births were easy. [J. S.]

5.—A man, 25 years of age, shot himself in the left side of the abdomen. The pulse and respirations were increased; there was tenderness in the region of the wound of entrance, which was at the level of the eighth rib in the left mammillary line. There was no evidence of injury to the intestine, but there was an area of dulness on the left side posteriorly that might have been due to effusion. Laparotomy was immediately performed, and a large quantity of coagulated blood found in the peritoneal cavity. The **spleen** was found to be separated in two parts and was **extirpated.** There was a small perforation in the diaphragm, but otherwise no injuries were found. The patient made a very satisfactory recovery. Careful examination of the blood showed very little change after the removal of the spleen; the erythrocytes diminished from 5,000,000 to 4,000,000 and then rose to 4,500,000. The leukocytes maintained the normal proportion. The case merely shows that the extirpation of an injured spleen has little effect upon the health of the individual. [J. S.]

6.—Federschmidt reports 10 cases of malignant pustule in human beings, 3 occurring in his own experience, treated by excision, and 7 treated expectantly by his colleagues. All the cases occurred among brushmakers. The 3 cases treated by excision were promptly cured. Other patients were treated with carbolic acid internally, and other forms of local and general treatment. Two died, and the others recovered after separation of the slough which sometimes required subsequent plastic operation. He believes that prompt excision is the best treatment. [J. S.]

7.—Grunert reports the case of a girl, 10 years of age, who had a severe fetid suppuration in the left nose, with evident **empyema of the ethmoid bone** and of the left frontal sinus. She developed **pyemia,** and a radical operation was performed after which she slowly recovered. [J. S.]

8.—An hysterical patient developed appendicitis for which operation was performed and the appendix removed. After the operaton she suffered considerably and had exquisite pain in the left portion of the body between the umbilicus and the border of the ribs. There was some dulness in this area. Accordingly, 5 days later a second operation was performed, and it was found that the descending colon was apparently tightly packed with scybala. The laparotomy wound was closed, and after repeated enemata 10 pieces of cloth of moderate size were expelled. Subsequently other pieces were also expelled. The patient made a complete recovery. The case was apparently one of appendicitis, but really due to **foreign bodies in the intestine.** [J. S.]

9.—Görl gives the following 3 theories for **spontaneous fracture of vesical calculi.** Either a certain portion of the stone is not moistened and dries and breaks off, or there may be an expansion nucleus of the outer layer, or energetic contractions of the bladder crush it. The commonest cause is apparently a fall. He reports the case of a man who had slight symptoms of calculus, and a stone was readily seen with a cystoscope. The patient was enormously fat, and, therefore, a depleting diet was employed which reduced his weight from 215 to 165 lbs. Subsequently the symptoms of calculus diminished, and examination of the bladder showed the presence of 2 small stones, both of which, together with a few minute fragments, were subsequently discharged. It appears that in this case, through an alteration in the character of the urine as a result of the diet which included 2 quarts of lithia water daily, the stone evidently underwent spontaneous fragmentation. [J. S.]

10.—Diehl reports the case of a woman, 20 years of age, with a narrow pelvis in which the head of the child was incarcerated. Perforation of the head was resorted to, but, owing to the firm sutures of the skull, extraction was impossible. The upper portion of the symphysis was opened, extraction was accomplished, and the patient made a rapid and satisfactory recovery. [J. S.]

11.—Dornblüth believes that **seasickness,** elevator-sickness, etc., are due to the sense of falling as the ship or elevator sinks downward. Therfore, the method of combating seasickness by a tight bandage around the abdomen, or by deep inhaling, is scientific and should be of benefit. [J. S.]

DEUTSCHE ZEITSCHRIFT FUER NERVENHEILKUNDE.

Band 22. Heft 5-6.

20. The Symptomatology and Diagnosis of Tumors of the Frontal Lobe. MUELLER.
21. The Influence of Sensory and Motor Disturbances Upon the Ability to Localize. SCHITTENHELM.
22. Contribution to the Knowledge of Hereditary Diseases. JENDRASSIK.
23. Book Reviews.

20.—Müller has collected a very considerable number of cases of frontal tumor, in the study of which he draws certain conclusions regarding the symptomatology of this condition. The cases are not published in the present article, but will appear shortly. Altogether there are 164 cases. The topics that he considers are: (1) The **structure of the body.** He believes that careful study of the bodies of the patients with reference to degenerative changes and for evidence of neuro- or psychopathic conditions, will be of interest. (2) **Nutrition.** In some cases this is rapidly and seriously impaired, even when there is no vomiting which is less common than in tumors of other parts of the body. (3) **Skin and temperature.** Vasomotor trophic disturbances are rare. Occasionally there is fever. Local changes of temperature have not been carefully studied. (4) **The skull.** Local changes in the frontal bones are rare; when they occur they correspond to the diseased hemisphere. Sometimes there is diffuse thinning and more rarely thickening of the skull. Occasionally there is tenderness to pressure; very rarely an alteration in the percussion note over the tumor. Sometimes the headache is increased; and very rarely there is special tenderness in the occipital region. (5) **Epilepsy and hysteria.** Epilepsy may be of various types, and occurs, sometimes as a result of other causes in cases of brain tumor. True epilepsy can only be assumed to be present when there is a typical attack, or when there are symptoms of cortical and infracortical inhibition associated with disturbance of consciousness. It was present in 37.2% of all cases; more frequently in the old than in the young. There could be no doubt that a neuropathic predisposition increased the tendency. In about one-fifth of the 61 cases in which epilepsy was present it appeared long before there were any symptoms of tumor. In about half the cases it was the earliest symptom of the tumor. The relation of **hysteria** is doubtful. Several cases have occurred in which hysterical manifestations were present. Focal epilepsy was present in 16 cases. In 6 cases there could be no doubt that the head eye center in the postfrontal region was irritated. The convulsions commenced with turning of the head and eyes followed by involvement of the facial part of the facial nerve or the arm. The turning of the head and eyes is toward the diseased side. Conjugate deviation, however, should only be used as a symptom of local disease, with great caution. A careful consideration of the order of the various movements, that is the involvement of the facial muscles, turning of the head and eyes, leads Müller to the conclusion that the center for the lateral turning of the head is in intimate association with the area of the lower facial branch, and lies beneath the center for the conjugate deviation of the eyes. The first-named center, therefore, probably occupies the lower portion of the foot of the second frontal lobe, and the last-mentioned occupies the upper portion of the same lobe. A curious fact resulting from a study of a number of cases was that spasms of the muscles of the back or trunk are only found in those cases of frontal tumor in which either the right lobe is affected alone or in cases of double lesions. Although focal epilepsy is not uncommon, it is not proof that the tumor is situated in the center from which the spasms proceed. (7) There was no case of sensory epilepsy and very few cases in which automatic movements of the extremities were observed. (8) Frontal ataxia does occur, but Müller expects to discuss it elsewhere. (9) Paralyses of the extremities of the opposite side occurred in about 2/3 of all cases. These may be transient or permanent. (10) From time to time there may be brief attacks of stupor or sleep, apparently due to increase in the intracerebral pressure. (11) Contractures of the limbs rarely occur; tremors in about 10% of all cases. (12) Headache occurs in nearly all cases, that is in about 94%. In those cases in which it is not recorded there is sometimes reason to believe that it may have been overlooked. The headache is localized most frequently in the frontal region or in the frontal and occipital regions, and more rarely in the temporal region or in the frontal and occipital regions, and more rarely in the temporal and parietal regions. In a few cases the localization seemed to vary; in 24 cases it was unilateral, in 20 it was stronger on one side. In some cases it was only present when the patient assumed certain positions. Disturbances of sensation in the course of the spinal nerve were only mentioned in 66 cases. These consisted of paresthesiæ, or very rarely of diminution of sensation in localized areas. (13) Often the patients have difficulty in remembering words. In 30 cases there was motor aphasia, the tumor being situated 24 times on the left, 4 times on the right, and twice on both sides. It occurred in 1/3 of the cases of left-sided tumor. Often there is merely difficulty in speech. Sensory aphasia is mentioned in very few cases. Agraphia was present in a few cases with motor aphasia. (14) Vomiting was present in about 1/3 of all cases, vertigo in about 1/5 of all cases. Irregularity of the pulse is mentioned as present in 24 cases. (15) In 71 of 90 cases choked disk was present. It was unilateral in 5 of these, and in 10 cases it was unequal. Disturbance of vision was present in a number of cases. When unilateral it was on the same side as the tumor. Exophthalmus is only mentioned in 4 cases. Anesthesia of the trigeminus in 2 cases. In 15% of all cases there were paralyses of the muscles of the eyeball. (16) Disturbance of smell was observed in 7 cases; usually it was not tested. Trigeminal neuralgia occasionally occurred; it was usually found on the same side as the tumor. Transient paralysis of the facial nerve was observed in 1/3 of the cases. In very few cases was there disturbance of hearing; disturbance of taste is mentioned in only 3 cases. Hiccoughing and frequent yawning were much more rare than in cases of occipital tumor. Constipation was fairly common. Contraction of the cucullaris and sternocleidomastoid muscles occurred in 2 cases. When the facial nerve was involved, paralysis of the tongue was not uncommon. (17) The reflexes showed variable alterations. The knee jerk was distinct in 55 cases; in 11 it was present; normal in 19 and increased in 12. When there were paralyses or pareses, it was increased on the affected side. (18) The spinal cord was only studied in a few cases. (19) Disturbance of the bladder and rectum apparently only occurred as a result of disturbance of the mental function. Disturbance of the sexual functions occasionally occurred, usually in the form of exaltation, but is at present of no value for diagnostic purposes. (20) Alterations in the urine were rare. Polyuria may have been present in one case. The clinical course of frontal tumor Müller expects to discuss in a later paper. There is a valuable list of the literature in this paper. [J. S.]

21.—Schittenhelm has made some **careful studies of localization in a series of cases of nervous disease.** He finds that, when there is disturbance of the sensory area without disturbance of motion, the localization of touch was not as good as that of pain, although there were often serious errors. In cases of disturbance of motility without disturbance of sensation there were no errors, but later slight errors occasionally occurred. There can be no doubt, therefore, that sensation plays the chief rôle in localization. [J. S.]

22.—Jendrassik contributes a third article **upon hereditary disease.** He reports 26 cases, with careful clinical histories. The details of these cannot be given in an abstract. His conclusions, however, are too valuable to be omitted. They are as follows: (1) Heredity is a specific cause of disease, and produces types that cannot occur as a result of other causes. (2) It is not correct to consider a disease hereditary only when it occurs in various members of a family and in the same manner. Individual cases often occur, and exceptions may be present in the most seriously degenerated families. Healthy members of degenerated families are not unlikely to have degenerated descendants. (3) The hereditary forms of disease do not develop in typical, sharply defined, clinical types; on the contrary, the most heterogeneous symptoms occur in endless combinations. Individual types may be retained for practical purposes, but they must not be regarded as individual, different diseases. (4) Hereditary diseases may attack all the elements of the body; that is, the nervous system, the muscles (dystrophy), the connective tissue (obesity; absence of fat), the bones (osteodystrophy, etc.), the various organs, etc. In many cases merely the disposition to various exogenic diseases is inherited. In others there may be direct aphasia, hypoplasia, atrophies or degenerations. (5) The symptoms of hereditary disease may show greater or less difference in different individuals of the same family, but the general type of disease persists. (6) Curious grouping of symptoms that otherwise rarely occur together, with marked, slowly progressive development corresponds with great probability to an hereditary degeneration. (7) Consanguinity of the parents increases greatly the possibility of the development of hereditary degeneration. [J.S.]

RUSSKY VRATCH.

February 22, 1903. (Vol. 11, No. 8.)

1. In Commemoration of V. A. Manassein.
   V. N. SIROTININ.
2. On the Diagnosis of the Catarrhal Forms of Inflammation of the Pelvis of the Kidney.
   A. P. FAVITZKY and V. F. ORLOVSKY.
3. A Case of Double Fracture of the Heads of the Fibulæ.
   V. V. ZENDER.
4. The Diagnostic Significance of Oliver's Sign in Aneurysm of the Thoracic Aorta. P. N. DROZDOVSKY.
5. A Few Observations in Ophthalmic Practice.
   E. N. NEEZE.

2.—Will be abstracted when concluded.

3.—Zender reports a case of **fracture through indirect violence of both heads of the fibulæ** in a man, 28 years old, who was caught by a revolving wheel of an electric machine and revolved twice, striking each time forcibly with the soles against the floor. For a time he was treated for the resulting paralysis of the lower extremities. The true nature of the injury was finally established and an operation performed. The latter proved successful in so far as it enabled the man to walk with the aid of crutches, but the paralysis of some of the muscles of the legs remained in *statu quo*, neither did the wiring of the fragments prove successful. [A. R.]

4.—Will be abstracted when concluded.

5.—Neeze reports in detail 2 interesting cases of affections of the eye. One was the case of a man, 59 years old, who had been suffering from **a malignant ulcer of the cornea** which was complicated by an acute psychosis and finally benefited by iridectomy. This case demonstrates the possibility of restoration of the cornea. In the report of the second case Jonnesco's operation **for glaucoma** is described and discussed. [A. R.]

March 1, 1903. (Vol. 11, No. 9.)

1. On the Heredity of Cancer. V. N. GEINATZ.
2. On the Diagnosis of Catarrhal Forms of Inflammation of the Pelvis of the Kidney.
   A. P. FAVITZKY and V. F. ORLOVSKY.
3. The Diagnostic Significance of Oliver's Sign in Aneurysm of the Thoracic Aorta. P. N. DROZDOVSKY.
4. On the Bacteriological Diagnosis of Typhoid Fever.
   Z. F. ORLOVSKY.
5. On Hygiene of the City Streets. M. N. RUBEL.

1.—Will be abstracted when concluded.

2.—Favitzky and Orlovsky conclude from a review of the literature and a critical analysis of the symptoms that **it is possible in many cases to make a correct diagnosis of catarrhal inflammation of the renal pelvis.** The diagnosis rests principally on the characteristic pain in the region of the affected kidney, tendency to acute exacerbations, the almost constant increase of mucus in the urine and the characteristic fluctuations in the quantity, specific gravity and the constituents of the sediment of the urine. Fourteen cases are described in detail, corroborating the views of the authors. [A. R.]

3.—Drozdovsky concludes from an analysis of 10 observations and a study of the cases of Auerbach, Ritoók, Jessen and Gebauer that **Oliver's sign cannot serve for the differentiation between an aneurysm of the thoracic aorta and a tumor of the mediastinum.** Under certain circumstances this sign may be present also in mediastinal growths, while, on the other hand, it may be absent in aneurysm of the thoracic aorta. Its absence in the latter condition may be due to the small size of the opening of the aorta caused by deposition of fibrin as well as the general condition of the patient. The diagnosis of aneurysm of the aorta, therefore, rests on the sum total of the symptoms. If Oliver's sign is present and mediastinal tumors can be excluded, the presumption is in favor of aneurysm. On the presence of Oliver's sign alone, even if tumors can be excluded, we are not justified in locating the aneurysm in any particular portion of the aorta, as the sign may be present in fusiform aneurysm of the entire thoracic aorta or even in aneurysm of the descending portion. [A. R.]

4.—Orlovsky investigated **the blood of 12 patients with suspected typhoid fever.** The blood, in quantities of 4. 5 or 6 cc., was obtained from a superficial vein of the arm and immediately transferred into Erlenmyer flasks containing 200 cc. of bouillon or 1 per cent. peptone solution containing sodium chloride. About 2-3 cc. were put into each flask, and 2 flasks inoculated in each case. Of the 12 cases investigated, in one the disease was very severe and terminated fatally, in 5 the disease was of medium severity and in 6 mild. In 10 cases a typical growth of typhoid bacilli was obtained on the second or third day. From 2 patients the blood was obtained on the sixth day, from 4 on the seventh, from 2 on the ninth and from 2 on the eleventh. In 2 of the cases cultures were made twice, having proved negative the first time. In the eleventh and twelfth cases, in which the results of culture were negative, the cultures were made only once. In 6 of the positive cases, the blood at the time of culture failed to give the Widal reaction which appeared later, while in 2 other cases the disease was very mild and the patients free from roseola. The author emphasizes the value of the culture method as a convenient and absolute test for the presence of typhoid infection. He believes that the negative results obtained by other observers were due to faulty technique. [A. R.]

AMERICAN JOURNAL OF THE MEDICAL SCIENCES.

March, 1903.

1. Metastatic Carcinoma of the Choroid, with Report of a Case and Review of the Literature. E. L. OATMAN.
2. Report of Cases of Anemia, with Observations Upon Their Symptoms, and Morphology of the Blood.
   J. A. SCOTT.
3. A Case of Banti's Disease, with Diffuse Productive Nephritis. C. W. FIELD.
4. Articular Rheumatism and Some Allied Conditions.
   A. STENGEL.

5. Two Cases of Complete Bilateral Duplication of the Ureters. A. H. GOULD.
6. Aphasia in Acute Disease, with Report of a Case Complicating Smallpox. C. A. ALDRICH.
7. The Clinical Value of Bloodpressure Determinations as a Guide to Stimulation in Sick Children. H. W. COOK.
8. Malarial Fever in Texas; The Financial Loss Arising From the Disease, and Its Prevention. A. WOLDERT.
9. Upon the Association of Epilepsy and Heart Disease. T. L. CHADBOURNE.
10. Hydatiform Mole; With a Report of Two Cases, and Clinical Deductions From Two Hundred and Ten Reported Cases. P. FINDLEY.
11. Entrance of Air Into the Veins. M. GOODRIDGE.

1.—Oatman reports the case of a man, 56 years of age, who had had blurring of vision followed by blindness of the left eye for 18 months. Two months before examination severe pain had commenced in and around the eye. When examined, there was no perception of light, pronounced ciliary congestion, increased tension and contracted and fixed pupil. The ophthalmoscope showed a grayish, movable mass closely adhering to the surface of the lens, and a diagnosis of intra-ocular growth was made. Enucleation was performed, and after the operation the patient rapidly became cachectic. An examination of the eye showed a **carcinoma of the choroid** which must necessarily be secondary in type, and a diagnosis of carcinoma of some other organ was made. The patient died, and at the autopsy a primary carcinoma was found in the liver. The type of tumor was a papillary cyst adenocarcinoma. Oatman gives a careful description of the histological changes, and some excellent illustrations to elucidate this. He collects from the literature 30 cases, including his own, and adds several others that are doubtful. The statistics are as follows: The age of the patients ranged from 30 to 58 years; the average was little less than 45 years. Twenty of the primary growths were situated in the breast; one in the thyroid; and one was a dermoid cyst of the suprarenal body. In 2 cases the primary growths were not located. Twenty-two of the patients were females and 7 males. This is probably due to the fact that carcinoma of the breast more readily gives metastasis to the eye. In one of the 7 males the carcinoma was situated in the breast. Metastasis takes place to the eye along the lymphchannels. In 10 cases the right eye was involved first, in 9 cases the left eye and in 10 cases both eyes. In one case the side involved is not stated. It is possible that if the patients live long enough both eyes would always be involved. In many cases detachment of the retina occurs very early in the disease, sometimes before the deposit can be seen. The prognosis is bad; the average duration of life after the occurrence of eye symptoms in 24 cases was 6½ months. The greatest expectation of life is about 2 years. In regard to the treatment it has generally been considered that enucleation should be performed early in the disease. Oatman questions this, unless there is pain or the eye is glaucomatous. He thinks that the speedy death which, with 2 exceptions, has followed enucleation, raises the expectation that the operation in some inexplicable manner stimulates the other deposits to increased activity. The first deposit usually occurs near the point at which the short ciliary artery enters the globe, and is a flabby discoid thickening of the choroid with a central elevation of 2 or 3 mm. The differential diagnosis is to be made chiefly from sarcoma. Oatman gives a table of the differential symptoms, and a very valuable bibliography. [J. S.]

2.—Scott reports a series of **cases of anemia.** The first patient, a woman of 30 years, had persistent bleeding from the vagina, and in the course of 2 weeks became very pale. The bloodcount showed that the red cells were 901,000, the hemoglobin 17%, and the leukocytes 53,000. Under treatment the patient rapidly improved. The second patient, a man of 54, had gradually increasing pallor and weakness, shortness of breath, and swelling of the feet for some months. The blood showed 15% hemoglobin and 305,000 red bloodcells. He improved and was discharged, but was subsequently re-admitted, grew worse and died. The third patient, a woman of 56, had cancer of the stomach. There was extreme anemia with mild leukocytosis. The patient died and a colloid cancer of the posterior wall of the stomach was found at autopsy. The fourth patient, a girl of 19 years, had repeated attacks of chlorosis. The hemoglobin was reduced to 38%. Under rest and treatment she improved considerably. The fifth patient, a woman, 32 years of age, had hemorrhage and diarrhea. The skin was lemon-yellow in color; examination of the eyegrounds showed extensive retinal hemorrhages. The hemoglobin was 16%; the red bloodcells 744,000. The condition of the blood steadily deteriorated, and the patient died. Cultures made from the blood during life were negative. The autopsy showed fatty degeneration and splenization of the bone marrow. The only cause that could be determined was pregnancy. A remarkable feature of this case was the increase in the lymphocytes and the very low percentage of hemoglobin, which, toward the end, was estimated at 3%. The last patient, a man of 65 years, began to be sick 4 days before admission. When admitted to the hospital the spleen was enlarged, there was general hyperesthesia, no enlargement of the lymphatic glands, and here and there punctate hemorrhages in the skin. The red bloodcells were 2,700,000; the leukocytes were 155,500. The small mononuclears were 85.8% of these, and myelocytes were present. The patient died of a terminal pneumonia, and cultures of the blood at this time showed the presence of the diplococcus lanceolatus. There was ulceration of the gums, and cultures from them showed the presence of staphylococci. The autopsy showed nothing of importance. [J. S.]

3.—A woman, 32 years of age, had had symptoms of **gastric ulcer** for which she was given morphine, to which she became habituated. She had had edema of the limbs at the age of 31. When examined the spleen was enormously enlarged, filling the left half of the abdomen. The blood showed moderate anemia, and there was a mild febrile temperature. The patient died, and at the autopsy the kidneys were found to be greatly enlarged, containing numerous punctate hemorrhages; the spleen was enormous and showed great increase in the connective tissue. The liver was enlarged and also showed increase in connective tissue. Histologically there was advanced sclerosis of the Malpighian bodies; proliferation of the connective tissue, and of the liver and spleen was also pronounced. The case resembles very closely Banti's cirrhosis. It is interesting because it exhibits an advanced chronic productive nephritis, and therefore is an addition to our knowledge of the pathological anatomy of **Banti's disease.** [J. S.]

4.—Stengel reports a series of cases illustrating **various phases of articular rheumatism.** The first patient, a man of 35, had a sudden chill and subsequent enlargement of the joints. The second, a man of 25, had pain in the neck and in some of his joints. The heart was enlarged, and there was a murmur-like sound at the apex. The third patient, a woman, had painful swelling of the knees and ankles, with some redness and typical acute articular rheumatism. Stengel does not believe that any organism hitherto discovered can be looked upon as in any sense the specific cause of the disease. It may be that a variety of organisms was present. He then reports some cases of chronic rheumatism. The first patient was a man in whom the lesions were not symmetrical, and there was nodular enlargement of the joints. This is the type that follows acute articular rheumatism. This differs from the symptoms produced by neuritis, in which enlargement and tenderness of the joints may occur, on account of the pain in the latter condition, the fact that it is limited to the originally affected part, and occasionally the edema of the limb. He also reports a case of rheumatoid arthritis in a woman, 40 years of age, and he discusses various types of deformity that occur; he states that at present we do not know the nature or the etiology of the condition. [J. S.]

5.—Gould reports 2 cases in which the **ureters were duplicated on both sides.** The first patient was a child of 6 months, the second a woman of 50 years. The ureters were slightly smaller in diameter than normal, and entered the kidneys separately. [J. S.]

6.—Aldrich reports the case of a male child who had **smallpox**, in the course of which there were convulsions followed by stupor. There were symptoms of meningismus until an eruption appeared, when the temperature fell and the child became conscious, but was completely aphasic. For 3 months he did not speak. He then learned to speak again almost as fluently as before. [J. S.]

7.—Cook has made a series of observations with the **Riva-Rocci instrument for determining the bloodpressure.** Only the maximum pressure was obtained, as he regards the minimum pressure as of less significance. In a series of children he found that during the first few months the pressure averaged between 70 and 75 mm.; during the last half of the first year, 80 or 85 mm.; in the weak children, 80 to 90 mm.; during childhood it rarely exceeds 110 mm. The variation in children from day to day rarely exceeds 5 mm. Feeding usually caused rise from 5 to 10 mm. in pressure; crying, restlessness and similar conditions also caused it to become elevated. A series of experiments was made with various stimulants. Strychnine produced a rise in pressure in from 10 to 20 minutes after its administration, usually amounting to 10 mm., and occasionally to 20 or 30 mm. Digitalin acts more certainly and more rapidly, causing a rise in from 5 to 10 minutes that may be as high as 40 mm. Alcohol causes a rise in bloodpressure which may be persistent. Infusion of salt solution produced only a transient effect. The apparatus is particularly valuable for determining the effect of the bloodpressure, and indicating the dose of the drug and the frequency of its administration, the object being merely to maintain as constant a bloodpressure as possible. [J. S.]

8.—Woldert has made some painstaking investigations **of the frequency of malaria in Texas.** In one hospital, out of 11,355 patients treated in the course of 6 years, 6303 had malaria, that is, more than 55%. Three of these died. He mentions as an interesting fact that, during the year from June 1896 to June 1897, 226 pounds of quinine were given to the patients without producing hemoglobinuria, and that 5 patients with hemoglobinuria, the cases occurring in the course of 3 years, took quinine and all recovered. In another hospital, in the course of 3 years, 4498 patients were treated, of whom 406 had malaria. On one of the railroads in Texas 20% of all the employés had malaria in the course of a single year. In another year 32% of them had been brought to the hospital suffering from this disease. Valuing a man's labor at $1.50 per day and estimating that each patient lost 10 days, the employés of this railroad lost nearly 25,000 dollars annually. In the United States army posts in Texas the conditions are practically the same. Statistics from 7 posts show that the cases of malarial fever vary from one to 22, to one to every 13 persons, and that the loss of time from active service varies from 4 to 17 days per case. Woldert does not believe that this represents the actual severity of the disease. He believes that in many cases the diagnosis has been inaccurate; but, even supposing that half were misdiagnosed, it would still show that one person in every 12 was affected by malarial fever. If we assume that each person loses 10 days, and that his labor is worth $1.50 per day, the financial loss to the people reaches over $5,000,000 per year. He suggests, as the most certain prophylaxis, the destruction of the anopheles mosquitoes. For this purpose drainage of stagnant pools should be employed whenever possible, and in other cases a mixture of 10 gallons of kerosene and one pound of tobacco should by spread upon the surface of the water once every 2 or 3 weeks, and frequently agitated. [J. S.]

9.—Chadbourne discusses the **relation of cardiac disease to epilepsy,** reporting altogether 11 very interesting cases in which there was undoubted epilepsy and valvular heart disease. Eight autopsies were obtained. He was unable to show that there was any direct connection between the valvular lesion and the epilepsy. There was usually a clear history of acute infectious disease to explain the valvulitis. Only one patient had a cardiac aura, and in none was there any improvement in the epilepsy when the heart improved, or any increase as the heart grew worse. In fact, in 3 cases, as the epilepsy grew worse, the heart apparently grew better. The postulates of Stintzing that the heart disease must precede the epilepsy, and that improvement in the heart disease must improve the epilepsy, were not fulfilled. [J. S.]

10.—The patient, a woman of 25, had been married for 3 years, a nullipara, had missed 2 menstrual periods, and there was bleeding and the usual signs of pregnancy. As the hemorrhage increased, examination was made, and a number of vesicles found protruding from the cervix. The patient discharged a mole. Three years later she had a healthy child. The second patient, a woman of 38, married 14 years, had 5 children. She had 2 **hydatiform moles,** for the second of which it was necessary to do an hysterectomy. Both ovaries were found to be cystic. Findley gives a careful description of the histological changes, with some excellent illustrations. He discusses the various changes that may occur, including malignancy, and tabulates 210 cases of this condition, from a study of which he reaches the following conclusions: (1) That the causes are unknown; that it occurs most frequently between the ages of 20 and 30 years and is one and one-half times as frequent in multiparæ as in nulliparæ. (2) That the weight of evidence is in favor of maternal origin, and probably disturbed maternal circulation is the exciting cause. (3) That there is no proof that cystic degeneration of the ovaries has any influence upon it. (4) That in about 16% of all cases malignant change occurs; no sharp line can be drawn between the malignant and benign forms. (5) Therefore, a microscopical examination of the discharged mole will not suffice to decide this point. (6) The length of time the mole remains in the uterus has no effect upon its disposition to become malignant. (7) The diagnosis cannot be made with certainty unless the vesicles are seen. These are only expelled spontaneously before abortion is in progress 4 times in 210 cases. (8) That the symptoms are hyperdevelopment of the uterus; uterine hemorrhage and an irregular shape and consistency of the uterus. (9) That early recognition and immediate removal are important. (10) That ergot and vaginal packs will control the hemorrhage; the curette should not be used. (11) That after the mole is expelled the uterus should be explored with the finger, irrigated and packed with antiseptic gauze. (12) That 2 weeks later it is well to curette the uterus and to examine the scrapings for syncytial invasion, and if this is found hysterectomy should be performed. (13) That the patient should be observed for 3 years after the expulsion. In the event of hemorrhage curettement should be performed, and the scrapings examined microscopically. All new growths in the vagina and lungs are to be regarded with suspicion. (14) In 210 cases the average age was 27 years, extreme ages 13 and 58. The largest number of moles born of a single woman is 11. Eight of the patients had cystic degeneration of the ovaries. In one case the mole developed in the Fallopian tube. Malignant degeneration occurred from one week to 4 months after expulsion. Maternal mortality was 25%, the causes of death being malignant syncytisis 16%, hemorrhage 4%, septic peritonitis 2%, and the rest general sepsis, uremia, nephritis, endocarditis, meningitis, or else the cause was unknown. It is the great exception for more than one mole to occur. [J. S.]

11.—Goodridge makes a very vigorous reply **to the criticisms of Hare** upon his article. He claims that in some respects Hare misquoted him, that Hare's results differ widely from those obtained by him, that personal equation plays a considerable part in the interpretation of experiments, and he believes that Hare is not justified in applying to man the results of his experiments upon dogs. [J. S.]

IL POLICLINICO (SEZIONE PRATICA.)

April 4, 1903.

1. Agglutination of the Bloodplates in Febrile Diseases. A. ZERI and M. ALMAZIA.
2. Acute Malarial Nephritis With Casts and Without Albumin. A. CARDUCCI.
3. A Case of Central Laceration of the Perineum. A. MAURIZI.

1.—Following up the experimental work of Ducceschi, who found that, prior to coagulation of healthy blood, minute granules appeared, which microscopical examination showed to be made up of large quantities of more or less deformed bloodplates and a smaller number of leukocytes, Zeri and Almazià have studied this phenomenon of **agglutination of the bloodplates in its relation to various diseases,** including pneumonia, pleurisy, influenza, tuberculosis, typhoid, scarlet fever, measles, malaria, etc., 200 patients, in all, being examined. A macroscopical examination of the blood was first made according to the method used by Ducceschi, that is, by allowing 3 to 4 drops of blood from the punctured fingertip to fall upon a glass-slide, and gently tipping it from side to side. After a short time, whitish granules, contrasting with the red color of the blood, are seen upon the slide when the specimen is held to the light. After fixation and staining with a 1 per cent. solution of methylene blue, these granules, under the microscope, are shown to be made up of bloodplates. In a preliminary note the authors state that the most striking result of their work was the **nonagglutination of the bloodplates in tertian and quartan malarial fever,** while agglutination took place in all the other diseases studied. The phenomenon was seen in both the febrile and afebrile periods of the disease; and agglutination reappeared after administration of quinine in sufficient quantity to break up the febrile seizures. The greater part of the malarial subjects in whom this phenomenon was absent recovered spontaneously, in a few days, without the use of quinine. The authors believe that, should their finding be confirmed by further observations, it may constitute a valuable aid to the diagnosis of malarial blood. [R. L. F.]

2.—Although absence of albumin in chronic nephritis has frequently been recorded, the cases of **acute nephritis without albumin** are few, writes Carducci. Within the author's knowledge, such cases have been reported solely in connection with scarlatina. A case came under his observation in which the patient, a child of six, previously in perfect health, was seized with malaria; and, 2 or 3 days after the development of that disease, edema, scanty urine, vomiting and diarrhea appeared. After this condition had persisted for 14 days, numerous granular and hyaline casts appeared in the urine, though albumin was entirely absent; and there was increased bloodpressure, reduplication of the first heart sound at the apex and accentuation of the second in the aortic space. After administration of quinine, fever ceased; and, under diaphoresis and a milk diet, edema disappeared, the urine became more abundant, and casts were no longer seen. Albumin still remained absent from the urine. Not till the twenty-third day after the onset of the disease was there a trace of albumin, and this disappeared within 2 days, to reappear in 6, and finally to disappear entirely. The patient made a complete recovery. [R. L. F.]

3.—Marizi reports a case of **central laceration of the perineum** which he **treated by simple vaginal suturing** with 7 interrupted stitches, including the mucous and muscular coats. The edges of the cutaneous tear being drawn into apposition by the vaginal stitches, no sutures were used in this part of the wound, a sterilized gauze dressing, only, being applied. Healing of the cutaneous wound took place within 7 days, and the doctor was able to remove the stitches from the perfectly healed vaginal wound upon the eighth day. [R. L. F.]

ZENTRALBLATT FUER INNERE MEDICIN.

March 7, 1903.

Concerning Spinal Metamery and its Relation to the Localization of the Amyotrophies.

E. BRISSAUD and A. BAUER.

The article is a reply to the recent article of Ferrannini, abstracted from the same journal; and is a very just criticism of the latter, showing particularly that the **amputation of a limb at almost any point would naturally result in changes in more than one segment of the spinal cord,** since various muscles, supplied by different segments, are cut across in such an amputation. The authors state that they have in preparation an article that will show, however, **that there is a certain degree of regularity in the distribution of atrophy of spinal cells, resulting from destruction of various portions of the limbs.** [D. L. E.]

March 14, 1903.

Cryoscopy of the Urine and of Ascitic Fluid in Diseases of the Liver. LUIGI FERRANNINI.

The author reports his examinations in 16 cases. He states that **in atrophic cirrhosis the value for the freezing-point lies within the normal bounds,** tending toward the higher limit. In malarial liver-disease, the value is high. In biliary hypertrophic cirrhosis the author found the value high; this was also true in one case of syphilis of the liver. In another case of syphilis of the liver, with icterus and disease of the pancreas, the freezing-point value was very low. In another instance of syphilitic jaundice it was normal. In a case of simple catarrhal icterus it was also normal; also in one of carcinoma of the liver. In a case of suppurating ecchinococcus cyst it was low. In another case, probably the same as the last, it was high. The cryoscopical index of ascitic fluid in atrophic cirrhosis varied from -0.55° to -0.75°. [M. O.]

Society Report.

PHILADELPHIA OBSTETRICAL SOCIETY.

Meeting held May 7, the president, Dr. J. M. Fisher, in the chair.

Dr. L. J. Hammond presented several specimens. He first showed 2 unusually large tubes and ovaries, unique specimens of **gonorrheal pyosalpinx,** confirmed by microscopical diagnosis. He then showed **true bilateral ovarian enchondromata,** removed from a woman of 62, unusually large specimens of this rare condition. Five enlarged perirectal glands were also removed at the time of operation, with excellent recovery following. He presented **an unusually large fibroid,** also followed by uninterrupted recovery. Only the anterior and lateral portions of the uterus had undergone myomatous change, the posterior portion being entirely unaffected. The patient was 42 years old and had had one child 19 years before. The last specimen was a **left-sided ovarian cyst,** removed from a woman of 32, 3 weeks after the birth of her eighth child at full term. She presented the characteristic ovarian facies described by Sir Spencer Wells. The growth weighed 110 pounds and contained more than 3 gallons of fluid. Recovery followed in this case also.

Dr. Wilmer Krusen reported a case of **central placenta prævia with transverse position,** occurring in a woman of 34, who had already had 9 children. After manual dilatation of the cervix, podalic version was performed, with successful delivery of a well-developed, though slightly asphyxiated infant. Both mother and child recovered. Dr. Stricker Coles discussed central placenta prævia, which rarely goes on to full term. He advised version when the infant is not viable, when the child is dead, when its life is endangered from severe hemorrhage, when the cervix is easily dilated and the vagina is large. In other cases he prefers Cesarean section. Dr. G. M. Boyd believed also that there were a few cases in which Cesarean section was best. Dr. Oliver Hopkinson discussed the diagnosis of central placenta prævia. Dr. Hammond considered the early diagnosis of the condition exceedingly difficult. Dr. Krusen, in closing, stated that his diagnosis had been made during manual dilatation, as the further he dilated the cervix, the more he found that orifice covered by the placenta. He believed that Cesarean section would be necessary in but very few cases.

Dr. G. E. Shoemaker reported 3 cases of **uterine fibromata occurring near the menopause,** showing that these tumors may grow to excessive size and be accompanied with all the severe complications of the condition at this time. These 3 cases occurred in a consecutive series of 19 hysterectomies performed at the Presbyterian Hospital without one death. Dr. Hammond said that the treatment of intraligamentous fibroids was always very difficult. In answer to a number of questions, Dr. Shoemaker said that, while he did not usually have a leukocyte count made, he always had the hemoglobin estimated. For controlling hemorrhage temporarily, he uses a vaginal gauze pad applied in the knee-chest position, renewed every third day. He also gives 5 grains of mammary extract, 4 times daily. The patients are kept in bed, with ice applied to the abdomen if there be local peritonitis.

Dr. Stricker Coles exhibited a specimen of **fetus papyraceus** from a woman aged 33, 300 days pregnant. The first stage of labor lasted 8 hours, the second 2 hours, and the third stage one hour and a quarter. The placenta and fetus papyraceus were removed by Credé's method. The child, a male infant, weighing 11 pounds 6 ounces, was well developed and perfectly normal in condition. The fetus papyraceus had grown to about three and a half months gestation before death.

Special Article.

OPENING ADDRESS

BEFORE THE FIRST ANNUAL CONFERENCE OF STATE AND NATIONAL HEALTH AUTHORITIES, WASHINGTON, D. C., JUNE 3, 1903.

By WALTER WYMAN, M. D.,

Surgeon-General U. S Public Health and Marine-Hospital Service.

Gentlemen: I beg leave to express my pleasure in meeting you at this assemblage, called by myself in accordance with Section 7, of the act of Congress approved July 1, 1902.

What may be the result of these annual conferences time must determine, but certainly we may consider the present, the first annual conference under the law, as a most noteworthy event. For the first time in the history of the United States there has been placed within its statutes, by the act of Congress referred to, a provision looking to harmonious and co-operative efforts in public health matters between the national government and the state governments.

This status has long been desired, but difficult of achievement by reason of our republican form of government. It has been difficult for the national government to extend its influence into state health matters without appearing to infringe upon the states' authority, and it has been difficult for the states, individually or collectively, to seek aid from the government without appearing to surrender authority reserved to them by the national constitution. In the meantime, however, the Marine-Hospital Service, now bearing the title of the Public Health and Marine-Hospital Service of the United States, has become so developed and strengthened, and the state health organizations have been so perfected, that a sentiment of respect, one for the other, has been established, finding its expression in this law of 1902, and, in particular, section 7 above referred to.

To my mind the outlook is bright. The great problems to be solved in sanitary affairs; the great work to be done in the suppression, and even elimination, of disease, and the cultivation of health and strength, so that physically, as well as in other respects, the United States may take a leading position among the nations, are propositions which should not be considered impossible of solution, and a proper development under the terms of this law will be an important step in this solution.

One of the most important features of this assemblage is its official character. All of us are familiar with conventions of similar purpose, productive of much useful information but entirely lacking in official significance. Here, however, are assembled the legalized health authorities of the states, representing the practical administrative experience as well as the theoretical and scientific knowledge required in the consideration of public health affairs.

Many of you have devoted the best years of a long professional life to the consideration of the subjects which will come before us, having acquired, in individual instances, and on special subjects, unusual knowledge and wisdom.

Combined effort appears to be a distinguishing feature of this new, twentieth century. This is seen in nearly all forms of civic and commercial life and even scientific and professional effort. It would seem that when the history of the twentieth century is written there will be lacking those great and single characters looming way above the average, leading, directing or dictating; instead, there will be an elevation of the average, the best individual effort will, neither in purpose nor effect, aggrandize the individual, but will be exerted in connection with other effort of like nature for the establishment of a parity of well-being among all. This, I take it, will be the keynote of our action, bearing constantly in mind the actual results to be attained and being determined to attain them.

To refresh your memory I will now read Section 7 referred to, and also Section 8, which is somewhat analogous.

It will be seen that Section 7 provides for three kinds of conferences. First, the Surgeon-General may invite as many of the health and quarantine authorities as he deems necessary, not more than one from each state, territory, or District of Columbia, to a conference, whenever in his opinion the interests of the public health would be promoted thereby. Second, a conference must be called at least once a year of all the states, territories, and District of Columbia. Third, upon the application of not less than five state or territorial boards of health, quarantine authorities or state health officers, he must call a conference, but in this event only those states joining in the request are to be called.

While the present is the first annual conference, it is not the first conference called under the law. Last January, upon the request of 22 states, a so-called plague conference was called to consider the situation in San Francisco. The proceedings of that conference in detail have been transmitted to each of you. The effect of it was undoubtedly very great in bringing about the present satisfactory status in San Francisco. The object of that conference was specific, but, as you will note, the law providing for the annual conference gives no details. We must assume, therefore, that the intent of the law is that we shall get together, and we are to decide ourselves as to the matters to be considered. It is evident that the conference is advisory in character, without changing in the least the present executive force of this Bureau of the Treasury Department.

It seems advisable at the outset, and for a satisfactory understanding of one another, to give a review of the laws and of the organizations relating to the Public Health and Marine-Hospital Service, and to receive in return an account of the same nature from each state delegate.

The laws especially relating to the United States Public Health and Marine-Hospital Service can be found listed in the appendix to the regulations of the service of 1902, and the laws relating to quarantine can be found printed in full in the quarantine regulations of 1903.

Having thus referred to the laws, I propose now to describe the organization of the Bureau of the

Public Health and Marine-Hospital Service. For executive administration, the Bureau is divided into six divisions, each presided over by an Assistant Surgeon-General. There is, also, a Miscellaneous Division, presided over by an Assistant Surgeon, and the office of the Chief Clerk. The clerical force numbers about 20. These divisons are named as follows:

Division of Marine-Hospitals and Relief.
Division of Domestic Quarantine.
Division of Foreign and Insular Quarantine and Immigration.
Division of Sanitary Reports and Statistics.
Division of Personnel and Accounts.
Division of Scientific Research.
Miscellaneous Division.

Division of Marine-Hospitals and Relief.

To this division are sent all matters relating to the marine-hospitals, 22 in number owned by the Service, and to the patients, numbering 58,000, treated annually in these hospitals and in some 110 relief or contract stations. The Purveying Depot, a large building located in New York, is under the direction of this division, to which are also referred all matters relating to hospital supplies, including subsistence, drugs, hospital furniture, surgical instruments and appliances, plans and specifications for hospital construction, and the conduct of the sanatorium for consumptive patients at Fort Stanton, New Mexico, where the service has a sanatory ranch, 56 square miles in area, the buildings of the fort having been placed in perfect condition, the patients in the sanatorium numbering about 150. The scheme for this ranch embraces the removal of consumptives from our hospitals with a view to their improvement or recovery. Quite a large percentage have recovered, a number leave greatly improved, and all who desire can find employment after leaving in the same high, dry and healthy locality. The hospitals are thus relieved from this contagious disease, and the vessels from which they come are subject to inspection and disinfection as to their forecastles or other quarters that have been occupied by known consumptive patients.

Division of Domestic Quarantine.

To this division are referred all matters relating to the national maritime quarantine stations, embracing 19 complete disinfecting stations and 18 inspection stations. At the former are hospitals, barracks, disinfecting machinery, steamers and small boats, all requiring constant care and attention. This division, also, must see to the expenditure of appropriations for new stations, involving purchase of lands, construction of piers and buildings, said construction being generally under the Supervising Architect of the Treasury on plans approved by the Bureau and the Department, but occasionally the Bureau attends to this construction itself. To this division are also referred all matters relating to the quarantine regulations and their interpretation. Matters relating to interstate quarantine and suppression of epidemic diseases are also handled in this division. Quarantine upon the Mexican and Canadian borders is also conducted through this division.

Division of Foreign and Insular Quarantine and Immigration.

To this division is assigned the management of the national quarantine stations in Hawaii, Porto Rico and the Philippine Islands, the supervision of officers detailed for duty in the offices of the United States consuls in foreign ports, who sign the bills of health with the consuls. At present there are three officers in Japan, Yokohama, Kobe and Nagaski; two in China, Shanghai and Hong Kong; one in Naples, Italy; ten in Cuba, three in Havana, one each at Cienfuegos, Santiago, Nuevitas and Matanzas, and several at subports; four in Mexico, two at Vera Cruz, one at Progreso, and one at Tampico; six in the fruit ports of Central America, namely, Bocas del Toro, Colombia; Port Limon, Costa Rica; Bluefields, Nicaragua; Ceiba and Puerto Cortez, Honduras; Livingston, Guatemala; and Belize, British Honduras.

To this division are also referred all matters relating to the medical inspection of immigrants, a most important function of the service, requiring the detail of a large number of officers.

Division of Sanitary Reports and Statistics.

This division is charged with the preparation of the Public Health Reports, published weekly by the Bureau. All matters of a statistical nature are referred to it.

It may be of interest to state that some question has arisen as to whether the work of this division, which is authorized both by the law of 1893 and the law of 1902, may not duplicate the work of the Census Bureau, but I am pleased to state that, after conference with the Chief Statistician of the Census Bureau and others connected therewith, it has been found that there need be no duplication or interference by one Bureau with the other; on the contrary, each will be helpful to the other. The Census Bureau, in addition to the decennial census, will publish an annual census of mortality and births, but the weekly and monthly reports will be published as heretofore by this Bureau, and morbidity reports, which are so much desired and which will require special organization to procure, will be undertaken by the Public Health and Marine-Hospital Service.

Division of Personnel and Accounts.

To this division are referred all matters relating to the personnel of the service, examinations for admission to the Corps of commissioned officers; examinations for promotion, appointments and resignations, appointment of boards for the physical examination of officers of the Revenue-Cutter Service. This division has, also, charge of the bookkeeping of the service.

Division of Scientific Research.

This division might be better called the Division of Scientific Research and Sanitation. To it are referred all matters relating to the Hygienic Laboratory. It should be understood that this laboratory, or the staff thereof, is not a part of the bureau proper, though at present located in the same building. A new building, however, is just completed, located on the grounds of the old Naval Observatory, about half a mile west of the White House on the river bank. Five acres of this tract were turned over from the Navy Department for the establishment of this laboratory. It will give the director of the laboratory great pleasure to arrange with the delegates to this conference to show them this building. The laboratory has an advisory board, consisting of a delegate from the Army, not yet named, Dr. Urie of the navy, Dr. Salmon, chief of the Bureau of Animal Industry; Professors Welch, of Johns Hopkins; Flexner, of Rockefeller Institute; Sedgwick, of the Massachusetts Institute of Technology; Vaughan, of the University of Michigan; and Wesbrook, of the University of Minnesota. Under the law of 1902, three new divisions were added to the laboratory, the Division of Bacteriology already existing. These three new divisions are those of Zoology, Chemistry and Pharmacology. But one of these new divisions has been organized, namely that of Zoology, and the good results of this new organization are manifested in the recent discoveries and published report of the chief of this division, Dr. Stiles, upon the Prevalence and Geographical Distribution of the Hookworm. Bulletins, embodying important results of investigations, are published from time to time under the supervision of the Director of the Laboratory, Dr. Rosenau. It is believed that Congress can be influenced to provide for the extension of this laboratory by the erection of new buildings from time to time as the necessity therefore becomes demonstrated.

To this Division of Scientific Research and Sanitation are referred special requests for scientific investigation of special diseases, as for example the recent investigation of the so-called spotted fever in Bitter Root Valley, Montana. The initiatory steps for special investigations of this character are taken in this division, but any prolonged or technical work connected therewith is turned over to the laboratory.

Requests for special investigations of water pollution or local causes for the spread of typhoid fever are referred to this division.

The officer in charge of this division examines all current literature relating to scientific medicine or sanitation and keepts a card index of the same.

Miscellaneous Division.

The Miscellaneous Division has charge of the mailing of all Bureau publications, and certain miscellaneous duties relating to the reports of necropsies from the marine-hospitals, the medical examination of claims for benefits on account of injuries received by the crews of life-saving stations, certain matters relating to the annual report, etc.

Under certain Bureau Orders the operations of these several divisions are co-ordinated so that the work of one division, when it affects the personnel or duties connected with another division, is accomplished with the full knowledge and acquiescence of the other. There are also two regular Bureau Boards for the careful consideration of matters referred to them—namely, the Service Board and the Sanitary Board.

Yellow Fever Institute.

There is one other feature of the Bureau, assigned to no one particular division, but embracing all, namely, the institute for the study of yellow fever, called the Yellow Fever Institute, with which most of you are familiar. This institute was founded about two years ago for the purpose of learning all that could be learned about yellow fever, including its etiology, and to bring to this work the aid of all reputable physicians who might desire to take part therein, its membership including, besides the officers of the Marine-Hospital Service, special investigators both in this and foreign countries. It is divided into four sections, the chairman of each section being one of the division officers of the Bureau to which, under Bureau organization, matter of a kindred nature would naturally come. These, together with the chairman and secretary of the institute, form an executive board to consider, especially with regard to publication, the contributions received from the members. Twelve bulletins have been issued. A thirteenth, and the most important of all, relating to the cause of the disease, is now being printed and will be ready for distribution within a few weeks. This bulletin contains the report of a working party sent to Vera Cruz last summer to investigate and attempt to find the causative agent of the disease. Their work was continued during the winter with the material obtained in Vera Cruz, and gives evidence that progress has been made toward a final result. A second working party of three, two of whom were in the first party, are now in Vera Cruz and vicinity pursuing a continued investigation, and it is the purpose of the institute to continue in the prosecution of this work until successful. This institute embraces new features in the investigation of the cause of a specific disease, and if it proves successful with regard to yellow fever it may be that the new features of organized effort which it embraces will be applied to the investigation of other diseases.

Other important matters engaging the attention of the service are the proposed legislation for the establishment of a national leprosarium in which may be received the occasional cases of leprosy found in the states, which give the local and state authorities so much trouble; also the enforcement of the new regulations relating to the examination and licensing of establishments for the production of vaccine, serums and antitoxin, under the law passed by the last Congress. These regulations go into effect next August.

Mention should also be made of the connection of the service with the International Sanitary Bureau of American Republics, established in accordance with resolutions of the Conference of American States held in the city of Mexico winter before last.

The Medical Corps.

Finally, with reference to the Service work, I wish to say a few words with regard to the medical corps, consisting of 109 commissioned medical officers received into the corps only after a thorough examination as prescribed by law, appointed first to the lowest grade, and promoted to the higher grades only after further successful examination. The discipline of the corps is military in character, the regulations for its uniforms and government are prescribed by the President, its officers, by reason of unusual responsibilities, continuous medical and surgical care of the large clientele, and by special scientific instruction in its hygienic laboratory, are kept in the van of professional excellence. There are, however, nearly two hundred acting assistant surgeons, some of whose appointments are temporary in character, but a number of whom have been long in service by reason of special adaptability or because the arrangement made with them is necessary in the interest of economy. These officers of the medical corps are stationed in all parts of the United States and its dependencies and constitute our reliance not only in the ordinary work of the service but in times of special need.

Conference Organization.

I have deemed it necessary to give this somewhat extended account of the organization of the service, both that our aims and methods may be understood and that I may the more readily explain a proposed method of making these annual conferences of practical utility. It might be advisable to appoint on special committees members of the conference especially interested in the several subjects to be considered by these committees, said committees to remain in organization during the year and to receive for further conference with the Surgeon-General such matters as might be pertinently referred to them by him. The titles of these committees would find their analogues in the several divisions of the bureau. The reports of these committees could be read to the full conference at its annual meeting, and, if adopted by the bureau and the conference, would have a force and influence which would naturally result from the conjoint action of the national and state authorities. I would suggest tentatively the following committees: First, on Scientific Research and Sanitation, second, on the Prevention and Spread of Epidemic Diseases, third, on Morbidity and Mortality Statistics, fourth, on State Legislation, fifth, on education. In addition to these, there might be special committees on certain specified diseases, namely, Cholera, Yellow Fever, Plague, Smallpox, Tuberculosis, Leprosy, Typhoid Fever. To these committees might be committed such resolutions as may be offered here, but the adoption of any resolutions by this conference, it seems to me, should not be until after a report thereon had been made by the special committee to which it is referred.

It is believed that the above plan is at least worthy of trial. It would give real aid and would stimulate the members of the committees in an investigation of the subjects confided to them, and might produce a uniformity of effort, a co-ordination of work in different parts of the country, which now does not obtain.

Typhoid Fever and Enteritis in the Nursling.—P. Nobecourt (*Rev. Mens. des. Mal. de l'Enfance*, January, 1903), reports the case of a baby, 1½ years old, who, in the course of an attack of typhoid fever, suffered from a severe enteritis. It was the latter disorder that the author believes was responsible for the death of the patient rather than the former. The affection of the intestine rendered the nourishment of the child almost impossible. Alimentary hygiene is necessary in infants suffering from typhoid fever as well as in adults suffering from the same disease. While a milk diet agrees with the majority of patients, there are some patients who will not tolerate it. To continue its administration in the latter class of patients exposes them to serious accidents. [J. M. S.]

Original Articles.

IMMUNIZATION FROM TUBERCULOSIS.

By D. E. SALMON, D. V. M.,
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In an article appearing in the **Philadelphia Medical Journal**, February 14, 1903, Dr. Flexner, Professor of Pathology in the University of Pennsylvania, appears to review the experimental researches on immunity from tuberculosis which have been made in America previous to the work recently published by Behring and by Pearson and Gilliland, and to undertake the distribution of credit for the development of protective inoculation against this disease. One paragraph in the article suggests that possibly Dr. Flexner did not carefully examine the literature of the subject before writing his contribution to the history of this important line of investigation. This paragraph is as follows:

"*To whom belongs the credit of protective inoculation against tuberculosis?* In biological science, as in the physical sciences, discovery proceeds not by isolated independent observation of fact, but by orderly procession. Even the newest, most unexpected and startling discoveries are bound up with previous knowledge. The successful attempts to produce immunity from bovine tuberculosis do not stand out as isolated performances, but are merely the ultimata of many unsuccessful and some partially successful experiments which have gone before. It is a matter of congratulation and national pride that the two essential prerequisites to the later important studies upon tuberculosis just cited should have been supplied by American investigators. The first of these was the demonstration by Theobald Smith of the differences between bovine and human tubercle bacilli; the second, the protection by Trudeau of rabbits and guinea-pigs from certain tuberculous infections by previous inoculation with tubercle bacilli of diminished virulence. Because of the high intrinsic value of Trudeau's experiments and because they have generally been overlooked in the published accounts of the protective inoculation of cattle, it is only just that they be recalled and be given the high place they deserve among the facts of this recent addition to our knowledge of tuberculosis."

The historian who emphasizes those achievements of his fellow-countrymen which are legitimate subjects for congratulation and which may stimulate the national pride, deserves commendation; but it surely would not diminish the amplitude of our national rejoicing if full credit were conceded to all Americans who contributed, and if this credit were logically proportioned. It is, also, well to bear in mind the more important contributions made by investigators in other countries.

Briefly, what have Behring, and Pearson and Gilliland done? They have produced immunity in cattle by inoculating them with varieties of tubercle bacilli of human origin, the virulence of which was not sufficient to produce appreciable pathological lesions in bovine animals. Now, the question is: Was the demonstration by Theobald Smith of differences between certain bovine bacilli and certain human bacilli an "essential prerequisite" to these researches? The line of reasoning by which such a conclusion may be reached is certainly very obscure, to say the least. It may be admitted that an attenuated bacillus was an essential prerequisite to the vaccination of cattle against tuberculosis, but as de Schweinitz, in the laboratory of the Bureau of Animal Industry, demonstrated that he had obtained such a bacillus, had produced immunity in guinea-pigs and proved its harmlessness for cattle two years before Smith pointed out the differences between bacilli from the *Nasua* and those of bovine origin, and four years before he published his paper entitled "A Comparative Study of Bovine Tubercle Bacilli and Human Bacilli from Sputum," it is rather puzzling from a chronological point of view to understand how Smith's observations were an "essential prerequisite" to this line of work. Trudeau, in 1897, freely conceded that de Schweinitz was the first to call attention to his (de Schweinitz's) results in protecting guinea-pigs by means of living attenuated cultures, and that his own (Trudeau's) results were not as good as those of de Schweinitz.

It is not the purpose of the writer to detract in the least from the merits of Smith's researches or to minimize their influence upon the progress of medical science; but there are others whose work should also be recognized. Several observers were working with attenuated tubercle bacilli, and knew how to obtain them at will, years before the demonstration of the "differences between bovine and human tubercle bacilli," referred to by Dr. Flexner, had been made. It is disappointing that so much good work should apparently be unknown to one who stands so high in experimental medicine and whose every word carries so much weight. As the subject is of particular interest at this time, a brief reference will be made to some of the important pioneer work, without any attempt, however, to give an exhaustive bibliography.

Daremberg, in 1889, made experiments looking to the production of immunity by inoculating guinea-pigs and rabbits with sterilized cultures of the tubercle bacillus. The guinea-pigs died, the rabbits were made sick. Some of the treated rabbits, after recovery, together with checks, were then inoculated with virulent tuberculosis germs. The treated rabbits showed considerable resistance to the disease, as compared with the checks. Daremberg also made experiments to test the effect of small doses of virus, and in one series of experiments he used medullas as a vaccinating material. His results appear to have made a profound impression upon him, for he concluded his paper with these words:

"From all these facts it follows that tuberculous virus is a poison which can be treated in a like manner with mineral or organic poisons. Its toxicity may be increased or diminished almost at will. On the other hand, one may augment the resistance of the organism against its disorganizing action. And I firmly believe that the day will come when in this gamut of diverse virulences will be found the correct note which will transform the virus into vaccine, which will fix with precision the attenuation infallibly conferring immunity."

Grancher and Martin, in the same year, presented a paper to the Academy of Medicine, Paris, made public the following year, which is of remarkable interest in this connection, as it shows that, at that early date, they had discovered a reliable method of attenuating the tubercle bacillus. The following quotation will convey some idea of their work:

"2. Vaccination against experimental tuberculosis.

"We applied ourselves to obtaining graduated virulences, even to the loss of virulence, and, although this scale is in nowise mathematical, it is sufficient, however, to be utilized about as are the dried marrows in the method of M. Pasteur for the treatment of rabies.

"We shall designate under the name of virulence No. 1 the most virulent cultures in our series, which kill rabbits, by intravenous injection, in 15 days or one month. Virulences 2, 3, 4, 5, 6, 7, 8, 9 and 10 are successively decreasing. These last cultures, from No. 10 to No. 7 inclusive, resown, no longer develop; they are without effect upon rabbits. Virulences 2 and 3 are fatal, but at varying periods, according to the resistance of the animal. These periods are variable, with still more reason, with virulences 4, 5 and 6. . . .

"Conclusion.

"We believe that we have succeeded, on the one hand, in giving to rabbits a prolonged resistance against the most rapid and the most certain experimental tuberculosis, and, on the other hand, in conferring upon them an immunity against this same disease, the duration of which remains to be determined."

In 1890 Trudeau described two tubercle cultures, both of human origin, but differing greatly in virulence. His description is extremely interesting in the light of subsequent events. Culture No. 1 was obtained from the lung of a man dead of acute miliary tuberculosis. It grew on glycerine-agar very slowly in very dry, isolated and heaped scaly masses, which could be raised entire from the subjacent culture medium without leaving any trace of their presence. Culture No. 2 came from France and had been obtained from the lesions of a guinea-pig dead from a general tuberculosis induced by inoculation with material from an old human phthisical cavity. It had been cultivated a long time, being occasionally allowed almost to die out before being again replanted. Its gross appearance was entirely different from No. 1. It grew much more rapidly in an even film, which, toward the end of the third week, began to raise in high irregular pleats above the level of the culture medium. It was nowhere dry or scaly, but was moist and of the consistency of very thick cream. It could be scraped clean from the subjacent agar with difficulty. Inoculated into rabbits, the virulence of No. 1 seems much greater, and the lesions it induces are more widespread and more rapidly fatal to life. When plants on glycerine-agar were made from the tubercles induced in rabbits by both these cultures, each presented, as it again developed on the culture medium, its own individual characteristics, showing that the variation was apparently not a temporary one, since it could be reproduced again, and each returned to its peculiar type after the microbes had passed through the system of a living animal.

Late in the same year Trudeau contributed a paper to the *Medical Record*, in which he gave details of two series of experiments made with a view to obtaining immunity. In the first series preventive inoculation of the nonliving chemical products of the life-history of the tubercle bacillus failed to afford any protection against subsequent infection with virulent living tubercle bacilli. In the second series preventive inoculation with the attenuated living germ described above, which was capable of producing in most cases only an indolent and localized tubercular process at the site of injection, failed to protect against subsequent inoculation with virulent tubercle bacilli.

In May, 1894, Trudeau read a paper on the production of immunity with avian bacilli. He said: "The rabbits which have survived the subcutaneous inoculation of living cultures of the avian tubercle bacillus of gradually increasing virulence and in graded doses, have undoubtedly acquired a certain degree of immunity against subsequent eye inoculation with the mammalian cultures, which in some animals under my observation has persisted for over a year without the slightest evidence of a relapse. . . . We find, also, that, while the rabbit, which is very much more susceptible to the avian than to the mammalian bacillus, may acquire a certain degree of immunity against the latter by preventive inoculations of the former, the guinea-pig, which can rarely and with great difficulty be killed by the avian microbe, even when enormous doses of these cultures are injected, is in no way protected by this treatment, a fact which I have several times proved experimentally myself."

In December, 1894, de Schweinitz contributed to the *Medical News* an article entitled "The Attenuated Bacillus Tuberculosis; Its Use in Producing Immunity to Tuberculosis in Guinea-pigs." In this article, which is remarkable in many respects, de Schweinitz said with reference to a strain of tubercle bacilli which he had obtained from Trudeau: "After growing for several generations upon glycerine-agar, about two months to each generation, the culture was transferred to glycerine beef-broth, which was to be used as a source for tuberculin. After the fourteenth generation I noticed that the guinea-pigs that were always kept inoculated with tuberculosis, to test the tuberculin, did not succumb nearly as readily, and in the case of the fourteenth generation it required six months before the disease developed. I, consequently, inoculated a number of guinea-pigs with the seventeenth, eighteenth, nineteenth and twentieth generations of this germ, which was alive and would grow very readily on the liquid media. Some of these pigs inoculated had previously been treated with an injection of tuberculin; the others had never been used. After some months those that had been inoculated with the attenuated germ remained quite well, and one was chloroformed, and the autopsy showed that it was free from disease.

"In order to see if this might be accidental, I then had nine pigs inoculated, four checks, four pigs previously inoculated with the attenuated germ, and one pig that had received tuberculin by feeding. These were all inoculated in the side with the material from the gland of a tuberculous cow that had just been killed. After seven weeks the checks were all found dead from tuberculosis. The other animals appeared perfectly well. One was accordingly chloroformed, and, although very careful examinations were made, no disease could be detected. Even the local lesion that was produced where the material had been injected had entirely healed. The animals were apparently immune. . . .

"At this time I had at the experiment-station of the Bureau the calf of a tuberculous cow, which, however, although the mother was badly diseased, did not respond to an injection with the tuberculin. The calf was then drenched with 100 cc. of a growing, active, liquid culture of this attenuated germ, the twentieth generation. After three months the calf was again injected with tuberculin, and, failing to respond, was killed. The autopsy showed the animal to be perfectly healthy.

"Another healthy southern cow received into a vein an injection of the same generation from this liquid culture, in July. On November 20 this animal, which was rather thin and had an initial temperature of 103° F., was injected with tuberculin, but did not show any reaction. Another animal, known to be tuberculous, injected at the same time, with the same-sized dose of tuberculin, showed a good reaction. The cow which had received the injection of attenuated culture had a small lump, the size of an egg, on the side of the neck, where inoculated. The diagnosis of no tuberculosis, as based upon failure of reaction to tuberculin, will be confirmed or disproved by an autopsy later."

These experiments of de Schweinitz, reported in 1894, show that at that time he had a human bacillus which had become so attenuated that it no longer produced disease even in guinea-pigs; moreover, in cultures from one original stock he had succeeded in obtaining bacilli of different degrees of virulence, forming a graded series between the most virulent, on the one hand, and those which no longer produced disease, on the other. He had inoculated guinea-pigs with these attenuated bacilli and produced such a high degree of immunity that they were able to resist inoculation with bovine tubercle material. And, finally, he had fed these attenuated bacilli to a calf and injected them into the bloodstream of a cow without any disease being produced. He concluded from these experiments that "our attenuated germ may possibly prove very valuable in checking or controlling tuberculosis in animals, especially cattle."

Theobald Smith's article, entitled "Two Varieties of the Tubercle Bacillus from Mammals," appeared in 1896. In this article he compared "somewhat carefully two original cultures from two mammals which presented not only a different behavior on bloodserum, but also in which the morphology and pathogenic characters showed certain well-defined divergences." The source of one of these cultures was an animal of the bear tribe (*Nasua narica*); the other culture was obtained from a tuberculous bull. The *Nasua* had been kept as a pet by a man who succumbed to tuberculosis, and Smith assumed that "it is highly probable that this animal had contracted the disease from its master." This is the apparent reason for a discussion relative to the differences between human and bovine tubercle bacilli. He points out that "the great sensitiveness of the tubercle bacillus to change of media—the difficulty in getting an artificial growth started—signifies that the transmission of certain bacilli from one species to another might encounter obstacles still greater than in the culture tube. Again, the tubercle bacillus is properly regarded as a parasite organism, rather highly specialized toward an intracellular existence. It is a well-known law that the more specially fitted to certain environments the organism, the less likely is it to survive or take root outside of those conditions. . . . Virulence toward one species in such organisms is no criterion of its invasive power toward other species." As these considerations bear equally in both cases, it would have been interesting if the author had explained by what process of reasoning he concluded that it was "highly probable" that the *Nasua* could contract tuberculosis from man, but very doubtful that man could contract tuberculosis from cattle.

In conclusion Smith says:

"I have presented this subject, not as an advocate for or against the view that milk is the cause of tuberculosis, for a discussion of this subject would lead too far, but to call attention to the necessity for more information along the following lines:

"1. The existence of races of tubercle bacilli (both human and bovine).

"2. The identity or nonidentity of bovine and human tubercle bacilli.

"3. The effect of bovine tubercle bacilli on man. This problem could be attacked by cultivating bacilli from a case of tuberculosis (presumably contracted by drinking milk) and testing them on cattle, as I have done.

"4. More evidence on the subject of milk infection by tracing the source of the disease in infancy more carefully, and by searching for primary foci of tubercular infection at all autopsies on children.

"5. Any existing differences between the disease produced in early life by human and that presumably due to bovine tubercle bacilli."

I find nothing in this paper indicating that Smith attempted to produce immunity or that his investigations led him to believe in the possibility of such a result being accomplished. His observations constituted an important contribution to the general subject of the variation of the tubercle bacillus, but this, certainly, was not the first case of the kind put on record.

In the same year (1896) de Schweinitz and Schroeder published an article entitled "Further Experiments with an Attenuated Tuberculosis Bacillus." They said: "The experiments with this attenuated germ have been continued, and we desire to present further evidence of the apparent absolutely harmless character of this attenuated germ, reserving for a later article further reports of its immunizing properties." Details of experiments were given of which it was said: "They show conclusively that from an originally virulent germ we have succeeded in obtaining an attenuated germ, which, even in large doses, is apparently harmless to guinea-pigs, rabbits, cattle, horses and monkeys. . . . Cows and calves have also been inoculated with this attenuated germ in doses varying from 2 to 500 cc. at a time, without the production of tuberculosis."

In 1897 an article by de Schweinitz appeared in the *Transactions of the Association of American Physicians* on "Some Products of the Tuberculosis Bacillus and the Treatment of Experimental Tuberculosis with Antitoxic Serum," in which the production of immunity with attenuated cultures was again referred to, as was also the possibility that "cattle could be vaccinated with this attenuated germ and made immune to tuberculosis." Details were given in this article as to the treatment of two cows and one heifer by injections of the attenuated culture, but a statement of the testing of these animals was not given, as it had not yet been made. It is of material interest to add in this connection, however, the history of one of these animals as it appears on the records of the Experiment Station of the Bureau of Animal Industry. On July 26, 1894, cow No. 217, which had been previously tested with tuberculin, received an intravenous injection into the right jugular vein of 16 cc. of an attenuated culture of the human tubercle bacillus. Tested on November 19, no reaction to tuberculin was noted. On November 28, 1894, 6 cc. of the one hundred and twenty-third generation of an attenuated culture was injected into the abdominal cavity. These injections were repeated at various times. The animal was kept in the work for 28 months, receiving altogether 20,870 cc. of culture intravenously and subcutaneously, as large an amount as 2,000 cc. being given at one time. On February 22, 1898, this animal received an injection of virulent material taken from a cow affected with generalized tuberculosis. The injection was made into the thoracic cavity. Cow No. 217 was killed September 20, 1898, and a careful autopsy made by Dr. Schroeder failed to disclose the slightest evidence of tuberculosis.

Trudeau presented a paper at the meeting of the British Medical Association at Montreal, in 1897, in which he reviewed his earlier work on immunity, and reported experiments in vaccinating guinea-pigs with mammalian cultures attenuated by prolonged growth on artificial media. He says: "Dr. de Schweinitz was the first to call attention to his results in protecting guinea-pigs by means of living attenuated cultures, and, although my results have not thus far been as good as his, my experience in the past four years shows that a very marked degree of increased resistance to tuberculous infection can be induced in these animals, as well as in rabbits, by such preventive inoculation. . . At present, if twenty animals be inoculated with this attenuated germ, which has been grown for six years continuously on artificial media, with perhaps one or two exceptions, all survive and ultimately recover completely. . . .

"A certain disturbance of health and loss of weight is always caused by the inoculation of this attenuated culture, but the animals after three months seem to have completely recovered. If at this time they are inoculated with virulent bacilli, together with an equal number of controls, the prolongation of life in the vaccinated animals will be apparent in every case. . . . In 36 controls the average life was 57 2-10 days, and in the 66 vaccinated animals it was 154 3-10 days, so that the vaccinated animals lived nearly three times as long as the controls."

It was not until after all these researches had been made that Smith's paper on "A Comparative Study of Bovine Tubercle Bacilli and of Human Bacilli from Sputum" was published. It consequently could have had no influence upon them.

In the light of these facts it appears that Dr. Flexner has done a grave injustice to de Schweinitz in utterly ignoring his work. De Schweinitz had discovered that certain human tubercle bacilli might be administered to cattle subcutaneously, intravenously and intra-abdominally without producing disease, and had so administered them with the view of producing immunity in cattle before Smith's papers were published. How can it be said, therefore, that these later papers were an "essential pre requisite" to such studies? As the director of the Rockefeller Institute for Medical Research, Dr. Flexner's statements carry great weight, and it is unfortunate that he should portion out the credit for a notable discovery in a manner which might be in the least suggestive of unfairness or bias, or that before assigning the credit for such meritorious work he should fail to examine the literature. Possibly there are more American investigators who have accomplished results in the field of medical research than is realized even by some of our own writers on the subject.

Below is given a list of the articles which have been used in this review.

1889—Daremberg. Bull. de l'Acad. de méd., Oct. 29, 1889, p. 391. (De l'évolution variable de la tuberculose expérimentale.)

1889-1890-1891—Grancher & Martin. Bull. méd. Aug. 20, 1890, p. 777. (Tuberculose expérimentale.) (Work presented to Acad. of Med., Paris, through M. Dujardin-Beaumetz, Nov. 19, 1889.)

Cong. p. l'étude de la tuberculose, Paris, 1891, p. 18. (Notes sur les vaccinations antituberculeuses.)

1890—Trudeau. Transactions Assn. of Amer. Physicians, 1890, V. 5, pp. 183-184. (Some Cultures of the Tubercle Bacillus illustrating Variations in its Mode of Growth and Pathogenic Properties.)

1890—Trudeau. Med. Rec., Nov. 22, 1890, p. 565. (An Experimental Study of Preventive Inoculation in Tuberculosis.)

1894—de Schweinitz. Med. News, Dec. 8, 1894, pp. 625-629. (The Attenuated Bacillus Tuberculosis: Its Use in Producing Immunity to Tuberculosis in Guinea-Pigs.)

1894—Trudeau. Transactions Assn. of Amer. Physicians, 1894, V. 9, pp. 168-173. (A Report of the Ultimate Results obtained in Experimental Eye Tuberculosis by Tuberculin Treatment and Antitubercular Inoculation.)

1896—de Schweinitz & Schroeder. Bull. No. 13, Bureau of Animal Industry, Dept. Agric., Sept. 19, 1896, pp. 11-14. (Further Experiments with an Attenuated Tuberculosis Bacillus.)

1896—Theobald Smith. Transactions Assn. of Amer. Physicians, 1896, V. 11, pp. 75-95. (Two Varieties of the Tubercle Bacillus from Mammals.)

1897—de Schweinitz. Transactions Assn. of Amer. Physicians, 1897. V. 12, pp. 205-219. (Some Products of the Tuberculosis Bacillus and the Treatment of Experimental Tuberculosis with Antitoxic Serum.)

1897—Trudeau. Brit. Med. Journ., Dec. 25, 1897, pp. 1849-1850. (Remarks on Artificial Immunity in Tuberculosis.)

1898—de Schweinitz. Cong. p. l'étude de la tuberculose, chez l'homme et chez les animaux, 4th sess., 1898, pp. 488-496. (Traitement de la tuberculose par le sérum antitoxique.)

1898—Theobald Smith. Journ. Exper. Med., 1898, V. 3, Nos. 4 and 5, July and Sept., pp. 451-511. (A Comparative Study of Bovine Tubercle Bacilli and of Human Bacilli from Sputum.) (See also Transactions Assn. of Amer. Physicians, 1898, V. 13, pp. 417-470.)

1902—Behring Römer & Ruppel. Tuberkulose. 1902. 90 pp. Marburg. (In "Beiträge zur experimentellen Therapie". Heft 5, Theil 1.)

1902—Pearson & Gilliland. Journ. Comp. Med. and Vet. Archives, Nov., 1902, V. 23, No. 11, pp. 673 688. (Some Experiments upon the Immunization of Cattle against Tuberculosis.)

THE PRESENT STATUS OF THE TREATMENT OF SUPERFICIAL CARCINOMA AND TUBERCULOSIS BY MEANS OF THE X-RAYS.

By WILLIAM L. RODMAN, M. D.,
and G. E. PFAHLER, M. D.
of Philadelphia.

In studying this subject we have not confined ourselves to our own experience, but have reviewed rather extensively, though hastily and incompletely, the literature upon the subject, and have drawn our conclusions from both these sources.

Many of the reports upon this subject have been necessarily incomplete. In many instances the treatment was interrupted before conclusions could be drawn, in others important details were omitted, and in others the patients were still under treatment with the hope of finally being cured. Part of the work has been done by experienced men—men who have had a general experience with the X-rays even before they were used for therapeutic purposes—while part was done by beginners. On account of these varying conditions it is difficult to draw conclusions, but, inasmuch as the future work will be done under the same circumstances, it is fair to use all the reports made by regular physicians in estimating the true value of the treatment. We realize that by the end of a year our conclusions are likely to be changed.

We find reports of the treatment of 234 cases of epitheliomata and mere reference to a much greater number. Of these, 147, or 65 per cent., have been cured; 87, or 36 per cent., have been reported improved, and 2, or one per cent., unimproved The least number of treatments needed in any case reported cured, and in which this detail was given, was 4, the greatest 68, the average 25 The least time required was three weeks, the greatest twenty-two weeks, the average was eight weeks In many reports the number of treatments and the time required to effect a cure were not given In such instances the time and the number of treatments required were probably considerably greater than the average given, and therefore we believe that the average time required to effect a cure is greater than eight weeks, probably not less than twelve to sixteen weeks There are probably many cases that have been cured and many more that have not been cured that have not been reported

When we realize, however that the greater number of these cases was recurrent or inoperable, either because of their extent or their location, and in many instances the cures and improvements were remarkable, we must acknowledge that the X-rays are a valuable adjunct to surgical treatment.

The time and number of treatments, of course, will always vary with the extent of the growth, the susceptibility of the individual, and the skill of the operator, but we feel that the surgeon should have some general idea of the time required to effect a cure.

In a number of cases reported, for instance by Beck, the growth made its appearance later in the adjoining glands. These glands should always be treated. In some instances in which the glands later showed the disease, as in a case reported by Pfahler, the glands were not only not treated but were protected from the rays.

Recurences in the growth itself have been reported, but these were easily controlled by a reapplication of the rays. On the other hand, cases can be shown by ourselves and many others that have remained well two years or more.

At least 90 cases of rodent ulcer have been reported as being treated with the X-rays. Of these, 43, or about 48 per cent., have been cured, and 47, or 52 per cent., were still under treatment and improving at the time of the reports. The time and number of treatments have been given in too few instances to justify any conclusions. It requires, however, from one month, in a small lesion, to many months, when the ulcer is large or when bone and cartilage have been exposed.

Sequeira, who has done more work upon rodent ulcer than anyone else, has had a number of recurrences, but in each instance the ulcer was again healed by a reapplication of the rays.

At least 74 cases of lupus vulgaris have been reported. Of these 65, or 88 per cent., have been cured, and 9, or 12 per cent., were improving at the time of the reports. The number of treatments were given in only 10 cases, the least being 8 and the greatest 87, the average 31. The least time required was four weeks, the greatest twelve weeks, and the average was eight weeks. We believe that the average number of treatments required will not be less than 40 and the time not less than twelve weeks.

We find records of 8 cases of lupus erythematosus with 8 cures, or 100 per cent. This is surely too high. Judging from our experience and from information obtained by conversation with other workers, lupus erythematosus is as difficult to cure by means of the X-rays as lupus vulgaris.

In a number of cases the disease has recurred, but in each instance it was controlled by repeating the applications. Jutassy states that nearly fifty cases of lupus treated by means of the X-rays by Kümmell, Freund, etc., have been published, and that of the older cases about 50 per cent. have had a recurrence, but that there are cases reported by Gocht, Kümmell and Albers-Schönberg which were treated two years ago and have had no recurrence. The final results, therefore, seem to compare favorably with any other method of treatment.

Following the application of the rays to lupus there is a reaction in the tissues, shown by an erythema in the diseased and in the healthy tissue, and, as described by Kümmel, cleansing of the ulcers, cicatrization, drying up and falling off of the scabs, peeling of the skin, decrease in the size of the nodules, disappearance of the redness, and the formation of a white scar without contraction.

At least 8 cases of tubercular glands have been reported, 2 were cured, 5 were improving, and one was unimproved. To this small number we can add 2 cases in both of which two operations had been performed, followed by a recurrence which is now disappearing under the influence of the rays.

We have found records of 4 cases of Hodgkin's disease. The 4 were improving at the time of the reports, and the authors were hopeful of a complete cure. In the treatment of this disease we have had no experience.

Three cases of tubercular ulcers have been cured, requiring about 16 treatments and fourteen weeks time. In several other instances reference was made to the curability of these ulcers without giving any report of cases. We have one undoubted case in a young girl, in whom the ulcers varied from one-half to two inches in diameter. Even the largest of these is nearly well.

The term "cured" as applied to the above cases cannot be accepted in its true, literal sense, but must be taken to mean a disappearance of the tumor, the ulcer, the tubercles or the enlarged glands.

While nearly all investigators must and do agree that it is not absolutely essential to develop a reaction in the tissues, as is evidenced by an erythema or a dermatitis, yet most of us agree that the more rapid and positive results follow such reaction. In a certain number of cases no effect was noticeable, even after a long course of treatment, until such reaction had occurred. Varney has found it necessary to burn into the true skin before the carcinoma or sarcoma was influenced. Grubbé says that he has burned every patient treated, and some of them have been burned repeatedly.

A number of theories of the physiological action of the X-rays have been advanced, but as yet they remain theories. The actual pathological changes, however, have been studied more or less carefully by Pusey, Ellis, Scholtz, Walker, Blackmar, Beck, Loeb, Herzog, Freund, Sequeira, Mayor and others. They find necrosis of cells and trabeculæ, at times fatty degeneration, increase in the elastic tissue, and a tendency to occlusion of the bloodvessels by a deposit on their inner surfaces. This last phenomenon is interesting in that it will probably explain the lessened tendency to bleeding after exposure to the X-rays.

Sequeira found, by microscopical study of rodent ulcer, two important results. In the first place, the epithelial cells were destroyed, the nucleus and protoplasm undergoing lysis. In some cells a definite fatty change was seen. The second change noted was stimulation of the connective-tissue elements leading to filling up of cavities and to formation of healthy scar tissue.

There is certainly an idiosyncrasy in individuals which must be carefully studied. In one of our patients, during an examination of the head, the hair on one side was removed by an exposure of two and a half minutes, while other patients have had repeated and long exposures without loss of hair or dermatitis. Grubbé has treated one case daily for two years, with the tube very near the body, and only produced a slight redness. On the other hand, in some cases a single exposure has produced a well-marked dermatitis.

The mucous membrane of the lip seems to be especially sensitive to the X-rays, and therefore should always be carefully protected when not involved by the diseased tissue. The conjunctivæ and tissues about the eyes are not especially affected by the rays, as shown by cases treated by ourselves and others in which the diseased tissue occupied the lids.

The advantages of the treatment, given by Pusey, are as follows: (1) It is painless. (2) It destroys diseased tissue, but leaves healthy tissue in its place. (3) It leaves a minimum scar. (4) It can be used when the surrounding tissue cannot be sacrificed. (5) It relieves pain and induces sleep.

Our conclusions are as follows: The length of time required for the cure of epitheliomata is longer than by surgical or caustic treatment, while the cosmetic results are better. The dangers are proportionate to the urgency of the treatment, as indicated by the degree of malignancy. It should only be recommended in cases that are inoperable either because of the extent of the growth or its location.

2. It is absolutely the best means at our command for the treatment of superficial tuberculosis, and it gives better cosmetic results.

3. It should follow all operations for malignant disease or tuberculosis, with the twofold object of stimulating the healing process and of preventing a recurrence. In some cases it may be of advan-

tage to give a course of treatment before operation, to destroy the outlying portions of the growth and make such operation of a less formidable nature.

BIBLIOGRAPHY.

Allen. Medical Record, January 25, 1902, and November 15, 1902
Albers. Schoenberg. Fortschritte a. d. Geb. d. Roentgenstr., Bd. ii., 1898, 1899, p. 27. Muenchener med. Woch., Februray 6, 1900. Ibid, 1898, 1899, Bd. ii. p. 24.
Beck. New York Medical Journal, November 16, 1901, and May 24, 1902.
Blackmar. American Electro-Therapeutic and X-ray Era, May, 1902.
Brickner. Journal of the American Medical Association, May 31, 1902.
Brokaw. Courier of Medicine (St. Louis), November, 1902. New York Medical Journal, 1902.
Campbell (quoted by Stover). Denver Medical Times, 1902.
Childs. New York Medical News, January 24, 1903.
Cleaves. New York Medical Record, December, 1902.
Clark. British Medical Journal, January 8, 1901.
Codman. Philadelphia Medical Journal, March 8, 1902.
Coley. New York Medical News, January 31, 1903.
Daniel. Georgia State Medical Association, April 17, 1902.
Delevan. New York Medical Record, October, 1902.
Despeignes. La Semaine Medicale, No. 37, 1896, p. 146.
Duncan. Interstate Medical Journal, October, 1902.
Ellis. The American Journal of the Medical Sciences, January, 1903.
Freund. Wiener med. Presse, No. 31, 1899. British Medical Journal, vol. ii. p. 1316, 1902.
Grubbe. New York Medical Record, November 1, 1902. Chicago Medical Standard, January, 1903.
Gibson. Albany Medical Journal, February, 1903.
Gocht. Fortschritte a. d. Geb. d. Roentgenstr., Bd. i., 1897, 1898.
Greenleaf. Buffalo Medical Journal, October, 1901, pp. 189-193.
Holding. Albany Medical Annals, February, 1903.
Heeve. Therepeutic Gazette, October, 1902.
Heidingsfeldt. The Cincinnati Lancet-Clinic, December 6, 1902.
Herzog. Journal of Medical Research, June, 1902.
Holland. Liverpool Medico-Chirurgical Journal, March, 1901.
Hopkins. Philadelphia Medical Journal, September 7, 1901.
Hall-Edwards. Archives of the Roentgen Ray, vol. vii., 1902.
Hyde and Montgomery and Ormsby. Journal of the American Medical Association, January 3, 1903.
Johnson and Merrill. Philadelphia Medical Journal, December 8, 1900.
Jutassy. Fortschritte a. d. Geb. d. Roentgenstr., 1900, Bd. iii., H. 3, p. 119.
Kinnaird. American Practitioner and News, September 15, 1902.
Kuemmell. Beilage zum Centralblatte fuer Chirurgie, 1898, No. 26, pp. 52.
Lee. Brooklyn Medical Journal, February, 1902.
Leonard. American Medicine, October 4, 1902.
Loeb. Journal of Medical Research, June, 1902.
Morton. Medical Record, March 8, 1902. British Medical Journal, October 25, 1902.
Morris and Dore. British Medical Journal, May 31, 1902.
Pfahler. Therapeutic Gazette, March, 1902. Philadelphia Medical Journal, December 13, 1902. Journal of the American Medical Association, January 3, 1903.
Pusey. Chicago Medical Record, April, 1901. Journal of the American Medical Association, January 18, 1902, and April 12, 1902.
Rinehart. Philadelphia Medical Journal, February 1, 1902. American Journal of the Medical Sciences, July, 1902.
Robinson. Canadian Journal of Medicine and Surgery, December, 1902.
Ross and Wilbert. Therapeutic Gazette, February, 1903.
Rudis-Jicinski. New York Medical Journal, November 15, 1902.
Schiff. Klinisch-therapeutische Wochenschrift, 1901, No. 27, July 7. Fortschritte a. d. Geb. d. Roentgenstr., Bd. ii. pp. 135-137.
Sequeira. British Medical Journal, February 9, 1901, and vol ii. p. 1317, 1902.
Schlotz. Archiv f. Dermatologie und Syphilis, Bd. lix., Heft. 23.
Smith. Philadelphia Medical Journal, December 1, 1900.
Spring. Northwestern Lancet, November 19, 1902.
Startin. The Lancet, July 20, 1901.
Snow. Journal of Advanced Therapeutics, November, 1902.
Stover. Denver Medical Times, 1902.
Stenbeck. Mittheilungen aus den Grenzgebieten der Medicin und Chirurgie, vol. i. p. 347, 1900.
Skinner. Medical Record, December 27, 1902.
Varney. Journal of the American Medical Association, February 21, 1903.
Walker. British Medical Journal, May 10, 1902.
Weisner. Muenchener med. Woch., June 24, 1902.
Williams. Boston Medical and Surgical Journal, January 17, and April 4, 1901. The X-rays in Medicine and Surgery, 1902.

THE VALUE OF WIDAL'S AND EHRLICH'S TESTS IN TYPHOID FEVER.*

By ORVILLE A. KENNEDY, B. S., M. D.,
of Louisville, Ky.

Before any disease can be intelligently and successfully treated a correct diagnosis must be made, and to treat any disease scientifically a clear knowledge of the pathological processes is essential. When the diagnosis of typhoid fever is made, we are in a position to treat the disease scientifically, because we have before us a clear picture of the abnormal condition, but in this disease the great difficulty lies in making an early diagnosis.

During the first week of typhoid fever there are no pathognomonic symptoms, and in many cases it is well-nigh impossible to differentiate it from many other diseases, especially in this section of the country from certain forms of malaria.

We have, however, two means by which an early diagnosis can be facilitated—the agglutination test of Widal and the diazo-reaction of Ehrlich. Widal's reaction, when it can be properly made, might be said to be pathognomonic, but its usefulness is greatly lessened by its being out of reach of the great majority of practitioners.

For the proper application of the test a culture of typhoid bacilli, neither too fresh nor too old, but of a certain virulence, must be available, which necessitates frequent renewal and the keeping of a specimen of blood which is known will produce the reaction for control tests, and a technique only acquired by long experience in such work. In the early stages of the disease, when the reaction is of most value, the agglutination of the bacilli is not marked, and to detect it requires the use of a microscope of high magnifying power and an experienced microscopist.

This test, therefore, is one that is hardly practicable outside of a bacteriological laboratory. The importance of this test and the fact that it cannot be made use of by the great majority of physicians, show the urgent need in this State (Kentucky) of a well-equipped bacteriological laboratory, under the supervision of a thoroughly trained bacteriologist, who will be prepared at all times to examine pathological specimens of all kinds and to make the Widal test or furnish the profession a culture of the typhoid bacilli of the proper virulence.

There is no such institution in the State, therefore I heartily endorse the efforts of our colleagues who are endeavoring to establish one in this city.

Although the Widal reaction, when its presence can be demonstrated, gives the most positive evidence of typhoid fever, until it can be placed within the reach of the general practitioner the reaction of Ehrlich must be depended upon to aid in the early diagnosis of this disease. Wide differences of opinion exist as to the value of this reaction, due, no doubt, to some extent to the improper application of the test and to the wrong interpretation of its value. It is not pathognomonic, nor can it be said to be present in every case of typhoid fever or to be constant in any case.

It is easily made and available to every physician. The two solutions used to make the test are: A solution made of one part of hydrochloric acid, twenty parts of water and enough sulphanilic acid to make a saturated solution; the second solution consists of a *one-half of a one per cent.* solution of sodium *nitrite* in water. One hundred parts of the first solution are mixed in a test-tube with one part of the sodium nitrite solution, and an equal quantity of the suspected urine is added; after shaking, a small quantity of strong ammonia water is added, and the mixture is then thoroughly agitated. By shaking the mixture a foam is formed on the liquid. If this foam has a distinct carmine color, the diazo-reaction is positive. This coloration of the foam only should be considered; the change of color of the liquid below the foam is of no significance.

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* Read before the Kentucky State Medical Society, April 22, 1903.

The directions usually given for making the reaction are to use one part of the nitrite solution to forty parts of the sulphanilic acid solution, instead of one to one hundred parts as I have suggested, but by using the smaller quantity of the nitrite false reactions are eliminated and the test made more delicate. The precautions in making the reaction are to make a fresh solution of sodium nitrite every few months (as it is unstable), to use strong ammonia water, to have the urine to be tested fresh and acid in reaction. According to Hönig: "The reaction arises as the result of absorbed intestinal toxins of the disease, which become changed in the blood and eliminated in the urine.'"

When the two solutions used in making the test are mixed, the hydrochloric acid acts upon the sodium nitrite, forming nascent nitrous acid, which combines with the sulphanilic acid and produces diazobenzenesulphonic acid, and this compound combines with the changed eliminated toxins and produces the color reaction in a strongly alkaline medium.

The diazo-reaction is not found in typhoid fever only, it may be produced by measles, acute miliary tuberculosis, in some cases of advanced malignant disease and, according to Dr. Greene, of the University of Minnesota, in certain febrile cases associated with septic absorption; but it is absent in malaria, appendicitis and pneumonia, and its absence in malaria makes it of great value, even if for no other purpose than to differentiate between malaria and typhoid fever.

In order to determine the true value of the diazo-reaction I have begun a systematic study of it, not only taking into consideration the disease present, but considering also the drugs administered. I have found the reaction absent in four cases of scarlet fever during every stage of the disease. In six cases of albuminuria it was absent, three specimens of urine having been examined in each case. In a case of ulcerative stomatitis complicating a case of scarlet fever the reaction was absent in four specimens of urine examined. In three cases of follicular tonsillitis the reaction was absent during the height of the disease; it was also absent in two cases of peritonsillar abscess. In two cases of acute gastritis with fever it was absent on the second and third days of the disease. In one case of vaccination during the febrile stage it was absent. In ten cases of continued fever the reaction was not influenced by the administration of large or small doses of quinine or dextroquinine, nor by the ordinary doses of bismuth, betanaphthol, guaiacol, eucalyptol, turpentine, hydrochloric acid, salol or phenacetine. The diazo-reaction has been found in typhoid fever as early as the fourth day of the disease and in all severe cases. I believe it is always present toward the end of the first week. It may be present from the fourth day to the end of the third week, and even longer in cases not progressing favorably, but its presence is not constant, apparently depending on the progress of the case. If improvement is taking place and the growth of the bacilli is checked, it is absent; but, if the disease processes are not checked, it is present. If the diazo-reaction is found at the beginning of a continued fever, malaria can be eliminated, and it can be looked upon as strongly pointing to typhoid fever, but the absence of the reaction is of no value in eliminating typhoid unless this absence is persistent during the whole of the first week, and even then it may not denote the absence of typhoid, but it can be relied upon to show the absence of an *extensive invasion*. It is, therefore, of very great value, not only as a positive sign, but still more so as a negative one, for it can be quite certainly relied upon to be present at some stage of all severe cases of typhoid and when persistently absent it pretty surely negatives the diagnosis of typhoid. Hönig says: "The diazo-reaction bears a distinct relation to the severity of the case. Its disappearance indicates early improvement when other signs of this change are wanting, while its reappearance is a sign of relapse. Its presence with Widal's reaction is a positive sign that typhoid fever is present." It is evident then that a single test in any case is not sufficient to base an opinion upon. To secure the full value of the reaction it should be made a part of the duty of the attendant at the bedside of the patient. When a trained nurse can be secured, and every effort should be made to secure one in every case, the simplicity of the reaction makes it feasible to instruct her to make it, being instructed also to make a tri-daily test of the urine for the reaction during the whole progress of the disease. This record will, I believe, prove of even more value as a prognostic sign than the temperature record.

To sum up: The Widal agglutination test furnishes the earliest and most positive evidence of typhoid fever. But to place it within reach of the general practitioner, a bacteriological laboratory is urgently needed in the State of Kentucky.

The diazo-reaction, although not pathognomonic nor as conclusive as the agglutination test, is a valuable aid in making an early diagnosis of typhoid fever. Its presence quite surely differentiates between malaria and typhoid, and practically eliminates all but measles, acute miliary tuberculosis and probably certain septic fevers. Measles may be easily excluded. Acute miliary tuberculosis produces the reaction only in severe cases and late in the disease, when other symptoms are present to clear up the diagnosis. It is possible that septic fevers may cause some uncertainty if the focal point of the septic process is not clearly manifest.

The reaction may be present as early as the fourth day and may be continuously or intermittently present throughout the disease, or, in favorable cases, it may disappear altogether early in the disease.

The disappearance of the reaction denotes favorable progress of the disease, and its reappearance an unfavorable turn, and it is, therefore, a valuable prognostic sign.

To obtain the full value of the reaction, tri-daily tests should be made throughout the disease; the nurse in charge of the case being instructed how to make the test. In this way a record can be obtained, not only of value in confirming the diagnosis, but of great value as an index of the progress of the disease.

THINGS TO CONSIDER BEFORE SENDING THE TUBERCULOSIS PATIENT AWAY FROM HOME.*

By MARTIN L. STEVENS, M. D.,
of Asheville, N. C.

Every physician who is familiar with conditions such as obtain in the climatic resorts for pulmonary diseases, and who treats and becomes familiar with the physical and financial condition of many of these patients—who sees daily in his practice, and in the public places, unfortunates who have been sent away from home by the family physician without due consideration of what they will do and how they will fare in the place to which they are sent—who sees far advanced patients; too sick to be out of bed, buoyed up by the consumptive's hope, slowly dragging themselves about when he who runs may read that every step brings them nearer to the grave—who sees curable, early-stage patients, seemingly not sick enough to need treatment, for lack of guidance and care advance steadily into hopeless disease—must be impressed with the fact that in very many instances the family physician has not duly considered all the things that he should consider before sending his patient away from home. It is with numerous illustrations of this fresh in memory that I desire briefly to remind you of some of the things that should in every case receive consideration before a tuberculous patient goes out from under the care of the family adviser.

Benefit to Be Derived.

First of all, is the case such as can be cured or at least benefited by proper treatment under suitable climatic conditions? And in determining this I would, without going into detail, mention certain things that must not be lost sight of. Far advanced cases are as yet, even under the best of treatment combined with the best of hygienic and climatic conditions, incurable. Certain complications debar a patient from hope of recovery or even of permanent arrest of his trouble. Among these I would specially mention diabetes mellitus, which as a complication has thus far proven insurmountable; amyloid changes in the kidney, frequently seen in advanced cases, and chronic interstitial nephritis, sometimes present in patients past middle life, have in connection with tuberculosis prognostic significance that should cause the patient to be advised to remain at home. Laryngeal ulceration, if sufficient to interfere with deglutition, will so stand in the way of the nutrition of the patient that curative treatment will be futile. In consequence no change of climate should be permitted unless by such change he could be placed under the care of a laryngologist who could make him more comfortable.

Certain other complications should interfere temporarily with any proposed change of climate, because of the special risk which would attend it. After a pulmonary hemorrhage a journey should not be undertaken for at least two weeks, especially if the trip be long or the proposed change be to a much higher altitude. Earlier than this the risk would be greater than could be compensated for by any reasonable hope of gain in the short time that would have to elapse before the period of special danger would be past.

An attack of pleurisy or of bronchitis or of grippe should stand in the way of any change until all acute symptoms have subsided.

During a pneumonia, of course, no one would think of sending a patient away from home. And during the softening and excavating of a caseous portion of the lung, with attendant high temperature, there needs to be considered the possible bad effect of the overexertion and fatigue which are inseparable from travel, and of the depression of spirits, disappointment and homesickness which sometimes result in patients confined to their beds away from home and without the accustomed companionship of relatives and friends.

The presence of Ehrlich's (diazo) reaction in the urine—the importance of which is perhaps overestimated—has also a bad prognostic significance in those cases in which it persists regardless of treatment. But alone it should not condemn a patient, except in so far as it may be confirmatory of conclusions arrived at by other means of examination. And among the single symptoms which, apart from complications, throw light on the progress of the disease, there is none upon which more dependence can be placed than the temperature. In general the destructive process runs *pari passu* with the height of the fever. And in determining the temperature it must be borne in mind that it may be normal at one period of the day and 101° or 102° at another. And this, too, without the patient being aware of it. I have repeatedly, in response to direct inquiry, been told by new patients that they had no fever, when at the time the statement was made I found the temperature to be 102° or more. The strength of the patient needs to be considered with reference to the exhausting effect of the journey, which at times does greater harm than can be compensated for by the good effect of any climate or subsequent mode of treatment. And, of course, those patients in whom the lung involvement is so great as to preclude the possibility of benefit should be kept at home. That doctor is culpable, indeed, who advises a dying patient, or one so far advanced in the disease that he cannot be benefited, to give up the comforts of home in exchange for the sufferings and annoyances which must be endured by the sick when traveling, and to expend his small store of strength in a fruitless journey.

The curable patients are the ones that usually remain at home, because they are not aware of their need of treatment, while those who should remain at home, because of the hopelessness of their condition, are too often referred to the specialist.

Character of Patient.

Has he strength of character sufficient to enable him to stand out against the numerous influences and tendencies which are antagonistic to his recovery? The importance of this can hardly be overestimated. The advantage possessed by one who can determinedly apply himself to the one purpose of getting well, and make his every act subservient to that one purpose, is great indeed. It requires no small strength of will to do this, and that there be many who fail in this respect can be seen on all sides. The alcohol habitué, whose habit made him an easy victim to the disease, is unwilling to give up or control his habit, even though his cure depend upon it. The dyspeptic, though knowing that he is dependent primarily upon his digestive organs, continues to tempt Providence by abusing them. The devotee of society expects his physician to cure him while he violates all nature's laws and neglects his part of the treatment. Invalids of all classes are easily influenced by companions who have the same or kindred maladies. And, in the consumptive, will-power is often lacking. Patients that have not strength of character sufficient to enable them to grasp the seriousness of the situation and to co-operate fully with the physician are not very favorable cases for treatment.

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* Read before the Medical Society of the State of North Carolina at its fiftieth annual meeting, at Hot Springs, June 2-4, 1903.

Financial Condition.

It is yet true that money is essential to the cure of the disease, and that the opportunities for best treatment are only within reach of the unfortunate rich, and that but little has as yet been done to help the doubly unfortunate poor. God speed the day when legislatures and philanthropists shall have provided for this most crying need of our time. Until this is done the family physician will have to decide upon a place and plan of treatment which is suited not only to the needs but to the means of the patient. In many instances he will have to decide to what extent financial sacrifice is justifiable, and it is along this line that some of the greatest blunders are made. The patient is unwilling to make sacrifice until the reason for it is apparent, and the false sense of security which attends the disease stands in the way of his realizing his condition until the disease has advanced so far that a complete restoration of health may be impossible, or, even if possible, the financial outlay then necessary to effect a cure may be so great that he cannot meet it. There must be impressed upon every one, and especially upon the patient of limited means, the fact that the earlier treatment is begun, the greater the sacrifice that can be assumed, and the more advanced the disease, the less the sacrifice that is justifiable. Truly, all that a man hath will he give for his life. But I have often seen a man expend for a vain hope the real necessities of life, and this, too, when some other member of the family was suffering from the same disease in a curable form, but who was sacrificed in favor of the incurable one whose case seemed more urgent. Early in the disease no sacrifice is too great if judiciously made.

Medical Care.

Is he to be under the care of a local physician in the place to which he is sent? There is no one thing upon which success of treatment is so much dependent as upon the control of the patient, and the constant oversight and directing of the details of his life. This is impossible if the patient is to manage his own case under the guidance of his home physician. As well send him to sea without chart or compass. The seriousness of his case is lost sight of, and he cannot put forth his best efforts toward recovery. He comes in contact with numerous fellow-sufferers, each of whom is ready to advise him how to manage his case. He drifts from one plan of treatment to another, becomes the victim of self-experimentation and of the experimentation of his companions, and an easy prey for the quack and the charlatan. Good treatment under suitable home conditions in any climate is much to be preferred to the best climate in the world without direct medical oversight of the patient.

The Health Resort.

The conditions to be found in the place to which the patient is to be sent should also be considered. In this connection it is well to remember that climate is not the only, nor the most important qualification. There should be facilities for the best of medical care. There should be facilities for carrying out the dietetic part of the treatment, upon which so much pends This is hardly possible in places not accessible to good markets and good dairies. There should be facilities for proper nursing in emergency. There should be an absence of those influences and conditions that are prejudicial to the patient's welfare, or that in any respect stand in the way of his following a perfectly regulated and hygenic mode of life. It s a mistake to send a patient to a pleasure resort in the hope that the return of health will be favored by the gaiety of those about him, in contradistinction to the supposed depressing effect which the presence of invalids would have upon him at a health resort The requirements of society as to hours for sleep, as to dress and as to various social functions are incompatible with that life which he must lead if he would regain his health, and the fact that he must constantly deny himself pleasures in which those about him participate makes his life there a combination of sacrifice and temptation. Whereas were he surrounded by others who were following the same mode of life prescribed for him, his task would be much easier, and the improved conditions and the hopefulness of those who have been there longer than himself would afford him more encouragement and pleasure that he could possibly get from the companionship of those who are well and in whose enjoyments he cannot fully participate.

Should Know the Nature of His Disease and his Responsibility to the Public.

Under no circumstances should a tuberculous patient be permitted to leave home with a false conception as to the nature of his malady, and without knowing his responsibility to those with whom he comes in contact. No one desires to be the bearer of unpleasant intelligence. But false ideas of sentimentality should not stand between the physician and his duty. The patient cannot carry out directions intelligently and do that which is necessary to effect his cure unless he understands the reason for it; and he is a menace to the health of those about him unless he takes proper precautions to prevent the spread of his disease. He needs to know also that the public is more or less afraid of him, and that in some places he may be put to inconvenience in finding suitable accommodations. This fear on the part of the public is well founded and is increased by the fact that there are yet many patients who have been told that they have bronchitis or throat trouble or dyspepsia or weak lungs, and who, knowing no need of precaution, go about expectorating everywhere and scattering the disease broadcast. The responsibility for this rests with the family physician. Many of these cases do not, unless an emergency arises, fall into the hands of the physicians in the places to which they go. Those physicians who deceive their patients in this matter usually belong to that class who have not yet learned that the disease is amenable to treatment, and who only aim to guide them comfortably to the grave instead of back to health and usefulness. Those of their patients who go to the health resorts are usually advised by them to take no treatment, but to live outdoors, take plenty of exercise, drink plenty of whiskey and rough it. And how often have we seen patients with excavations in some portion of the lung, and whose temperature each day reached perhaps 3° above normal, trying to carry out such advice, exhausting themselves by long walks or even riding horseback, taking life in hand every time they mount the saddle, and supporting their feeble strength by the too liberal use of alcohol. That occasionally a patient gets well in the face of such obstacles only proves the curability of the disease and not the wisdom of the treatment.

So before sending your patient away from home consider whether he will be benefited.

Consider his character with reference to the influence it will have upon his prospect of recovery.

Consider his financial condition, and that, if sacrifice has to be made, it is the part of wisdom and economy to make it early.

Consider his need of medical care and control wherever he is, and that good treatment in an unfavorable climate is better than a favorable climate without treatment.

Consider the facilities which the health resort offers for the cure of hs disease, rather than those offered for his pleasure.

Consider the need of candor as to his condition and his responsibility to the public.

FLORENCE NIGHTINGALE.

AN ADDRESS TO NURSES.

By W. C. CAHALL, M. D.,
of Germantown, Pa.

Hawthorne has told the story of the Great Stone Face, which nature has carved out of the rock and boulders of one of the New England mountains into a striking resemblance to the human countenance of a manly and noble type. The story describes the development of a young man who grew up in one of the valleys dominated by this face, where, through daily looking upon it and communing with it, he himself became in time the living expression of its manly characteristics. The moral of the story is that we cannot long contemplate the wise and noble without, to a certain degree, becoming wise and noble ourselves. With this thought in our minds I shall, in the few minutes in which I shall address you, undertake to draw the outlines of an ideal nurse, whose life I trust you will diligently study, with the result that some of her womanly tenderness and sympathy, thoroughness, zeal and devotion to duty will be imparted to you.

Florence Nightingale, for she it is of whom I shall speak, was born May, 1820, to English parents, at Florence, Italy. She was educated with particular care by the direction of her father, himself a highly educated man, who had her taught many things which were not usually taught young ladies of her day. Although born to great wealth and position, Miss Nightingale early decided that, for her, life was to be more than a round of pleasure and frivolity. Following her natural bent, she resolved to devote her life to nursing the sick, especially the sick poor. This act would not be so surprising to-day, now that nursing has reached its present high and honorable position, largely, it may be added, by Florence Nightingale's personal labor, but it took a resolute heart to enter a service which fifty years ago was thought fit for no decent woman. Even for a servant to turn hospital nurse was equivalent to declaring that she had lost her character. You have all learned from the writings of Charles Dickens the character of the nurse of that period. Mrs. Gamp was not overdrawn. I will quote you the description of a hospital nurse of that day, as described by an eye-witness: "I have seen her, coarse-faced, thick of limb, heavy of foot, brutal in speech, crawling up and down the stairs or about the wards, in dresses and aprons that made me feel (although quite well and with a good appetite) as if I would rather not have my dinner just then."

Miss Nightingale concluded that such a condition was altogether wrong, and determined to reform it. Her parents disapproved of her choice, but, recognizing her pre-eminent aptitude, did not forbid her. They, however, took her to London and had her presented to the Queen in the hope that a taste of the capital's pleasures would wean her from her purpose. But it was London hospitals and not London society she frequented. After learning all that the hospitals in London, Dublin and Edinburgh could teach her, she went to France, Italy and Germany to search for improved methods and new ideas. She found the system of training carried on at Pastor Fliedner's Institution at Kaiserswerth so vastly superior to any hitherto met with that she entered the institute as a pupil nurse in 1849. So enthusiastically did the new nurse enter into her duties among the deaconesses that Pastor Fliedner afterward declared that in all his experience no nurse had ever passed so brilliant an examination as, or more thoroughly comprehended her duties than, Florence Nightingale.

After spending several months at Kaiserswerth she passed on to Paris, where she entered the service and studied for a time with the Sisters of St. Vincent de Paul. Thoroughness was her motto, and she fortunately had the means to gratify her desires. So that when she returned to England she was mistress of all the world could teach in nursing, hospital construction, the feeding and housing of the sick.

She went to London and took charge of the home for sick governesses. This institution was on the verge of ruin, the result of mismanagement. Now was put to the touch all the extensive preparation of Miss Nightingale. Was it practical or only theoretical? It stood the test. Within two years the institution was revolutionized. Order, method, wise administration, brought the institution back to security and prosperity. But the close application was too much for a constitution never robust, and she was obliged to retire to her country home to win back her own health.

Then came the Crimean War, and her great opportunity. England was illy prepared for a foreign war, and an incompetent war department increased the natural hardships of the campaign by sending out supplies in the most haphazard manner. It is said that, when a consignment of boots was opened, it was found that all of them were for the left foot, and that a large number of mules, intended to convey the stores, were actually delivered to the Russians instead of the English. Necessarily the medical stores shared in the confusion, and the medical officers were swamped with work, and with scant hospital supplies to work with. So that whole boat loads of wounded soldiers were brought down from the front to the hospitals at Scutari, opposite Constantinople, with their injuries undressed for five or six days, and the wounds filled with maggots. More doctors were sent out, but, in addition to the wounded, sickness in dreadful types broke out among the soldiers, actually threatening the destruction of the entire army.

Kinglake, in his history of the Invasion of the Crimea, thus describes the condition of health of the army at this time: "On the last day of February our army, out of a mean strength of 30,919 for the month, had lying in the hospitals no less than 13,608 men (and even that immense number is utterly insufficient to measure the evil which it partly discloses). Between the first of November and the end of February our soldiers perished in hospitals to the number of 8,898. Putting into yet other words the same ugly truth, one may say that our army on that last day of February had, lying in hospital beds or else in new hospital graves, dug all of them within the four months, a number of sick and dead amounting to 22,506. the number before assigned, leaving but 11,367 effective men before Sebastopol."

Now let us see what preparations were made to care for this enormous number of sick and wounded. Kinglake continues: "Among the men sent out there were medical officers of various ranks, though not in sufficient numbers. But for attendance upon our sick and wounded men in hospitals the war administration at first made no provision at all, and, in the absence of hospital orderlies, duly trained for the work, our people had to rely upon the clumsy old plan or drawing sergeants and soldiers from the ranks to make them do the duty of nurses. But even this was not all that the perverseness of the system contained, for when the orderlies, and the sergeants especially, had after a while learned their work and become at last more or less skilled in the performance of their hospital duties, they were to be called back to their regiments and replaced by uninstructed beginners."

No wonder that all England rose in indignation when the true condition of the sick and wounded reached them. Demands were made that voluntary nurses should be sent out. The secretary of war, Mr. Sidney Herbert, at once wrote to Miss Nightingale, begging her to organize a body of nurses, go to Scutari and take charge of the hospital, adding: "There is but one person in England that I know of, who would be capable of organizing and superintending such a scheme. I must not conceal from you that upon your decision will depend the ultimate success or failure of the plan." But Miss Nightingale had not waited for the invitation. She had volunteered to go as a nurse before receiving the secretary's letter. Her decision was announced in a published letter in which the secretary said: "Miss Nightingale, who has, I believe, greater practical experience of hospital administration and treatment than any other lady in this country, has, with a self-devotion for which I have no words to express my gratitude, undertaken this noble and arduous work."

The case was pressing, and by working day and night she selected out of a large number offered 38 nurses, and within seven days set sail for Constantinople, arriving on the day of the battle of Inkerman, "cheerful and pleasant, neatly attired in black—a strong contrast to the usual aspect of hospital attendants, and, oh, how welcome!"

Work in plenty was awaiting them. The general hospital at Scutari was an immense affair. On the floors of several stories, along the corridors, overflowing to the open galleries, stretched four miles of mattresses, and on each mattress lay a wounded or sick soldier. And there were 38 trained nurses. But, more than the overcrowding, the neglect, the mismanagement, dirt, partly cooked food and unwashed bedding added to the already intolerable condition of the soldiers with wounds, with frostbite, with scurvy, with dysentery, with camp fever, with cholera, lying indiscriminately together.

Such was the task which met Florence Nightingale the night of her arrival. Administrative order required her first attention. This required great tact, for the military officers and some of the medical men were prejudiced against the innovation of women nurses in military hospitals. She was equal to the occasion, and soon the commanding officer no less than the sick hailed her presence with gladness. But red tape was a subject with which she had little patience. The officers had been so drilled that no matter how pressing were the needs for certain material, unless they had the proper requisition, properly signed by the proper authorities, they would not touch them, though they were lying on the beach in plain sight. But on one occasion when she was denied certain hospital material because she had not the properly signed requisitions, with a woman's scorn of legal proceedings, she promptly directed her orderlies to break into the warehouse and took what she needed.

She then turned to the proper preparation of food. The hospital cooks had been selected after the manner of the orderlies, from the ranks, without instruction or supervision. Their usual method of cooking was after this manner. They tied their meat and vegetables separately in nets and boiled them all together in a large copper kettle. As a consequence some of the food was boiled to pieces, while some was but partly done. But in ten days Miss Nightingale had her kitchen in order, whence a thousand men were supplied with broths, jellies and puddings, well cooked and attractively served.

The bed linens were indescribable. Miss Nightingale established a well-equipped laundry, and every moment the nurses could spare from their nursing they spent in making pillows, sheets and bandages. The effect was immediatly noticed. The mortality decreased, and the spirits of the sick and wounded soldiers rose with the new surroundings. One of the patients wrote home: "To see her is happiness. She would speak to one and nod and smile to many more, but she could not do it to all, you know. We lay there by hundreds; but we could kiss her shadow as it fell and lay our heads upon the pillow again, content."

Our own Longfellow has preserved in verse her acting thus:

"So in that house of misery,
A lady with a lamp I see
Pass through the glimmering gloom
And flit from room to room.

"And slowly as in a dream of bliss,
The speechless sufferer turns to kiss
Her shadow as it falls
Upon the darkening walls.

"A lady with a lamp shall stand,
In the great history of the land,
A noble type of good
Heroic womanhood."

So burdensome were her labors, and so forgetful was she of her own health, that the Crimean fever, through which she had nursed so many, found her an easy prey. Always delicate and worn to exhaustion, she nearly died, as indeed four of her band of nurses did succumb. As soon as she could walk she insisted on returning to her post at Scutari. Of course, the knowledge of her splendid success reached England, and, when the time came for her return, the whole people was ready to rise in a national welcome. But Florence Nightingale's modesty was as great as her other virtues, and, instead of sailing on the man-of-war placed at her disposal, she returned in another ship under an assumed name, slipped into England and retired to her Derbyshire home before the people learned she had landed. But there were some honors she could not escape. Among them were the Queen's decoration, the gift from the Sultan of Turkey and the eloquent eulogies of Parliament. A great fund was raised and offered to her as a public testimonial. But she declined to receive pay for her services. This fund, amounting to two hundred thousand dollars, was finally used to found an institute for training nurses, under Florence Nightingale's supervision. St. Thomas' Hospital and King's College Hospital were selected as the places of training and instruction. At St. Thomas' Hospital, where most of the training finally centered, there is the Nightingale Home of Nurses, where the probationers live, and from whence modern scientific nursing has spread throughout the entire English-speaking world.

Though an invalid for the rest of her life, Miss Nightingale never relaxed her interest in nursing. When she could no longer nurse herself, her pen was busy in spreading broadcast her rich experience. Her *Notes of Hospitals* and *Notes of Nursing*, both elaborate text-books, have gone through several editions, and her exhaustive article on *Hospitals* in Chambers's Encyclopedia is well known. Indeed, it is said that the plans for most of the hospitals erected in England during the last 30 years have been submitted to her for criticism and approval. During our Civil War she was frequently consulted concerning the military hospital service. She was also one of the foundresses of the Red Cross Society.

When one considers the amount of work she has accomplished, it is hard to believe that it was an invalid who did it all.

Such is the woman I commend to your study and imitation, feeling sure that, though you may never have the opportunity to see the great service she enjoyed, you can do the same kind of work she did, in the same spirit, with the same thoroughness and with the same devotion to duty. Make your calling as she described it—an art. "Nursing is an art," she says, "and, if it is to be made an art, requires as exclusive a devotion, as hard a preparation as any painter's or sculptor's work, for what is the having to do with dead canvas or cold marble compared with having to do with the living body—the temple of God's spirit? It is one of the fine arts, I had almost said the finest of the fine arts."

LA RIFORMA MEDICA.

April 22, 1903.

1. Upon Migration of the Blood Elements in the Transudates and Exudates of Leukemics.
FERRUCCIO SCHUPFER.
2. Contribution to the Treatment of Epilepsy.
U. ALESSI.
3. Concerning the Pathogenesis of Sydenham's Chorea.
A. B. GIANASSO.

1.—Schupfer finds that the cytology of transudates—whether spontaneous (ascites) or artificial (from vesicants)—differs widely from that of exudates in serous cavities. In the latter was found a larger number of myelocytes and lymphocytes, both large and small. It may be considered doubtful if small lymphocytes exist in transudates. The author believes that, any degree of motility being denied to lymphocytes, and myelocytes exhibiting no ameboid motion upon the warm microscopical stage, it may readily be conceded that a stronger stimulus than that of simple transudation is required to induce their exit from the vessels; and that the power to attract them must reside in substances which do not exist in the bloodserum, otherwise they would appear in transudates. That the cytological formula of exudates varies not only with the morphological constitution of the blood, but also from other causes, was demonstrated by the fact that, at times, in pleuritic exudates the polymorphonuclear leukocytes were for the most part eosinoplilic, though but slight eosinophilia existed in the blood; and the myelocytes and mastcells migrated more freely in a croton oil blister than in liquid obtained with other vesicants. [R. L F.]

2.—Having noted a distinct improvement in a certain number of epileptics after treatment, with iron, of the hypoglobulia and deficient hemoglobin common in this class of patients, Alessi concluded that treatment of the general condition might go far toward ameliorating the symptoms in epilepsy. He reports success in 4 cases from administration of sodium arsenate 1 mg., zinc phosphate 5 mg., calcium phosphate 8 gm., sodium benzoate and pancreatin, of each, 20 gm. This given as one dose and repeated twice or three times daily till 20 doses were taken. [R. L. F.]

3.—From a study of 46 cases, Gianasso concludes that chorea belongs to the neuroses, and that choreic patients are predisposed by heredity to neurotic affections as indicated by the abnormal characters of such subjects. Hence he believes these patients to be, to a certain degree, degenerates in whom any determining cause may induce the development of chorea or some other neurosis. Thus chorea may appear in the train of an acute or chronic infectious disease, rheumatism, emotion or reflex irritation (as in Breintung's case of chorea, which was produced by a foreign body in the external auditory canal and was cured by its removal). This view of the pathogenesis of chorea, the author holds, accounts for the various bacteriological and anatomopathological findings reported in this condition from time to time. [R. L. F.]

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